

# 17/18th Annual SBMT

World Congress of Society for Brain Mapping and Therapeutics, Los Angeles, California, USA  
(In Person & Virtual Event Focused on Brain and Spine)

**Breaking Boundaries of Science, Technology, Medicine, Art & Healthcare Policy**

July 8 - July 11, 2021, LA Convention Center, 1201 S. Figueroa St, Los Angeles, CA 90015

Exhibition, Workshops, Didactics, Bio-skills/Cadaver Labs (Brain and Spine) and Brain Mapping Foundation Gala

**Audience includes:** neurosurgeons, radiologists, neurologists, psychiatrists, rehabilitation medicine physicians, cardiologists, pulmonologists, bio-ethicists, oncologists, radiation oncologists, neuroscientists, engineers, physicists, psychologists, industry leaders, Orthopedic/Spine Surgeons, biochemists, nanotechnologists, pharmacists, stem cell scientists, computer/data scientists, post-docs, residents, and fellows



For more information visit:

[www.WORLDBRAINMAPPING.ORG](http://www.WORLDBRAINMAPPING.ORG)



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

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## TOPICS COVERED BY WORLD LEADERS IN THIS MEETING:

**Neurosurgery** (e.g. image guided therapy, intraoperative navigation, nanoneurosurgery, stereotactic radiosurgery, minimally invasive therapy, vascular neurosurgery, functional neurosurgery, neurotrauma/military medicine, neurosurgical oncology, surgical simulation, Peripheral nerve disorders...)

**Neurology** (e.g. EEG, ERP, movement disorders, neurodegenerative diseases (Alzheimers, Parkinson, and huntington), neurooncology, neuromodulation, epilepsy, neuroanesthesia and brain and spinal cord function...)

**Psychiatry** (e.g. opiod and addiction, anxiety disorder, autism, sleep, medical imaging for psychiatric conditions such as schizophrenia, depression, PTSD...)

**Radiology** (e.g. fMRI, MEG, PET, nuclear medicine, MRSI, MR-PET, DTI, CT-PET, focused ultrasound, MSI/MEG, ultra-high and low field MRI and interventional radiology...)

**Neuroscience** (e.g. stem cell, molecular neuroscience, image guided mapping of genes, proteomics, genomics, neurophysiology, nanoneuroscience, aging CBD...)

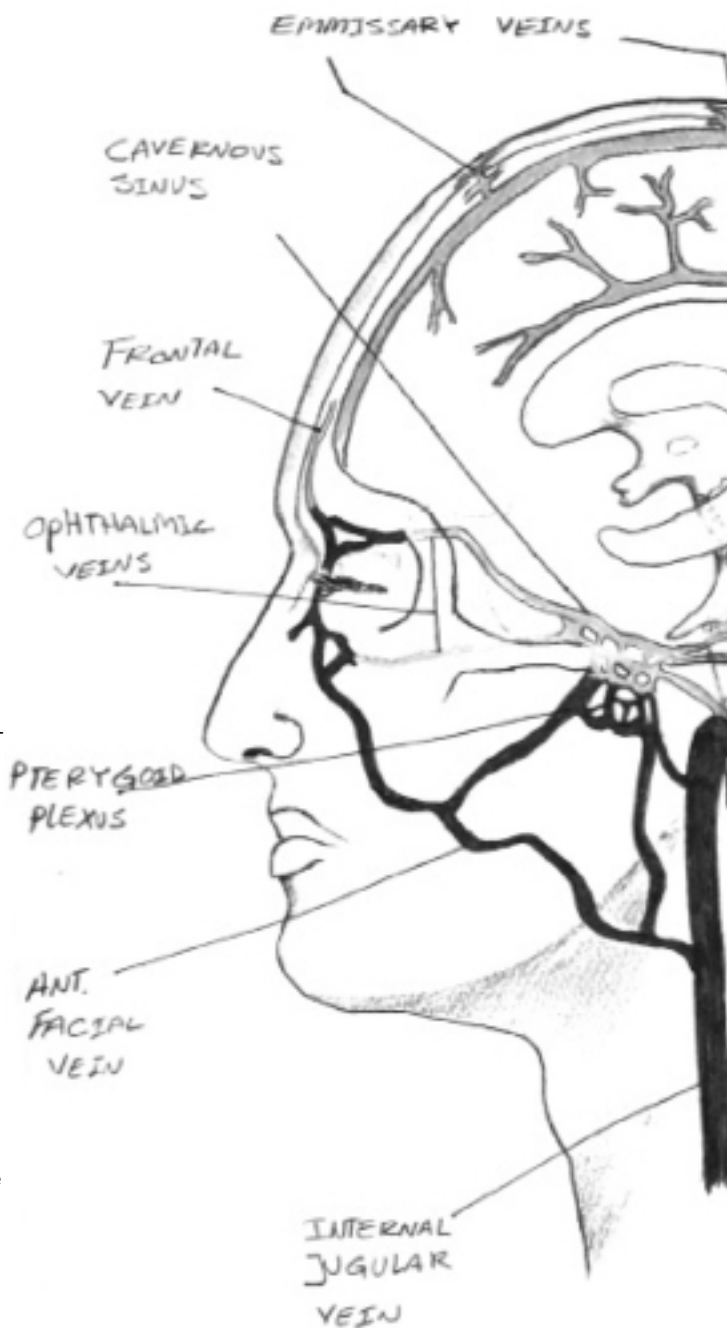
**Vascular/Neurovascular** (e.g. risk of Spinal Cord Injury and Stroke during Aortic procedures and new protective measures, new dynamic modalities of MRA & MRV in diagnostic of vascular diseases, Neurovascular imaging, Angiogenesis stimulation and stem cells research, new aggressive approach to Stroke management, endovascular treatment of Cerebral aneurysms, Vascular Disease in Patients with Multiple Sclerosis, Chronic Cerebrospinal Venous Insufficiency (CCSVI) in Pathophysiology of MS, carotid disease identification & management in Stroke prevention)

**Neuroengineering** (e.g. artificial intelligent, fractal geometry, super computing, neuro-photonics, biomaterial & tissue engineering, human brain machine interface, brain and spinal cord devices, nanomedicine, extraterrestrial/space medicine & clinical practice, software engineering, electrical and material engineering, aeronautic engineering/space medicine and radiation physics/oncology as well as robotics...)

**Nano-Bio-Electronics** (e.g. integration of stem cell/cellular therapy with nanotechnology, medical devices and imaging...)

**Spine** (e.g. regeneration, stem cell, imaging, implants and biologics, materials, hardware and techniques...)

**Policy and Business Development** (e.g. business plan workshops, health care policy issues that affect the treatment delivery, and usage of certain devices/drugs/ imaging technologies, FDA regulations and reimbursements, federal and regional regulation impacting health care delivery and research funding...)



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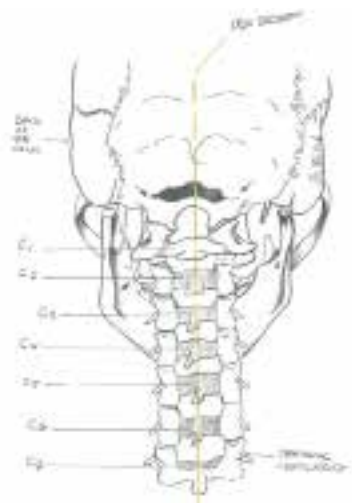


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## CONTINUING MEDICAL EDUCATION NEEDS ASSESSMENT



In recent years, astonishing advances have contributed to amazing discoveries and breakthroughs in fields of neurology, neuroscience, neurosurgery, radiology, engineering, computer science, nanotechnology, medical imaging, medical devices and cellular/stem cell therapy.

These scientific advances also have contributed to the large gap of knowledge amongst the scientists in different disciplines. One of the major challenges of 21st century for the scientific community is how to close such gaps of knowledge amongst multiple disciplines. We have designed the annual meeting of SBMT to address such challenges by bringing together world class experts across multiple disciplines.

Moreover, we have identified a need for progressive integration of nanotechnology, cellular therapy with medical devices and imaging. This is why we have chosen "Nano-Bio-Electronics: Translation, Integration and Commercialization" as the theme of the 17th Annual World Congress of SBMT at Los Angeles Convention Center. The purpose of the annual meeting is to create an interactive environment, which fosters cross-pollination of ideas and paves the way for birth of new treatment and diagnostic modalities in the field.

## REASONS TO PARTICIPATE

**Link** in with near 200,000+ scientists, engineers, surgeons and physicians on SBMT global network.

**Network** with our attendees during social events held during the conference.

**Present** in a World Class Multidisciplinary Biomedical Association.

**Meet Funding Agencies** (Foundations, government and industry).

**Meet** leaders and Pioneers in your field.

**Market** your research and ideas to investors / grant makers.

**Commercialize** your ideas.

**Publish** in PlosOne NeuroMapping and Therapeutics.

**Demonstrate** your state of the art technologies at one of the top brain and spinal cord conventions in the world.

**Gain Access** to our scientists, engineers, surgeons and physicians from multiple different disciplines at once.

**Promote** your company through multiple net-working opportunities and develop business-to-business contacts.

**Return On Investment** and increase your bottom line with face-to-face contact with potential investors.

**Competitive Advantage** Your participation at the conference provides you the opportunity to spend quality time with the leaders in the community and get your message across more effectively and efficiently.

**Obtain Continuing Medical Education (CME)** is provided by Johns Hopkins School of Medicine and Saint Louis University School of Medicine

**Interact** with a focused and attentive audience during scientific and educational activities, such as exhibitor-hosted workshops, division programming, poster sessions, and other meeting activities.

**Make The Difference** and reinforce your visibility beyond the exhibition area through discussion groups, workshops and hands on courses.

**Attract** and influence attendees at every stage of their career, from students to entry level scientists to acknowledged leaders in their scientific fields.

**Enhance** your know-how and stay abreast of industry changes and state-of-the-art in the field.

**Visit** the beautiful city of Los Angeles with its amazing sights.



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## CONTINUING MEDICAL EDUCATION JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE



JOHNS HOPKINS  
MEDICINE



### ACCREDITATION STATEMENT

The Johns Hopkins University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

### CREDIT DESIGNATION STATEMENT

CREDIT DESIGNATION STATEMENT The Johns Hopkins University School of Medicine designates this live activity for a maximum of 13.15 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### POLICY ON PRESENTER AND PROVIDER DISCLOSURE

It is the policy of the Johns Hopkins School of Medicine that the presenter and provider globally disclose conflict of interest. The Johns Hopkins School of Medicine OCME has established policies in place that will identify and resolve conflicts of interest prior to this educational activity. Detailed disclosure will be made prior to presentation of the education.

### JOHNS HOPKINS CME CERTIFICATES

Within thirty days after the close of the activity, you will be sent an email from JHU office of continuing medical education, to the address provided during registration, notifying you that your CME certificate is available for download. You will need to log-in to the online registration site in order to access and print your certificate. If you do not already have an account then you will need to create one. Please use the email that you registered with.

### Thursday, July 8, 2021

- Session A1 Advances in Movement Disorders I: DBS & Beyond
- Multimodal assessment of photoreceptor structure and function in traumatic brain injury
- Seeing the Brain Through the Eye: 21st Century Neuroimaging Applications
- Optometric Research at the Cellular Level
- The Pivotal Effect of Eyeglasses on Heart Rate Stability
- Using Near Infrared Light to Image Brain Tissue: The Golden Optical Window

### Friday, July 9, 2021

- Session A1 Advances in Movement Disorders I: DBS & Beyond
- Session A8 Neural Engineering I: Addressing Challenges in Cochlear Implants
- Session A9 Surgical Treatment of Spinal Fracture-Dislocations: Technical Nuances and Biomechanical Considerations
- Session A11 Stroke Management
- Session A20 Epilepsy and Intraoperative Brain Mapping
- Session A22 Rehabilitation and Biologics in Spine Surgery
- Session A24 Neurovascular Disorders
- Session A27 Advances in Movement Disorders III: Imaging and Other Biomarkers
- Session A32 MED/EEG Clinical Applications
- Session A33 Neural Engineering III: Computational Models for Neural Prosthesis
- Session A34 Spinal Cord Trauma from Research to Clinical Care
- Session A36 Aneurysm Management
- Brain Injury from a Legal Point of View Linking Neuroscience, Concussion and Chronic Pain

### Saturday, July 10, 2021

- Session B47 Management of the Spine Disorder
- Session B59 Neural engineering V: Multiscale (Hierarchical) model of the Nervous System
- Session B75 Neurovascular Disorders and Skull Base Disorders

### Sunday, July 11, 2021

- Session C79 Brain Mapping in Neuro-Psych-Behavior
- Session C84 MEG Sensors
- Session C88 Neurovascular Disorders
- Session C98 Neural Engineering XIII: Artificial Retina
- Patient Mood and Confidence Affected by Disrupted Visual Skills
- Impact of Optometry on Brain Function after a TBI
- Visual Testing in the 21st Century
- The Eye: Window to the Mind and Body
- Effects of Optometric Dysfunction on Quality of Life
- The Need for Neuro-Optometry during TBI Rehab





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You will need to log-in to the online registration site and complete the activity evaluation, **CLAIM THE HOURS THAT YOU ATTENDED THE JHU APPROVED SESSIONS** in order to access and print your certificate.

The link to log-in and your username will be included in the email.

## OBJECTIVES FOR JOHNS HOPKINS UNIVERSITY CME APPROVED ACTIVITIES:

### NEUROENGINEERING (Room 150A):

#### OBJECTIVES

1. Discuss recent advances in sensory Neuro-prostheses.
2. Discuss advances in the brain as a computing machine.
3. Employ recent advances in methodologies to solve complex multi-scale problems in the nervous system.
4. Analyze the latest advances in neuro-technology from the DOE national labs.
5. Explore the latest state of science in neuro-engineering and neural interface technologies.

### MEG (Room 410):

#### OBJECTIVES

1. Discuss the latest advances in MEG and EEG Techniques, software applications and future directions, and the state of Science of MEG and EEG
2. Perform detailed localization of cortically and subcortically abnormalities, seizure localization, autistic spectrum and other neurological disorders.
3. Discuss the latest advances in the use of scalp derived biometrics measures for localizing brain function.
4. Utilize objective measurements in movement disorders.
5. Discuss the latest state of science, technology and clinical application of neuromodulation
6. Demonstrate how EEG, MEG, QEEG and scalp derived Biometrics are applied in the treatment of brain function associated with the cerebellum and movement disorders.



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## OBJECTIVES FOR JOHNS HOPKINS UNIVERSITY CME APPROVED ACTIVITIES:

### Spine (Room 150 B):

#### OBJECTIVES

1. Share the latest advances in complex spine disorders and injury, including care, techniques, rehabilitation, and technology.
2. Discuss the rehabilitation of spinal cord injury, including sports injury in athletes.
3. Analyze the latest approaches to the management of the spinal cord trauma and disorders..

### Neurovascular (Room 150 B):

#### OBJECTIVES

1. Discuss the most recent advances in the management of cerebral aneurysms, cerebral AVMs and acute ischemic stroke
2. Address the challenges involved in the treatment of complex neurovascular disorders
3. Compare and contrast approaches to skull base extra-axial tumors with a focus on surgical anatomy
4. Relate artificial intelligence to the treatment of neurovascular disease

### Optometry (Room 406 A):

#### OBJECTIVES

1. Articulate that the eye is an easily accessible portal into the brain and body.
2. Utilize retinal stimulation as a treatment modality, rather than just a diagnostic tool, to affect physical, physiological, and psychological functions.
3. Integrate brain science and computer technology.





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## CONTINUING MEDICAL EDUCATION SAINT LOUIS UNIVERSITY SCHOOL OF MEDICINE



SAINT LOUIS UNIVERSITY  
SCHOOL OF MEDICINE



### ACCME Accreditation

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Saint Louis University School of Medicine and the Society of Brain Mapping & Therapeutics. Saint Louis University School of Medicine are accredited by the ACCME to provide continuing medical education for physicians.

### Credit Designation

Saint Louis University School of Medicine designates this live activity for 27.0 AMA PRA Category 1 Credits™. Due to duplicate sessions at the same time the maximum credits participants can claim are 13.5 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity. Saint Louis University School of Medicine will provide Other learner certificates (for NPs, nurses, and other types of learners). The certificate will state that the activity was designated for 13.5 AMA PRA Category 1 Credits™. Follow your board's requirements for reciprocal CE credits.

### Friday, July 9, 2021

Session A3: Alzheimer's Disease Mechanisms 1: Beyond AB and Tau  
Session A4: Novel Therapeutics for Combat Related PTSD  
Session A17: Innovative Diagnostic and Treatment Approaches in Military TBI  
Session A18: Neuro-Oncology: Stem Cell Immunology and Molecular Targeting  
Session A30: Suicide

### Saturday, July 10, 2021

Session B41: AD Diagnosis I: Biomarkers  
Session B42: Subconcussive Blast Exposure  
Session B43: Neuro-Oncology: Ablative Therapies  
Session B55: Diagnostic, Pathology and Epidemiology of TBI  
Session B56: Neuro-Oncology: Precision Medicine  
Session B67: AD Diagnosis III: Brain Imaging and Brain Stimulation (rTMS)

### Sunday, July 11, 2021

Session C82: Neuro-Oncology: Radiation Technologies  
Session C93: AD Treatment I: Traditional Targets and New Horizons  
Session C94: Rehabilitation of Chronic Brain Injury  
Session C95: Neuro-Oncology: Tumor Treating Fields  
Session C99: Neurosymposium of National Skull base Foundation(NSBF)  
Session C106: AD Treatment II: Mechanistic and Alternative Targets  
Session C112: Neurosymposium of National Skull base Foundation(NSBF)



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You will need to log-in to the online registration site and complete the activity evaluation, **CLAIM THE HOURS THAT YOU ATTENDED THE SLU APPROVED SESSIONS** in order to access and print your certificate.

The link to log-in and your username will be included in the email.

## OBJECTIVES FOR SAINT LOUIS UNIVERSITY CME APPROVED ACTIVITIES:

### Military Medicine and Neurotrauma Session Room 406B

#### OBJECTIVES

1. Describe the results of completed and active clinical trials assessing new approaches with which to treat PTSD.
2. Illustrate the mechanisms of action of novel PTSD therapies.
3. Assess the significance of the results accumulated to date, and whether they are sufficient to support the implementation of new PTSD therapies at this time.
4. Articulate the value of art therapy in military service members with mTBI.
5. Describe neuropathologic findings that can be used to distinguish between those dying of suicide and those dying of other causes.
6. Identify measures that may be useful in documenting the impact on the brain of subconcussive blast exposure during military training exercises.
7. Compare the impact of subconcussive forces on the athletic field vs. those on the battlefield.

### Neuro-Oncology Session Room 407

#### OBJECTIVES

1. Identify modern treatment options and their variants for malignant brain tumors and their integration.
2. Recognize personalized treatment options and their combinations based on molecular characteristics of malignant brain tumors.
3. Assess preclinical research activities that may lead to discoveries and new clinical trials in the treatment of malignant brain tumors.

### Alzheimer's Disease Session Room 409

1. Articulate the latest in pathophysiological theories of Alzheimer's Disease.
2. Utilize diagnostic and biomarker approaches to determine dementia and Alzheimer's Disease.
3. Review established, emerging, and future directions of treatments to manage dementia and Alzheimer's patients.





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In recent years astonishing advances have contributed to amazing discoveries and breakthroughs in fields of neurology, neuroscience, neurosurgery, radiology, engineering, computer science, nanotechnology, medical imaging, medical devices and cellular/stem cell therapy. For example: SBMT has been instrumental in introducing Infrared technology into the OR of the future by taking an engineering approach toward solving the problem of intraoperative tumor and vascular mapping. These scientific advances also have contributed to the large gap of knowledge amongst the scientists in different disciplines. One of the major challenges of 21st century for the scientific community is how to close such gaps of knowledge amongst multiple disciplines. The clear example of a gap of knowledge is lack of communication between engineers (Electrical, Material, Biomedical,...) and physicians (Neurosurgeons, neurologists and radiologists).

As the result of SBMT annual meeting we have been able to bring these fields closer together so we could also find engineering solutions to neurological disorders such as brain cancers, Alzheimer, Parkinson's and neurotrauma. Clear examples of such solutions are reflected in more than 60 publications in our last 3 special issues of neuroimage and our current PLoSOne NeuroMapping and Therapeutics journal. We have designed the annual meeting of SBMT to address neurological disorders by bringing together world class experts across multiple disciplines of engineering, neuroscience, nanoscience, imaging, molecular biology and computer science. SBMT is been leading force behind progressive integration of nanotechnology, cellular therapy with medical devices and imaging because we believe the next generation of therapies requires a creative and multidisciplinary approach. The purpose of the annual meeting is to create an interactive environment, which foster cross pollination of ideas and pave the way for birth of new treatment and diagnostic modalities in the field.

### Financial Disclosures

In accordance with the Standards for Commercial Support established by the Accreditation Council for Continuing Medical Education (ACCME), faculty, abstract reviewers, paper presenters/authors, planning committee members, staff and any others involved in planning the educational content (and the significant others of those mentioned) must disclose any relationship they or their co-authors have with commercial interests which may be related to their content. The ACCME defines "relevant financial relationships" as financial relationships in any amount occurring within the past 12 months that create a conflict of interest.

## EDUCATIONAL OBJECTIVES

**Upon completion of the scientific meeting, participants should be able to:**

- identify and apply new findings in brain mapping (BM) & therapeutics most relevant to their own sub-specialty (i.e., imaging, image guided therapy, nanotechnology, stem cell and/or device)..
- Describe the effect of the newly developed methods in medical imaging, medical devices, nanotechnology, and stem cell/cellular therapy.
- Discuss and design the possible future research and developments in BM, therapeutics and nano-bio-electronics and assess the possible impact of such research and development on their own clinical and scientific work in the future.
- Describe and assess the latest cutting-edge technological advancement in BM & therapeutics such as the emerging field of nano-bio-electronics (integration of nanotechnology with stem cell/cellular therapy, medical imaging and medical devices).
- Explain ways to build a bridge amongst multiple disciplines.
- Build bridges amongst multiple disciplines.
- Recognize advancements in other disciplines and explain how such advancements could help them formulate new diagnostics and treatment modalities.
- Discuss and describe governmental agencies, foundations, and industry roles in research and development of the field.



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## SBMT MISSION STATEMENT



SBMT is a non-profit society organized for the purpose of encouraging basic and clinical scientists as well as engineers who are interested in areas of Brain Mapping and Therapeutics to improve the diagnosis, treatment and rehabilitation of patients afflicted with neurological disorders.

This society promotes the public welfare and improves patient care through the translation of new technologies into life saving diagnostic and therapeutic procedures. The society is committed to excellence in education, and scientific discovery. The society achieves its mission through multi-disciplinary collaborations with government agencies, patient advocacy groups, educational institutes and private sector

(industry) as well as philanthropic organization. SBMT legal name and Tax ID: International Brain Mapping Society-20-2793206

## ANNUAL SBMT WORLD CONGRESS

The annual SBMT World Congress is a multi-disciplinary forum designed to facilitate crossdisciplinary dissemination of technological and medical advances and scientific discovery. Thus the attendees are a mixture of neurosurgeons, radiologists, neurologists, neuro-oncologists, psychiatrists, physiatrists, and other physicians, bioethicists, policy makers, government officials, engineers, physicists, graphic designers, neuroscientists, allied healthcare professionals, healthcare executives, students, post-docs, residents and fellows. SBMT's annual meetings are world class scientific events designed to have a significant impact on cross-disciplinary flow of information and scientific advancements







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## CHARTER OF SBMT

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The Society for Brain Mapping and Therapeutics (SBMT) was founded in 2004 to break boundaries in healthcare. The society promotes policies that support rapid, safe, and cost-effective translation of new technology into medicine. The SBMT globally promotes interdisciplinary research to improve the diagnosis, treatment, and rehabilitation of patients with central nervous system diseases regardless of race, creed, color, national origin, gender, or age. The SBMT catalyzes interactions between clinical, biological, physical and engineering sciences. The Society builds transdisciplinary and translational consortia which break down traditional barriers that impede application of new technology to medical problems. Translational research applies cutting edge basic science and advanced technologies to clinical neurosciences. The Society examines emerging disciplines such as nanotechnology, image-guided therapy, stem cell therapy, multi-modality imaging, biophotonics, and biomaterial and tissue engineering for their application to the diagnosis, treatment, and rehabilitation from neurological diseases. The Society seeks to apply these technologies to clinical problems such as brain tumors, stroke, epilepsy, neurodegenerative diseases (Parkinson, Alzheimer, multiple sclerosis and ALS), traumatic brain and spinal cord injuries, autism, post traumatic stress disorder and other psychiatric illnesses. The Society achieves its goals through meetings, fellowships, publications, international collaborations, consortiums, and policy forums. The SBMT is a nonprofit society which has obtained support from many government agencies (USA, EU and Asia), foundations, and multi-national corporations. The Society maintains its headquarters in West Hollywood, California.



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## SBMT EXECUTIVE BOARD



**Babak Kateb**

Chairman/CEO SBMT & President of  
Brain Mapping Foundation  
Research Scientist, Maxine Dunitz Neu-  
rosurgical Institute



**Ken Green**

Senior VP of Brain Mapping Foundation



**Aaron G. Filler**

13th President of SBMT (2015-2016)  
Medical Director Institute for Nerve Medi-  
cine & Neurography Institute



**Vicky Yamamoto**

Member of the Executive Board of the  
Brain Mapping Foundation



**Kuldip Sidhu**

11th President, SBMT (2013 - 2014)  
Associate Professor, Stem Cell Research,  
University of New South Wales



**Warren W. Boling**

15th President of SBMT (2017-2018)  
Professor of Neurosurgery and Chairman,  
Department of Neurosurgery, Loma Linda  
University Medical Center



**Wes Ashford**

14th President of SBMT (2016-2017)  
Director of the WRIISC, VA Palo Alto  
Health Care System



**Jeffrey C. Wang**

16th President of SBMT (2018-2019)  
Professor of Orthopedic Surgery and  
Neurosurgery, Co-Director of the USC  
Spine Center



**Robert Hariri**

SBMT President 2020-21  
Chairman, Founder and Chief Executive  
Officer, Celularity; Adjunct Professor of  
Neurosurgery, Weill Cornell Medical  
College Former Chief Executive Officer of  
Celgene Cellular Therapeutics

## SBMT BOARD MEMBERS



**Daniel Sipple**

Pain Management. Board Certified in  
Physical Medicine & Rehabilitation. Board  
Certified in Pain Medicine



**Prof. Dr. med. Katrin Amunts**

Director Institute of Neuroscience and  
Medicine (INM-1), Research Center  
Juelich, Germany



**Saleem I. Abdulrauf**

Professor & Chairman, Department  
of Neurological Surgery, Saint Louis  
University



**Christoph Ebell**

COO of a German software company  
for next generation High Performance  
Computing





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### SBMT BOARD MEMBERS



**Mike Y. Chen**

Associate Professor of Department of Neurosurgery, City of Hope Cancer Center



**Maya Koronyo-Hamaoui**

Associate Professor, Neurosurgery & Biomedical Sciences, Cedars-Sinai Medical Center



**Theodore W. Berger**

Professor of Biomedical Engineering, David Packard Chair of Engineering, Director, Center for Neural Engineering - USC Viterbi School of Engineering



**Eric Kandel**

Nobel Laureate, neuroscientist and a University Professor of biochemistry and biophysics at the College of Physicians and Surgeons at Columbia University



**Howard Federoff**

Dr. Howard Federoff named UCI vice chancellor for health affairs and dean of medicine



**Dawn S. Eliashiv**

A Professor of Neurology and Co-Director of the UCLA Seizure Disorders Center



**Rudolph E. Tanzi**

Dr. Tanzi has published roughly 500 scientific papers including the top three most cited papers in the field of Alzheimer's disease research.



**K. Nevzat Tarhan**

President, Üsküdar University



**Michael J. Roy**

9th President SBMT (2011 - 2012), Director of Internal Medicine, Arlington, Virginia, Uniform Services University Health Sciences



**Reinhard Schulte**

Professor, Basic Sciences, Division of Biomedical Engineering Sciences, School of Medicine, Loma Linda University



**Denise Kandel**

Dr. Denise Kandel's major research interests are in the epidemiology, risk factors and consequences of drug use; the epidemiology of substance dependence; comorbidity between substance use and psychiatric disorders.



**Venkat Sadanand**

Professor of Pediatric Neurosurgeon Department of Neurosurgery Loma Linda University School of Medicine



**Jeffrey C. Wang**

Jeffrey C. Wang, MD is Professor of Orthopedic Surgery and Neurosurgery, Co-Director of the USC Spine Center with an expertise in the surgical treatment of all neck and back disorders.



**Maheen Mausoo Adamson**

Senior Scientific Research Director, Defense and Veterans Brain Injury Center (DVBIC); Clinical Associate Professor Neurosurgery/Psychiatry & Behavioral Sciences, Stanford School of Medicine - VA Palo Alto Health Care System





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## SBMT BOARD MEMBERS



**Seung-Schik Yoo**

Seung-Schik is an associate professor of Radiology at Harvard Medical School, and is a director of Neuromodulation and Tissue Engineering Laboratory (NTEL), Brigham and Women's Hospital



**Robert Thatcher**

Robert Thatcher, President & CEO of Applied Neuroscience, Inc.



**Deborah Zelinsky**

Deborah Zelinsky, O.D. is an optometrist noted for her work in neuro-optometric rehabilitation. She is the founder of The Mind-Eye Institute, based in Northbrook, IL.



**Katherine Chiu**

Katherine Chiu is an Assistant Professor of Clinical Anesthesiology, University of Southern California Keck School of Medicine



**Robert Hariri**

Chairman, Founder and Chief Executive Officer, Celularity; Adjunct Professor of Neurosurgery, Weill Cornell Medical College  
Former Chief Executive Officer of Celgene Cellular Therapeutics



**Zoltan Mari**

Ruvo Family Chair and Director Parkinson's and Movement Disorders Center, Cleveland Clinic Lou Ruvo Center for Brain Health



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## SBMT EXECUTIVE STAFF

### **Babak Kateb**

Chairman/CEO SBMT & President of Brain Mapping Foundation

### **Vicky Yamamoto, PhD**

Executive Director

### **Marko Mijat, M.H.A**

Chief Operating Officer

### **David Grimes**

Director of Industry and Nonprofit Partnership

### **Bryan Aroz**

Global Director for Conventions and Events

### **Commander Ken Green, DMD (Ret. USA NAVY)**

Vice President of Foundation

### **Harry Kloor, PhD (Chem) and PhD (Physics)**

Director of Strategic Alliance

### **Christopher Wheeler, Ph.D.**

Senior Research Scientist

## SBMT RESEARCH FELLOWS

### **Joe Bolanos, M.D.**

Research fellow

### **Marco Amaya, M.D., MPH**

Research fellow

### **John Fiallos, M.D.**

Research fellow

### **Kevin Morris, M.D.**

Research fellow

### **Nataliia Fedorchenko, M.D.**

Research fellow

### **Alena Mohd-Yusof, B.A.,M.A.,CNIM**

Research fellow

### **Ebrahim Mostafavi, Ph.D.**

Research fellow

### **Solventa Krakauskaitė, Ph.D.**

Research fellow

### **Alejandro De Flippis, M.D.**

Research fellow

### **Teshia Bustos, M.D.**

Research fellow

### **Eduardo Sanchez, M.D.**

Research fellow

### **Mohammad Nami, M.D., Ph.D.**

Research fellow

### **Nikita Chintam, M.D.**

Research fellow

### **James Okereke, M.D.**

Research fellow

### **Tatsiana Serhiyenia, M.D.**

Research fellow

### **Kateryna Potapova, M.D.**

Research fellow

### **Maria Auxi Lobo, M.D.**

Research fellow

### **Susanne Strand, Ph.D.**

Research fellow

### **Jonathan Dang, M.D.**

Research fellow

### **Indira Sakibova, M.B.A.**

Policy fellow

### **Melody Sadri, B.Sc.**

Intern

### **Milena Asiryan, B.Sc.**

Intern



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*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

## SCIENTIFIC COMMITTEE

### Alzheimer's Disease Subcommittee:



**Chris Wheeler, Ph.D.**  
(Senior Research Scientist at Brain Mapping Foundation; Chief Science Officer at T-Neuro Pharma, Inc.)



**John Wesson Ashford, MD, Ph.D.**  
Director, War Related Illness & Injury Study Center, VA Palo Alto Health Care System; Clinical Professor (Affiliated), Psychiatry and Behavioral Science, Stanford University



**Maya Koronyo-Hamaoui, Ph.D.**  
(Associate Professor of Neurosurgery, Associate Professor of Biomedical Sciences, Research Scientist Maxine Dunitz Neurosurgical Institute, Cedars Sinai)



**Margaret Fahnestock, Ph.D.**  
(Professor, Department of Psychiatry & Behavioural Neurosciences, McMaster University)



**Maj-Linda Selenica, MD**  
Assistant Professor, Sanders Brown Center on Aging

### Military Medicine Subcommittee:



**Michael Roy, MD, MPH**  
Director, Division of Military Internal Medicine and Professor of Medicine, Uniformed Services University, Bethesda, MD



**Ken Green, DMD**  
Vice President of Strategic Initiatives for Government and Nonprofit Partnerships, SBMT



**Rick Starrs, MBA**



**Stuart Hoffman, Ph.D.**

### MEG/EEG Subcommittee:

#### Judith Ann Thatcher Memorial Session



**Robert Thatcher, Ph.D.**  
Applied Neuroscience, Inc., CEO and Director Applied Neuroscience Research Institute, ([www.appliedneuroscience.com](http://www.appliedneuroscience.com))



**Warren Boling, MD**  
(Professor and Chairman, Department of Neurosurgery Loma Linda University)



**Zoltan Mari, MD**  
Ruvo Family Chair and Director Parkinson's and Movement Disorders Center, Cleveland Clinic Lou Ruvo Center for Brain Health, Member of Science Committee, Chair of Movement disorders/ Neurodegenerative Diseases Subcommittee





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## SCIENTIFIC COMMITTEE

### Neuro-engineering subcommittee:

#### Warren Grundfest Neuro-Engineering Memorial



**Ted Berger, Ph.D.**  
(Director, Center for Neural Engineering,  
Professor of Biomedical Engineering, USC)



**Roger Werne, Ph.D.**  
(Senior Advisor Innovation and Partnerships  
Lawrence Livermore National Laboratory &  
Lawrence Livermore National Laboratory)



**Dong Song, Ph.D.**  
(Research Associate Professor Center for  
Neural Engineering  
Department of Biomedical Engineering  
Neuroscience Graduate Program University of  
Southern California)



**Jean-Marie C Bouteiller, Ph.D.**  
(Research Assistant Professor Department  
of Biomedical Engineering Viterbi School  
of Engineering University of Southern  
California)



**Dr. Seung-Shick Yoo**  
Seung-Schik is an associate professor of  
Radiology at Harvard Medical School, and  
is a director of Neuromodulation and Tissue  
Engineering Laboratory (NTEL), Brigham and  
Women's Hospital



**Vicky Yamamoto, PhD**  
Executive Director, Society for Brain Mapping  
and Therapeutics



**Reinhard Schulte, MD, MS**  
Professor-Division of Biomedical Engineering  
Science, Loma Linda University



**Jennifer Yu, MD**  
Radiation Oncology, Cleveland Clinic Cancer  
Center

### Neuro-Oncology Subcommittee:



**Mark Torchia**  
Vice-Provost, Executive Director-Centre Ad-  
vancement of Teaching & Learning



**Colin Watts**  
Professor of Neurosurgery; Chair Birmingham  
Brain Cancer Program,  
University of Birmingham, UK



**Terry Burns, MD, PhD**  
Assistant Professor of Neurosurgery and Neuro-  
science, Mayo Clinic



**Jethro Hu, MD**  
Cedars-Sinai - Department of Neurology  
Department of Neurosurgery



**AjitKumar Mulavara, PhD**  
CNS/BMed/Sensorimotor (CBS) Portfolio Scien-  
tist, NASA, JSC



**Thomas Williams, PhD**  
Element Scientist, NASA, JSC



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## SCIENTIFIC COMMITTEE

### Optometry/ Opioid/ Psychiatry Subcommittee:



**Deborah Zelinsky, OD**  
Founder of the Mind-Eye Institute,



**Brian Norling**  
Chief Executive Officer at MEMS Precision  
Technology, Inc



**Daniel Sipple, DO**  
Midwest Spine and Brain Institute



**Nevzat Tarhan, MD**  
Professor, Uskudar University



**Barish Metin, MD**  
Assistant Professor, Uskudar University



**Zoltan Mari, MD**  
Ruvo Family Chair and Director  
Parkinson's & Movement Disorders Center,  
Cleveland Clinic Lou Ruvo Center for Brain  
Health, Member of the Science Committee,  
Chair of Movement Disorders/Neurodegenera-  
tive Diseases Subcommittee



**Mark Liker, MD**  
Clinical Assistant Professor of Neurological  
Surgery (Part Time). Neurological Surgery. GNH  
3300 Off Campus Los Angeles

### Spine Subcommittee: John McDonald III Memorial Spine Program



**Dr Tobias Mattei**  
(Assistant Professor, Neurosurgery Division  
Saint Louis University)



**Dr Namath Hussain**  
(Neurosurgeon, Loma Linda University,  
Department of Neurosurgery)



**Dr Ann Choe**  
(Assistant Professor of Radiology and  
Radiological Science, Johns Hopkins School  
of Medicine)



**Dr Jason Cormier**  
(Neurosurgeon, Acadiana Neurosurgery)

### Legally Mind



**Art McComber,**  
(Presenter, Legally Mind  
Art spent his first career as a special agent for  
the FBI. Now, he devotes his time to teach-  
ing and helping thousands of people protect  
themselves from becoming victims of crime and  
lawsuits.



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## SCIENTIFIC COMMITTEE

### Neurovascular subcommittee



**Dr. Justin Dye**

(Assistant Professor of Neurosurgery, Loma  
Linda University)



**Dr. Saleem Abdulrauf**

(MD, MSCR, FAANS, FAHA, Professor of Neu-  
rosurgery, Saint Louis University)



**Dr. Robert Hariri**

Chairman, Founder and Chief Executive Officer,  
Celularity; Adjunct Professor of Neurosurgery, Weill  
Cornell Medical College Former Chief Executive  
Officer of Celgene Cellular Therapeutics



**Dr. Martin Mortazavi**

MD, FICS, Chairman and Director, Cerebrovas-  
cular, Skull Base & Tumor Program California  
Institute of Neuroscience





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## SBMT PROGRAM

### 1 - Scientific Meetings

This includes national meetings, international meetings, and world congress. The world congress is the society's annual meeting that invites prominent scientists and clinicians from all areas of expertise.

SCIENTIFIC EXHIBITS & POSTERS	SPECIAL FOCUS SESSIONS	STUDENT FUNDING OPPORTUNITIES
<p>Basic and Clinical Research in image guided therapy.</p> <p>Novel research and development in brain mapping and intra-operative surgical planning.</p> <p>Clinical trials.</p> <p>Bio-Ethics.</p>	<p>Governmental Regulation</p> <p>Government Education Patient Advocacy</p> <p>Healthcare Policy</p> <p>Funding Opportunities</p>	<p>Graduate and Post</p> <p>Graduate Interdisciplinary</p> <p>Fellowships Student Travel awards</p> <p>University Student chapters mentorship programs</p> <p>Scholarships for undergraduate students studying neurological disorders.</p>

### 2 – Student Chapters

The student chapters are organized to promote and encourage multi-disciplinary research across disciplines. Universities with Student Chapters qualify for student travel award starting 2012.

### 3 – Fellowships

SBMT fellowships are focused on interdisciplinary training of neurosurgeons, neurologists, radiologists and rehabilitation physicians, neuroscientists and engineers on diseases that has major Social impact such as Traumatic brain and spinal cord injuries, neuro-oncology and neurodegenerative diseases. The fellowships are design to apply state-of-the-art research through the study of biomedical science and cutting edge technologies to clinical problems. These scholarship are awarded to masters students, pre-doctoral, and post-doctoral fellows.

### 4 – Visiting Scholars Program

Visiting scholars program facilitates exchange of scientific investigators and policy experts with other countries and institutions through participating SBMT centers. The goal of the visiting scholar program is to develop collaborations between physical and biological sciences and address major policy issues relevant to the society.



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## 5 – World Congresses

**2019** - LA Convention Center

**2018** - Millenium Biltmore Hotel, LA, California

**2017** - Millenium Biltmore Hotel, LA, California

**2016** - Miami Convention Center, Florida

**2015** - LA Convention Center

**2014** - Sydney, Australia

**2013** - Baltimore, MD, USA

**2012** - Toronto, Ontario, Canada

**2011** - San Francisco, CA, USA

**2010** - USUHS, Bethesda, Maryland, USA

**2009** - HARVARD Medical School Boston, MA,

**2008** - UCLA California Nano-system Institute,  
Los Angeles, CA, USA

**2007** - Washington DC, USA

**2006** - Clairmont-Ferrand, France

**2005** - Pasadena, CA, USA

**2004** - USC Keck School of Medicine, CA, USA

### ***SBMT Annual Meeting Organizers Encourage Cross-Disciplinary Subjects:***

- Image guided systems
- Neurovascular coupling and Perfusion imaging
- ISP & Image guided surgery (OR of the future)
- BM and ISP in Stereotactic Radiosurgery (proton Therapy, Novalis, Tomo-therapy, Varian system, Xknife, gamma knife and cyberknife technologies will be compared and contrasted)
- Molecular and cellular imaging including: the use of nanoparticles for stem cell and T-cell imaging
- Neuro Anatomy and histopathology in brain mapping
- Nanoscience, genomics, computational informatics genetics in brain mapping
- Rehabilitation Medicine (e.g. TBI, Stroke, Spinal Cord Injury)
- Novel imaging techniques for TBI and PTSD (eg. DTI, PET,SPECT) NeuroImaging for Psychiatric Diseases (eg. PTSD, Autism,Schizophrenia) Nanoscience, genomics, computational informatics genetics in brain mapping
- Neurophysiology (EEG, MEG, Evoked Potentials, EMG/NCS,ESM) · Functional brain mapping (fMRI, PET, SPECT, Intrinsic Signal Optical Imaging)
- Brain Mapping and Intra-operative Surgical Planning using Endoscopy Biophotonic techniques for Brain Mapping · Multi-modality imaging techniques
- Ultrasound Imaging
- Magnetic Resonance Spectroscopic Imaging
- High-field and low-field magnetic resonance High-field and low-field MRI, MR Spectroscopic Imaging, micro MRI Magneto encephalographic
- Transcranial Magnetic Stimulation Cerebral White Matter Mapping and Imaging, (eg. Diffusion Tensor Imaging) Neural Prosthesis & Robotics (Human Brain machine Interface technology)
- Minimally invasive therapy for traumatic brain injury (TBI) imaging modalities for detecting mild/mod TBI, micro-TBI Socioeconomic, Ethical, and Healthcare issues related to the brain mapping and intra-operative surgical planning



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## 6 – Seed Grants

SBMT, in partnership with Brain mapping Foundation and other foundations is planning to provide seed grants to encourage cross disciplinary collaboration. The purpose of these grants is to bridge physical and biological sciences and encourage cross disciplinary collaboration.

## 7 – Industry Partners

SBMT encourages support from private industry and provides industry with a forum to present their latest advances. The society recognizes the role of industry in translating cutting-edge research and technology into the market. SBMT is currently partnering with more than 100 multi-national corporations.

## 8 – Society Publications

The Society has successfully published 3 special issues with NeuroImage. We have reached out to more than 50,000 scientists worldwide through our partnership with Elsevier in the last several years. Recently, SBMT partnered with PloSOne publishing giant to launch special Collection /publication called: NeuroMapping and Therapeutics ([www.PloSOne.org](http://www.PloSOne.org)) PloSOne is one of the largest Open access Publishers in the world. This partnership has enabled SBMT to reach out to a larger audience of scientists. <https://www.worldbrainmapping.org/Publications/>

## 9 – Legislation and Initiatives

The society works actively with the representatives of various governments in order to leverage its resources and focus attention on healthcare issues through interdisciplinary collaborations. In this regard, SBMT has partnered with Brain Mapping Foundation (BMF) and held 9 Annual Brain Mapping Days at the US Congress. The organization has held Brain Mapping Days at the Australian and Canadian Parliaments. Please visit the following link for a list of current initiatives: <https://www.worldbrainmapping.org/Legislation-and-Initiatives/>

## 10 – Healthcare Policy

The first healthcare policy advocacy of SBMT was done in 2004 when the organization pushed for funding for a collaborative network through the office of the Honorable Barbara Boxer and Dian Feinstein of California. In 2008 SBMT introduced formation of Science, Technology, Medicine and Law- Healthcare Policy (STML-Hub) to the US Congress and house of representative in order to establish a center for introducing technological and scientific advancements to the policy makers. The organization hoped that through this hub we could educate policymakers about the state-of-the-art science. This could help policy In 2012 with the help and support of Congressman Moran and Congressional Neuroscience Caucus SBMT advocated report language on “Multidisciplinary Brain Research”. The report language passed through the House and Senate with significant and overwhelming bipartisan support. This legislation





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may enable DoD to better focused on integrating nanotechnology, stem cell and cellular therapy and medical imaging/devices in order to rapidly provide solutions for the wounded warriors and civilians with neurological disorders such as PTSD and TBI.

## 11 – Outreach Program / Student Chapters

Outreach programs including woman and minority in sciences and community awareness of new technology, science and medical advancements. This includes high school and college educational programs run through student chapters worldwide.

## 12 – Global Physician and Scientists (GPS)

GPS is a humanitarian program, which is focused on mobilizing physicians, scientist and surgeons to serve for few weeks in the poor and rural areas of the United States and abroad. This program will collaborate with industry and government officials and will use the national and international SBMT centers as bases of operations.

## 13 – Neuroscience 20

The G20 World Brain Mapping & Therapeutic Scientific Summit aims to contribute to President Obama's BRAIN initiative and to expand action on the current and upcoming initiatives across the G20 nations, bringing the finest scientists, engineers, physicians and surgeons across the globe in order to rapidly introduce clinical solutions for neurological disorders, which cost the world economy hundreds of billions of dollars annually. G20 World Brain Mapping Summit was launched in 2014 on the initiative of The Society for Brain Mapping and Therapeutics (SBMT).[1]

<https://www.worldbrainmapping.org/G20-World-Brain-Mapping-Therapeutics-Initiative/>

## 14. Brain Technology and Innovation Park (BTIP)

### **Purpose of the Brain Technology & Innovation Park (BTIP) Initiative:**

To expedite introduction of diagnostics & therapeutics for neurological disorders by facilitating strategic partnership amongst governmental agencies, academia, various stage biotech & pharmaceutical companies, startups, non-profit organizations, philanthropists, venture funds, hedge funds & angel investors for an Investor Symposium & Workshop



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## LETTER FROM THE FOUNDER



With President Obama at the White House;  
Brain Initiative announcement April 2, 2013

### Babak Kateb, MD

*Founding Chairman of the  
Board of Directors  
CEO and Scientific Director  
Society for Brain Mapping &  
Therapeutics (SBMT)*

*President & Scientific Director  
Brain Mapping Foundation*

*Director / National Centre for  
Nano-Bio-Electronics / Los Angeles / CA*

*Director / Brain Technology and Innova-  
tion Park / Los Angeles / California*

*Chairman / Neuroscience-20+/G20  
Summit World Brain Mapping and  
Therapeutics Initiative*

*Editor / The Textbook of Nanoneurosci-  
ence and Nanoneurosurgery*

*Editor / Textbook of NeuroPhotonics  
and Brain Mapping*

Let me start by congratulating our Presidents of SBMT Dr. Jason Cormier, Dr. Robert Hariri, and Dr. Saleem Abdulrauf, for their visionary leadership and for working closely with me and 12 different committees who helped us organizing one of the largest world congresses for brain mapping so far! We thank our corporates, non-profits, government agencies and academic partners. This program could not be possible without their generous supports and contributions. I also thank our supporters, staff, fellows and volunteers for their amazing dedication and assistance with this convention.

This year, we have more than 900 speakers in 116 scientific sessions, practical sessions, cadaver labs (brain and spine) and 12 keynote speakers, who highlight advances made in their own respective disciplines, which could impact our field. We have worked with 100+ scientists to build a scientific program that showcases current advances in the fields such as AI-Neuro, Nanoneurosurgery, Neurophotonics, MEMS/NEMS and their application in clinical neuroscience.

SBMT and its members are proud to be a part of over a decade of scientific accomplishments, which include more than 2000 publications, more than 4000 presentations, significant involvement in President Obama's BRAIN Initiative, establishment of G20 Brain Mapping and Therapeutics Initiative/ Neuroscience-20, establishment of African Brain Initiative, establishment of Middle East and North Africa Brain Mapping Initiative, passing of a congressional report language on the defense appropriation bill, and the Brain Technology and Innovation Park (BTIP) Initiative.

In the past 18 years, SBMT has recognized 127 top scientists, technologists, policymakers, students, humanitarians, and advocates. The organization has published the inaugural textbooks of NanoNeurosurgery and Neurophotonics, facilitated countless game-changing clinical trials on Alzheimer's disease, Parkinson's disease, brain cancer and neurotrauma. SBMT also established our Atlas, student chapters in colleges and universities, partnership with major associations, and new guideline committee for standardization.

SBMT members have been pioneers in the field by introducing a new retinal imaging to diagnose Alzheimer's disease, creating microwave device to treat cancers (brain, breast, prostate, lung, liver, head and neck), inventing new nano-drugs to treat brain diseases, implementing policies that could support such game-changing approach and introducing new metadata analysis repository data in the field.

I congratulate the award recipients this year who have made a huge stride in advancing the field from basic science and engineering to medicine and policy. While we are celebrating our past and current achievements this year, we are planning the future for the organization as we expand globally. Our work has just begun, and it will not be finished until we find cures for neurological disorders such as ALS, autism, brain cancer, Alzheimer's, Parkinson's, and traumatic brain injuries, just to name a few. However, we can only achieve this if we work together.



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I congratulate the award recipients this year who have made a huge stride in advancing the field from basic science and engineering to medicine and policy.

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I hope you will enjoy this remarkable scientific meeting this year, which is all recorded and will be available online for our members and hope to see you in 17th annual World Brain Mapping Congress in Los Angeles, CA! (July 9, 10, 11, 2021).

Respectfully yours,

**Dr. Babak Kateb,**

*Founding Chairman of the Board of SBMT, President of Brain Mapping Foundation, Director of National Center for NanoBioElectronics*





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## SBMT- 19th President's Letter

I am both humbled and honored to be elected as the 19th president of the Society of Brain Mapping and Therapeutics. It has been an extreme privilege to be part of such an elite group of scientists, in addition to the movement towards a safer world environment, especially in the face of a very challenging time in global health and mental illness. Thinking about both the immediate and long-term effects from the Global COVID-19 pandemic, the economic catastrophes led to more complicated issues not only from a medical health standpoint, it burdened several workforce's with depression and other mental health issues. The Society of Brain Mapping and Therapeutics remained engaged from pushing global policy to publishing landmark papers, particularly the most recent and most comprehensive review of Covid-19. Additionally, the organization distributed 700 meals to the frontline workers during the pandemic and the curfew but also advocated for the California proposition 14, which is a \$5.5B intended for stem cell and other medical research, including training; stem cell therapy development and delivery; research facility construction; and associated administrative expenses. \$1.5 billion dedicated to research and therapy for Alzheimer's, Parkinson's, stroke, epilepsy, and other brain and central nervous system diseases and conditions. It will further provide for the expansion programs promoting stem cell and other medical research, therapy development and delivery, and student and physician training and fellowships.

As president of the Society of Brain Mapping and Therapeutics, my vision and goals remain furthering global policies for fast-tracking therapeutics, impacting thoughtful regulatory reform in collaboration with the FDA and encouraging a more innovative application of technologies, like infrared thermal technology, not only for prescreening of COVID19/flu patients but also for integrating it more into the clinical setting. I will also work with 20 subcommittees within the Society of Brain Mapping and Therapeutics to help transform the treatment of dementias, degenerative neurological diseases, and brain cancer with the same urgency by which we have tackled this pandemic. I understand these are ambitious goals, but I believe that the Society and its vast global network could help achieve this vision with the collaborative efforts as they continue to strengthen, the Technological advances are both urgent and necessary.

As a neurosurgeon, I have and will continue to advocate and utilize emerging technologies such as neurophotonics, nanotechnology, Artificial intelligence/machine learning, stem cell/cellular therapeutics, augmented reality, virtual reality, avatar, supercomputing, and predictive modeling in my operating room during brain surgery, which are fostered by studies, clinical trials and research consortia conducted by Dr Kateb and Society of Brain Mapping and Therapeutics subcommittees. Such technologies are now respected and embraced by Neurosurgery and Neuroscience communities. This is an all inclusive effort with Diversity of ideas, backgrounds, gender, and races in science bringing forth innovation. It will be my ongoing mission to encourage an even more diverse and cross disciplinary work at SBMT with more participation by our female and minorities colleagues so we can create a united front to address neurological disorders. These endeavors, will continue to be the transformational voice that is heard and never silenced.

My predecessor, Professor Robert Hariri, MD, PhD, and I continue a push for prioritizing cellular therapy and stem cell use for the treatment of neurological disorders. Dr. Hariri's leadership during the pandemic years brought us a global unity and collaboration for introducing an FDA approved Celularity immunotherapy treatment for COVID19. We will continue building on this momentum by building more collaboration across institutions across the globe, which will capitalize of the society's global reputation and popularity. I am deeply confident that together with the SBMT leadership we will foster those relationships while substantiating the bridge to the industry, other associations, non-profits, academic centers, and investment community partners. We will also make our Brain Technology and Innovation Park initiative a priority and work with the President Biden and Vice President Harris to make this vision a reality. I would also like to take this opportunity to congratulate President Joe Biden and VP Harris for their steadfast approach to the American recovery and strongly belief BTIP align with their vision for creating biotech jobs in the USA.

I am grateful for this opportunity and look forward to the challenging year ahead for achieve the society's mission and vision.



**Jason Cormier, MD**

*President, SBMT 2021-2022*

*19th President of the SBMT*

*Neurosurgeon, Acadiana  
Neurosurgery*



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## World Congress of Society for Brain Mapping and Therapeutics

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## SBMT- 18th President's Letter

It is a unique honor and privilege to be elected the 18th President of the Society of Brain Mapping and Therapeutics (SBMT), particularly at such an historically challenging time in global health. This Society, created under the brilliant and visionary leadership of Dr. Babak Kateb and through its diverse and talented membership, has the gravity and influence to help shape the future of not only the treatment of neurological diseases but a range of other systemic maladies. The Society can accomplish this by bringing together innovators from the medical, basic science, information technology, pharmaceutical and biotechnology industries with policy makers in government to identify and characterize the major challenges in health care which manifest themselves through effects on the brain and design solutions in the form of diagnostics and therapeutics. Through the voice the Society gives us, we can be an effective force directing resources and human capital to those problems which impact health and the human condition.

As a surgeon-scientist, industry executive, inventor and entrepreneur I have worked to build cross disciplinary teams which can tackle complex clinical, scientific and technical challenges by focusing on the bottom line: how to deliver results with full accountability. As President of the Society of Brain Mapping and Therapeutics, my vision is to inventory of strengths and capabilities, identify our targets for change and enlisting the membership to make a meaningful contribution through the forum we have within and outside of our community. As I sit writing to you in the throes of the Global COVID-19 crisis I cannot help but believe the Society must be more engaged in the global policies for fast-tracking therapeutics, impacting thoughtful regulatory reform and encouraging a bolder and more innovative application of technologies to transform the treatment of dementias, degenerative neurological diseases and brain cancer with the same urgency by which we will tackle this pandemic. It will be my mission to encourage this culture in our community.

Like my predecessor, Professor Saleem Abdulrauf, I envision collaboration across institutions on multiple continents which will capitalize of the society's global reputation and popularity. I see my role as both a champion for the society and as bridge to the industry and investment community partners with whom we can engage to create a more powerful and sustainable voice in society.

I am grateful for this opportunity and look forward to a challenging and exciting year ahead for the Society of Brain Mapping and Therapeutics.



**Robert Hariri, MD, PhD**

*President, SBMT 2020-21*

*18th President of the SBMT*

*Chairman, Founder and Chief  
Executive Officer, Celularity;*

*Adjunct Professor of Neurosurgery,  
Weill Cornell Medical College*

*Former Chief Executive Officer of  
Celgene Cellular Therapeutics*





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## World Congress of Society for Brain Mapping and Therapeutics

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## SBMT- 17th President's Letter

I am honored and humbled to be elected the 17th President of the Society of Brain Mapping and Therapeutics (SBMT). I fully embrace the concept that led to the founding of this society by Dr. Babak Kateb. This concept is based on bringing together innovators from the scientific, technology, industry, and government arenas to form a "Think Tank" to fast forward our understanding of the Brain and the treatment of diseases that affect it.

As the President of the Walter E Dandy Neurosurgical Society, I have developed relationships with key leaders within this specialty worldwide. Perhaps more importantly, the Dandy Society is becoming the educational home for young neurosurgeons globally. These young leaders in the field of neurosurgery could significantly expand their contributions in the educational and research arenas by collaborating with the SBMT clinicians and scientists. I envision collaborative educational forums between the two societies in multiple continents. Likewise, I envision collaborations in basic science, clinical and translational research trials (institutional, national, and multinational).

My key role will be to deepen the neurosurgical footprint of the SBMT while at the same time reach out to our colleagues from the various clinical and scientific disciplines that make up this organization to make sure that their ideas and contributions are welcomed and expanded.



**Saleem Abdulrauf, MD**

*President, SBMT 2019-21*

*17th President of the SBMT*

*Professor and Chairman, Department  
of Neurosurgery*

*Saint Louis University, St. Louis. USA.*





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### Keynote Speakers

**Friday July 9<sup>th</sup>**

**Location - Concourse Hall 151**

**8:20- 9:00 am –**

#### **Congressman Ro Khanna**

Representative Ro Khanna represents California's 17th Congressional District, located in the heart of Silicon Valley, and is serving his third term. Rep. Khanna sits on the House Committees on Agriculture, Armed Services, and Oversight and Reform, where he chairs the Environmental Subcommittee. Additionally, Rep. Khanna is the Deputy Whip of the Congressional Progressive Caucus; serves as an Assistant Whip for the Democratic Caucus and is the Democratic Vice Chair of the House Caucus on India and Indian Americans.

Rep. Khanna is working to ensure our nation is focused on creating new tech jobs across the country, particularly for American left behind, and investing in science and technology to win the 21st Century. This includes job training programs, economic development initiatives, re-wiring the U.S. labor market, and debt-free college to help working families prepare for the future. He is also committed to advancing a foreign policy of military restraint and diplomatic engagement. Instead of spending trillions on wars overseas, Rep. Khanna believes we should invest in priorities at home like Medicare for All, Debt Free College, and a new 21st Century infrastructure.

A dedicated political reformer, Rep. Khanna is one of only a few members of Congress to refuse contributions from PACs and lobbyists. He also supports a 12-year term limit for Members of Congress and a constitutional amendment to overturn Citizens United.

Rep. Khanna was born in Philadelphia, PA, during America's bicentennial, to a middle-class family. Both of his parents immigrated to the United States in the 1970s from India in search of opportunity and a better life for their children. His father is a chemical engineer and his mother is a substitute school teacher. Rep. Khanna's commitment to public service was inspired by his grandfather who was active in Gandhi's independence movement, worked with Lala Lajpat Rai in India, and spent several years in jail for promoting human rights.

Prior to serving in Congress, Rep. Khanna taught economics at Stanford University, law at Santa Clara University, and American Jurisprudence at San Francisco State University. He wrote the book *Entrepreneurial Nation: Why Manufacturing is Still Key to America's Future* and worked as a lawyer specializing in intellectual property law. Rep. Khanna served in President Barack Obama's administration as Deputy Assistant Secretary at the U.S. Department of Commerce. In 2012, California Governor Jerry Brown appointed him to the California Workforce Investment Board. He has also provided pro bono legal counsel to Hurricane Katrina victims with the Mississippi Center for Justice, and co-authored an amicus brief on the fair housing U.S. Supreme Court case, *Mount Holly v. Mt. Holly Gardens Citizens in Action, Inc.*

Rep. Khanna graduated Phi Beta Kappa with a B.A. in Economics from the University of Chicago and received a law degree from Yale University. As a student at the University of Chicago, he walked precincts during Barack Obama's first campaign for the Illinois Senate in 1996. In his free time, Rep. Khanna enjoys cheering for the Golden State Warriors, watching movies, and traveling. He and his wife Ritu call Fremont, CA, home.





# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

**9:00- 9:30 am –**

### **Dr. Robert Hariri**

#### **“The Future of Cellular Medicine and Functional Regeneration”**

18<sup>th</sup> president of SBMT- He is the chairperson, founder, and chief executive officer of Celularity, Inc., one of the world's leading human cellular therapeutics companies. Dr. Hariri was the founder and CEO of Anthrogenesis Corporation, and after its acquisition by Celgene Corporation, served as CEO of Celgene Cellular Therapeutics. Dr. Hariri also co-founded the genomic-based health intelligence company, Human Longevity, Inc. Dr. Hariri has served on numerous public boards including Cryoport (NASDAQ:CYRX).



Dr. Hariri completed his undergraduate training at Columbia University School of Engineering and Applied Sciences and Columbia College. He received his M.D. and Ph.D. degrees from Cornell University, where he was the recipient of both the Julian R. Rachele Award and the Doctoral Dissertation Award. He was a surgical resident and fellow in neurosurgery at The New York Hospital-Cornell Medical Center and served as an Assistant Professor of Neurosurgery and Associate Research Professor of Surgery at Cornell and Co-director of the Aitken Laboratory in Neurosurgery.

Dr. Hariri pioneered the use of stem cells to treat a range of life-threatening human diseases and continues today to make transformative contributions in the fields of immuno-oncology and cell therapeutics along with tissue engineering and functional regeneration. He is widely acknowledged for his discovery of pluripotent stem cells derived from the human placenta, and as a member of the team that discovered the physiological activities of tumor necrosis factor (TNF). Dr. Hariri and his team of scientists were the first to obtain FDA approval to use its cryopreserved allogeneic, off-the-shelf Natural Killer (NK) cell therapy to treat COVID-19 infected adults. He holds over 170 issued and pending patents for discoveries including placenta-derived stem cells, which Nature recognized as one of the ten most important patent estates in the field. He has authored over 150 published chapters, articles, and abstracts.

Dr. Hariri was the recipient of the Pontifical Medal for Innovation awarded by Pope Francis in 2018 for his discovery of placental stem cells and advances in immunotherapy and regenerative medicine. Dr. Hariri twice received the Thomas Alva Edison Award for invention, in 2007 and 2011, and is a recipient of the Children's Brain Tumor Foundation's Fred J. Epstein Lifetime Achievement Award. Dr. Hariri was recipient of the Genius of New Jersey Award in 2019 and over the years has received numerous other honors for his many contributions to the fields of biomedicine and aviation.

Dr. Hariri is an Adjunct Professor of Neurosurgery and member of the Board of Overseers of the Weill Cornell Medical College and a former member of the board of visitors of the Columbia University School of Engineering and Applied Sciences, and the Science & Technology Council of the College of Physicians and Surgeons. He is a member of the X PRIZE Foundation scientific advisory board for the Archon X PRIZE for Genomics. Dr. Hariri is a trustee and vice-chair of the Liberty Science Center. In 2010 he was appointed a Commissioner of Cancer Research by New Jersey Governor Chris Christie.



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

**Friday July 9<sup>th</sup>**

**Location - Concourse Hall 151**

**12:00- 12:30 pm –**

**Dr. Martin M Mortazavi**

**“Modern concepts for Surgical Treatment Intracranial Aneurysm”**



Dr. Martin Mortazavi is an integral member of the neurosurgical society. He graduated from the Karolinska Institute, School of Medicine and completed his residency in Neurological Surgery at The University of Alabama in Birmingham, under tutelage of Mark Hadley, Winfield Fisher and Shane Tubbs, where he received several awards including the Morawetz and the Beverley Walters Research Awards. Further advancing his neurosurgical knowledge, Dr. Mortazavi pursued a postdoctoral research fellowship in neurotrauma and regeneration at Barrow Neurological Institute under the mentorship of Nicholas Theodore and Robert Spetzler, during which he received the American Association of Neurological Surgeons Synthes Spinal Cord Award. He pursued two clinical fellowships in Skull Base and Cerebrovascular neurosurgery under the tutelage of world-renowned pioneers of neurosurgery, Takanori Fukushima in Japan, and Laligam Sekhar at The University of Washington in Seattle.

Dr. Mortazavi holds an ongoing interest in advancing the field of neurological surgery. He has authored and co-authored more than 100 scientific papers and book chapters that have been published in well-known neurosurgical journals, he has mentored many undergraduate and graduate scientists and neurosurgical residents. He is a member of 10 Editorial Boards of scientific journals and numerous professional organizations including the American Association of Neurological Surgeons, the Congress of Neurological Surgeons, the American Medical Association, North American Skull Base Society, International College of Surgeons, and Cerebrovascular section of the Congress of Neurological Surgeons.





# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

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**12:30 – 1:00 pm-**

### **Dr. Jason Cormier**

#### **“Advances in Spine and Neurotrauma”**

Dr. Cormier is a native of South Louisiana, where he graduated from St Thomas More High School in Lafayette, La. A former LSU basketball player and graduate of Louisiana State University in Baton Rouge, he went on to receive his medical degree from Louisiana State University in New Orleans, Louisiana. He became eligible for the Alpha Omega Alpha Medical Honor society and served on several committees, including the LSU School of Medicine Admissions Committee, the LSU School of Medicine Dean's Selection Committee and was the medical school's representative to the Louisiana Board of Supervisors in 2004. He received a number of scholarships and was a member of many different societies. Dr. Cormier also dedicated his time on a monthly basis to the Student Run Homeless clinic in New Orleans, La.



Dr. Cormier joined Acadiana Neurosurgery and its founder Dr. Alan Appley after his internship in general surgery and neurosurgery at Duke University Medical Center in Durham, NC and the completion of his training at the University of Alabama at Birmingham in Birmingham AL. During his training, he gained extensive experience in complex spinal surgery under the direction of Dr. Mark N. Hadley and associates. He also received special training in minimally invasive spinal surgery as well as open and endoscopic brain surgery. He has published articles in national journals involving the fields of Adult and Pediatric spine and epilepsy. In 2005 he served on the Council of State Neurological Society in 2005 as a representative of Alabama to the American Association of Neurological Surgeons. He received the Resident Leadership Award from the Division of Neurological Surgery at the University of Alabama at Birmingham for "his dedication to promoting the art and science of Neurosurgery, demonstrating outstanding clinical skills, offering leadership by word and example and providing mentorship to junior residents."

Dr. Cormier maintains his interests to train Neurosurgeons of tomorrow and will be teaching both medical students and residents many innovative neurosurgical techniques including endoscopic pituitary and image-guided surgery, and minimally invasive complex spinal surgery. Dr. Cormier was named as one of "America's Top Surgeons," in the field of Neurosurgery, by the Consumers Research Council of America, Guide to America's top surgeons.

Dr. Cormier is a member of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons and is board eligible in neurological surgery.

In his own words, "It's great to be back home. I have been truly blessed."



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

**Saturday July 10<sup>th</sup>**  
**Location - Concourse Hall 151**

**8:30- 9:30am-**

**Dr. Deepak Chopra**

**“The Case against Reality”**



**Dr. Chetan Prakash**

Emeritus Professor of Mathematics, CSUSB  
Founder President and Head Aikido  
Instructor, Redlands Aikikai, a School of Meditative  
and Martial Arts



**Dr. Menas Kafatos**

Professor, Fletcher Jones Endowed Professor of Computational  
Physics, Director, Center of Excellence in Earth Systems Modeling  
and Observations, Schmid College of Science and Technology;  
Computational and Data Science

Founder of The Chopra Foundation, a non-profit entity for research on well-being and humanitarianism, and Chopra Global, a whole health company at the intersection of science and spirituality, is a world-renowned pioneer in integrative medicine and personal transformation. Chopra is a Clinical Professor of Family Medicine and Public Health at the University of California, San Diego and serves as a senior scientist with Gallup Organization. He is the author of over 90 books translated into over forty-three languages, including numerous New York Times bestsellers. His 90th book and national bestseller, *Metahuman: Unleashing Your Infinite Potential* (Harmony Books), unlocks the secrets to moving beyond our present limitations to access a field of infinite possibilities. For the last thirty years, Chopra has been at the forefront of the meditation revolution and his latest book, *Total Meditation* (Harmony Book, September 22, 2020) will help to achieve new dimensions of stress-free living and joyful living. TIME magazine has described Dr. Chopra as “one of the top 100 heroes and icons of the century.”

Deepak Chopra's popularity as an international presenter and keynote speaker is exemplified in an impressive list of honorariums. Chopra is the recipient of the 2012 Police Athletic League Humanitarian Award, 2012 Mandala Award for Humanitarian Achievement – Rubin Museum of Art, 2012 Asian American Arts Alliance Honoree, 2010 GOI Peace Award, 2010, Starlite Humanitarian Award, 2010 Art for Life Honoree, 2009 Oceana Partners Award, 2008 Mattie J. T. Stepanek Peacemaker Award Honoree – We Are Family Foundation, 2006 Ellis Island Medal of Honor presented by the National Ethnic Coalition of Organizations Foundation, and 2006 Trailblazer Award by the Scripps Center for Integrative Medicine, 2002 Einstein Humanitarian Award through Albert Einstein College of Medicine in collaboration with the American Journal of Psychotherapy, 2002 Books for a Better Life Hall of Fame Award, 1999 Citation of the Medal of the Presidency of the Italian Republic by the Pio Manzu International Scientific Committee. He participates annually as a lecturer at the Update in Internal Medicine event sponsored by Harvard Medical School, Department of Continuing Education and the Department of Medicine, Beth Israel Deaconess Medical Center since 1997.



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

**12:00- 12:30 pm –**

**General Mark A Milley (TBD)**



General Mark A. Milley is the 20th Chairman of the Joint Chiefs of Staff, the nation's highest-ranking military officer, and the principal military advisor to the President, Secretary of Defense, and National Security Council.

Prior to becoming Chairman on October 1, 2019, General Milley served as the 39th Chief of Staff of the U.S. Army. A native of Massachusetts, General Milley graduated from Princeton University in 1980, where he received his commission from Army ROTC. General Milley has had multiple command and staff positions in eight divisions and Special Forces throughout the last 39 years to include command of the 1st Battalion, 506th Infantry, 2nd Infantry Division; the 2nd Brigade, 10th Mountain Division; Deputy Commanding General, 101st Airborne Division (Air Assault); Commanding General, 10th Mountain Division; Commanding General, III Corps; and Commanding General, U.S. Army Forces Command.

While serving as the Commanding General, III Corps, General Milley deployed as the Commanding General, International Security Assistance Force Joint Command and Deputy Commanding General, U.S. Forces Afghanistan. General Milley's joint assignments also include the Joint Staff operations directorate and as a Military Assistant to the Secretary of Defense.

General Milley's operational deployments include the Multi-National Force and Observers, Sinai, Egypt; Operation Just Cause, Panama; Operation Uphold Democracy, Haiti; Operation Joint Endeavor, Bosnia-Herzegovina; Operation Iraqi Freedom, Iraq; and three tours during Operation Enduring Freedom, Afghanistan. He also deployed to Somalia and Colombia.

In addition to his bachelor's degree in political science from Princeton University, General Milley has a master's degree in international relations from Columbia University and one from the U.S. Naval War College in national security and strategic studies. He is also a graduate of the MIT Seminar XXI National Security Studies Program. General Milley and his wife, Hollyanne, have been married for more than 34 years and have two children.





# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

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**12:45- 1:15pm -**

**Dr. Saleem Abdulrauf**

**“The Future of Neurovascular and Skull- base  
Neurosurgery”**



Professor Saleem I. Abdulrauf is the Neurosurgeon-in-Chief of the Abdulrauf Institute of Neurosurgery™. He is the founding Chairman of the Department of Neurosurgery at Saint Louis University, St. Louis, Missouri, USA. He is considered a leading figure in the field of neurosurgery. He has served as a visiting professor to over 100 universities around the globe. He has authored the main reference textbook for brain bypass surgery titled “Cerebral Revascularization” in which Dr. Abdulrauf details extra-cranial to intra- cranial bypass surgery. Additionally, he has pioneered a procedure for brain bypass surgery that is named after him. He has served on the boards of multiple neurosurgical societies including the Congress of Neurological Surgeons (CNS), the North American Skull Base Society (NASBS), and the World Federation of Skull Base Societies (WFSBS) and was the 17th President of the Society for Brain Mapping and Therapeutics (SBMT). His most preeminent role was his appointment as the inaugural Global President of the Walter E. Dandy Neurosurgical Society, which is considered the primary international society for operative neurosurgery.



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

### Sunday July 11<sup>th</sup> Location - Concourse Hall 151

**8:30- 9:00 am –**

#### **Dr. Andre Machado**

#### **“Deep Brain Stimulation of the Cerebellothalamocortical Pathway for Post-Stroke Rehabilitation. A translational study.”**

Dr. Machado is the Chairman of the Neurological Institute and the Charles and Christine Carroll Family Endowed Chair in Functional Neurosurgery. Dr. Machado performs deep brain stimulation (DBS) surgery for patients with Parkinson’s disease, tremor, dystonia and obsessive-compulsive disorder as well as surgical procedures for patients with trigeminal neuralgia, intractable pain syndromes and spasticity.

Dr. Machado received his medical degree from the University of Sao Paulo in 1997. He completed his residency in the same institution in 2003 and obtained his Ph.D. in 2004. He came to the Cleveland Clinic in 2004, completed his fellowship in Stereotactic and Functional Neurosurgery in 2006 and has been on the staff of the Cleveland Clinic since then.

Dr. Machado is the program director for education in Stereotactic and Functional Neurosurgery and won the “Teacher of the year award” from the Department of Neurosurgery in 2009. Dr. Machado is Full Staff in the Department of Neurosurgery with Joint Appointments in the Department of Neuroscience and in the Department of Biomedical Engineering at the Cleveland Clinic Lerner Research Institute. He is the current Chairman for the Joint Pain Section of the CNS/AANS and he is a Board Member of the American Society of Stereotactic and Functional Neurosurgery.

Dr. Machado leads several deep brain stimulation and neuromodulation clinical trials as well as laboratory research. His research in deep brain stimulation for thalamic pain syndrome was awarded the National Institutes of Health Director’s New Innovator’s Award. In addition, he conducts deep brain stimulation research for treatment refractory depression as well as obsessive compulsive disorder. His laboratory in the Lerner Research Institute is focused in developing new strategies for utilizing neuroprosthetic devices such as DBS to improve post-stroke rehabilitation. His current NIH funded research is aimed at evaluating the effects of deep cerebellar stimulation on post-stroke perilesional plasticity and recovery of function.

Dr. Machado is the author of several peer reviewed publications and chapters in stereotactic and functional neurosurgery.





# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

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### Sunday July 11<sup>th</sup> Location - Concourse Hall 151

**9:00- 9:30 am-**

#### **John Adler**

##### **“Global Access to Radiosurgery”**

He was born in Yonkers, New York, in 1954. He graduated at Harvard

College in 1976 and at Harvard Medical School in 1980. From 1980

to 1987 he did a neurosurgical residency at Massachusetts General Hospital and Brigham and Women's Hospital and a radiosurgery fellowship at the Karolinska Institute in Sweden, where he worked

with Lars Leksell. He joined the faculty of Stanford University School of Medicine in 1987 as an assistant professor in the department of neurosurgery in 1987, was also, made an assistant professor in radiation oncology in 1992, was made an associate professor in both departments in 1993, and was made a full professor in both departments in 1998. In 2007 he was named the Dorothy and Thye King Chan Professor in neurosurgery. He was eventually appointed an emeritus professor of neurosurgery.

In 1985 he did a one-year fellowship in Sweden with Lars Leksell, who had invented a device to deliver targeted radiation at brain tumors, called the Gamma Knife. He was astonished and inspired but saw an opportunity to improve it. The Gamma Knife relied on a physical cage to coordinate the location of the subject's head and the device delivering the radiation; Adler wanted to use medical images to guide the beam, instead of the cage. When he returned to Stanford he worked with faculty in the engineering school to build a prototype and by 1987 was pitching his company to venture capitalists. They rejected his idea because the machines were enormous and expensive (the estimated price at that time was \$3.5M), so he raised \$800,000 from other neurosurgeons, friends, and family, and started a company, Accuray, in 1990. Adler served as chief medical officer, remaining on the Stanford faculty. The company ran out of money in 1994 and had other struggles; Adler took a leave of absence from Stanford in 1999 and took over as CEO, serving in that role until 2002, when he stepped back into being CMO. As of 2005, the company was selling about two machines each month.

In 2009, Adler founded *Curēus.com* (originally known as peerEmed.com), a web-based peer-reviewed medical journal that combines attributes of traditional expert review and social networks with the objective of fairly compensating reviewers and authors

In April 2010, Adler was appointed vice president and chief of New Clinical Applications at Varian Medical Systems. Since 2015 he has served as the founder and CEO of Zap Surgical Systems. The company's flagship project was presented in Europe in 2018 at the "Frontiers of Radiosurgery" scientific symposium and adopted for the first time in Europe in 2020. In 2018 Adler was awarded the Cushing Award for Technical Excellence and Innovation in Neurosurgery, presented at the AANS Annual Scientific Meeting. He is the father of Trip Adler, co-founder and CEO of Scribd, an American e- book and audiobook subscription service that includes one million titles.







# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

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**Sunday July 11<sup>th</sup>**  
**Location - Concourse Hall 151**

**12:00- 12:30pm –**

**Dr. Qin Wang**

**“The Noradrenergic Link Between Amyloid and Tau”**



Dr. Qin Wang received her M.D. degree from Beijing Medical University, China. After traveling to the US, she obtained her Ph.D. degree in December 1999 from University of Iowa. She then did her postdoc work at Vanderbilt University, where she was appointed as a Research Assistant Professor two years later. In June 2005, Dr. Wang joined UAB as an Assistant Professor.

The long-term goal of her research is to reveal novel regulatory pathways controlling G protein-coupled receptors (GPCRs) functions at the molecular and cellular levels and to understand how these regulatory mechanisms influence GPCR-elicited physiological functions in vivo, so as to provide new insights for therapeutic strategies. Current projects include: 1) regulation of alpha2A adrenergic receptor trafficking and signaling in native neurons exploiting gene knock-in and knock-out mice; 2) regulation of adenosine-mediated synaptic plasticity and behavior; 3) neuroprotective functions of the alpha2A adrenergic receptor in neurodegenerative diseases.



# 17/18th Annual

## World Congress of Society for Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*

## Map and Talks Locations





Room 409 A	Room 407	Room 406A
<p>11</p>		<p>12</p>

Break	E6 Neurogenetic and Epigenetic Mechanisms of Hypodysmatelia in Reward Deficiency Syndrome: Genetic Addiction Risk Tooling with Pro-Dopamine Regulation	E7 Stem Oncology: Biomarkers and Diagnosis and Monitoring	E8 Electrical Signal Pathways
3:30-5:00 PM	Co-Chair: David Boren and Rajendra D. Badgiani	Chair: Chantelle Poyssikera and Juliana Mueller-Bark	Chair: Christopher Tyler

7:00 AM	Delegate Registration
8:00 – 8:20am Concourse Hall 151	Opening Remark: Babak Kateb, Founder of SBMT and Vicky Yamamoto, SBMT Executive Director and Cancer Scientist, USC-Neck School of Medicine Department of Head and Neck Surgery, Welcoming message

5:00-6:30 PM	Music at the Exhibit hall
6:30-7:00 PM	1 with the Honorable Ro Khanna (Location TBD)
7:30-8:30 PM	Board of Directors Dinner Meeting (Location TBD)







Friday, July 9<sup>th</sup> 10:00-11:30 am PDT

**A1: Advances in Movement Disorders I: DBS & Beyond (JHU CME)**



*Chairs: Dr. Zoltan Mari, Ruvo Family Chair and Director Parkinson's & Movement Disorders Center, Cleveland Clinic Lou Ruvo Center for Brain Health, Member of the Science Committee, Chair of Movement Disorders/Neurodegenerative Diseases Subcommittee)*



*Dr. Mark Liker, Clinical Assistant Professor of Neurological Surgery (Part Time). Neurological Surgery. GNH 3300 Off Campus Los Angeles*

**10:00-10:15 am:** Dr. Mark Liker

Neurosurgery, Keck Hospital of University of Southern California, Division of Neurosurgery

**DBS for pediatric secondary dystonia as a model for targeting novel indications**

**10:15-10:30 am:** Dr. Terence Sanger

Professor University of Southern California, UCI, Professor of Electrical Engineering and Computer Science. CHOC, Child Neurology

**Dystonia is a pattern disorder, and DBS is a pattern treatment**

**10:30-11:00 am:** Dr. Kelly Mills

Director, Professor of Neurology, John Hopkins, Movement Disorders Division

**Advances in functional neurosurgery**

**11:00-11:15 am:** Dr. Elliot Hogg

Director, Professor of Neurology, Cedars-Sinai Medical Center, Caron and Steven D. Broidy Chair in Movement Disorders, Director, Movement Disorders Program, Vice Chair, Department of Neurology

**Advanced Treatments for ET**

**11:15-11:30 am:** Session Discussion

## **A14: Advances in Movement Disorders II: Overview of New Treatments in Parkinson Disease**



*Chairs: Dr. Zoltan Mari, Ruvo Family Chair and Director Parkinson's & Movement Disorders Center, Cleveland Clinic Lou Ruvo Center for Brain Health, Member of the Science Committee, Chair of Movement Disorders/Neurodegenerative Diseases Subcommittee)*



*Dr. Mark Liker, Clinical Assistant Professor of Neurological Surgery (Part Time). Neurological Surgery. GNH 3300 Off Campus Los Angeles*

**1:30-1:45 pm:** Dr. Zoltan Mari

Director, Cleveland Clinic Lou Ruvo Center for Brain Health,

### **Disease modification and neuroprotective clinical trials**

**1:45-2:00 pm:** Dr. Ejaz A. Shamim,

Chief, (Kaiser Permanente) Chief of neurology

### **Parkinson's Disease: General Treatments and Selected Emerging Therapies**

**2:00-2:15 pm:** Dr. Gregory Pontone

Director, Professor, Johns Hopkins Director, Parkinson's Disease Neuropsychiatry Clinic, Associate Professor of Psychiatry and Behavioral Sciences

### **Advances in Neuropsychiatric treatment of PD**

**2:15-2:30 pm:** Dr. Yousef Salimpour

Assistant Professor, (The Johns Hopkins Hospital) Assistant Professor of Neurosurgery

### **Phase-dependent neuromodulation for treating Parkinson's disease**

**2:30-2:45 pm:** Dr. Roy Alcalay,

Associate Professor (Columbia University) Professor of Neurology (in the Taub Institute), member of the Movement Disorders Division at Columbia University Irving Medical Center

### **Genetic biomarkers in Parkinson's Disease**

**2:45-3:00 pm:** Session Discussion



Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

## **A27: (John Hopkins University CME) Advance in Movement Disorders III: Imaging and Other Biomarkers**



*Chair: Dr. Virendra Mishra- Associate Staff Cleveland Clinic) Cleveland Clinic Lou Ruvo Center for Brain Health*

**3:30-3:45 pm:** Dr. Virendra Mishra  
Associate Staff (Cleveland Clinic) Cleveland Clinic Lou Ruvo Center for Brain Health

### **Utility of Advanced MRI techniques to understand Parkinson's disease**

**3:45-4:00 pm** Dr. Liana Rosenthal  
Director, Professor, (Johns Hopkins School of Medicine) Director, Ataxia Center; Director, Clinical Core of the Morris K. Udall Centers of Excellence for Parkinson's Disease Research, Assistant Professor of Neurology

### **Could inflow-based vascular space occupancy (iVASO) MRI be a marker for cognitive change in Parkinson's disease?**

**4:00-4:30 pm:** Dr. Codrin Lungu  
Director, NIH Program director Division of Clinical Research

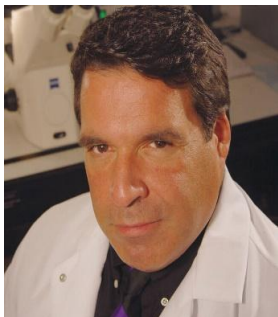
### **Parkinson's Disease treatment priorities for the next decade**

**4:30-4:45 pm:** Dr. Ryan Walsh  
Director, Barrow Neurological Institute Huntington's Disease Program

### **Imaging Parkinson's Disease: You Can't Treat What You Can't See**

**4:45-5:00 pm:** Session Discussion

## **B39: Celularity Neurovascular, Skullbase and Endovascular Bioskills labs (Cadaver labs)**



*Chairs: Dr. Robert Hariri, 18th President of SBMT and member of the Executive board of SBMT, Chairman, Founder and Chief Executive Officer, Celularity; Adjunct Professor of Neurosurgery, Weill Cornell Medical College, Former Chief Executive Officer of Celgene Cellular Therapeutics*



*Dr. Martin Mortazavi, Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience*



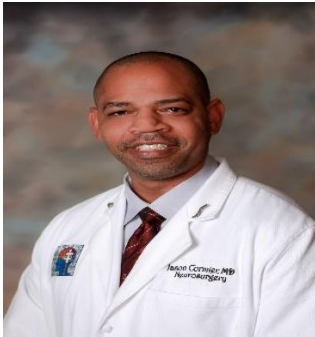
*Dr. Justin Dye, Assistant Professor of Neurosurgery, Loma Linda University)*

Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

**B52: Spine Bioskills labs Cadaver Lab**



*Chairs: Dr. Namath Hussain, Neurosurgeon, Loma Linda University, Department of Neurosurgery*



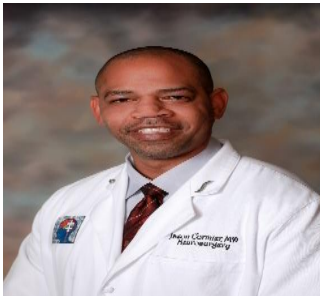
*Dr. Jason Cormier, Neurosurgeon, Acadiana Neurosurgery*



**B65: Spine Bioskills labs (Cadaver labs)**



*Chairs: Dr. Namath Hussain, Neurosurgeon, Loma Linda University, Department of Neurosurgery*



*Dr. Jason Cormier, Neurosurgeon, Acadiana Neurosurgery*

## **B78: Epilepsy and Neurophysiology**



*Chairs: Dr. Antal Berenyi, Adjunct Assistant Professor, University of Szeged, Hungary. New York University*



*Dr. Yousef Salimpour, Assistant Professor of Neurosurgery, The John Hopkins Hospital*

**10:00-10:15 am:** Dr. Brach Poston

Assistant Professor, University of Nevada, Las Vegas Department of Kinesiology and Nutrition Sciences

### **Transcranial direct current stimulation to improve motor function in Parkinson's disease**

**10:15-10:30 am:** Dr. Teresa Arroyo-Gallego

Chief, NQ- Medical, Chief Data Scientist

### **Deep brain stimulation for post-stroke motor rehabilitation: a translational project.**

**11:00-11:15 am:** Dr. Antal Berenyi

Assistant Professor, (University of Szeged, Hungary. New York University) Adjunct Assistant Professor

### **Oscillotherapy – Closed-loop transcranial electric stimulation in epilepsy and PTSD**

**11:15-11:30 am:** Session Discussion

## **C91: Advances in Movement Disorders IV: Telemedicine**



*Chairs: Dr. Esther Cubo, Hospital Universitario Burgos, Spain  
Neurologist*



*Dr Meredith Spindler, Assistant Professor of Clinical Neurology Perelman School of Medicine, University of Pennsylvania*

**1:00-1:30 pm:** Dr. Esther Cubo,

Attending Neurologist and Investigator, Neurology Department, Hospital General Yague, Burgos, Spain

### ***Covid-19 impact on global teleneurology***

**1:30-1:45 pm:** Dr. Meredith Spindler

Director, (U Penn) Associate Clinical Director, Parkinson's Disease and Movement Disorders Center

### ***How to set up your Teleneurology practice***

**1:45-2:00 pm:** Dr. Emile Moukheiber

Assistant Professor of Neurology, Johns Hopkins

### **Medical education and training in the era of COVID**

**2:00-2:30 pm:** Session Discussion



Sunday, July 11<sup>th</sup> 3:30-4:45 pm PDT

## **C104: Advances in Movement Disorders V: Objective Monitoring Technology in Movement Disorders**



*Chair: Dr. Yousef Salimpour, Assistant Professor of Neurosurgery, The John Hopkins Hospital*

**3:30-3:45 pm:** Dr. Roongroj Bhidayasiri  
Professor, Chulalongkorn University Hospital) Professor, Founder and Director of Movement Disorders Center in Thailand

### **Digital phenotyping in Parkinson's Disease**

**3:45-4:00 pm:** Dr. Ou Bai  
Professor, Florida International University, Associate Professor

### **EEG-Based Neurophysiological study in PD with Freezing of Gait**

**4:00-4:15 pm:** Dr. Naoufel Ouerchefan  
Neurologist, Fosch Hospital

### **Spinal Cord Stimulation for Peripheral Vascular Disease**

**4:15-4:30 pm:** Dr. Teresa Arroyo-Gallego  
Chief, NQ- Medical, Chief Data Scientist

### **Typing measures as biomarkers in Parkinson's Disease**

**4:30-4:45 pm:** Dr. Yousef Salimpour  
Assistant Professor of Neurosurgery, The Johns Hopkins Hospital

### **Objective Evaluation of Motor Symptoms in Parkinson's Disease Via a Dual System of Optical Hand Tracking Sensors**

**4:45-5:00 pm:** Session Discussion

# Society for Brain Mapping and Therapeutics (SBMT) Psychiatry Conference 2021:

Room 409A



**Thursday, July 8<sup>th</sup> 10:00-11:30 am PDT**

## ***E1: (Lifetime Attention Disorders and Related Co-morbidities)***



Chairs: Dr. Mohammad Nami  
(Head of the Department of  
Neuroscience,  
Cognitive Neuroscience, Sleep Expert.  
Head of the Department of Neuroscience,  
Shiraz University of Medical Science



Dr. Alero Mayuku-Dore

**10:00-10:15 am:** Dr. Ali A. Asadi-Pooya

Professor of Epileptology, Director, Shiraz Epilepsy Center and Epilepsy Surgery Program, Department of Neurology, Shiraz University of Medical Sciences, Shiraz, Iran Adjunct Research Associate Professor, Department of Neurology, Thomas Jefferson University, Philadelphia, PA, USA

### **Epilepsy and attention deficit in adults and young Kids**

**10:15-10:30 am:** Dr. Mohammad Nami

Head of the Department of Neuroscience Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

### **Psychosomatic features in ADD; A Neuropsychiatry Perspective**

**10:30-10:45 am:** Dr. Prasun Chakrabarti

Professor, Provost and Institute Endowed Distinguished Professor, Techno India NJR Institute of Technology, Udaipur, Rajasthan, India, and Adjunct Distinguished Professor, Thu Dau Mot University, Vietnam

### **Novel Perspectives in the Study of ADHD using Artificial Intelligence and Neuro-Informatics**

**10:45-11:00 am:** Dr. Marsha Chinichian

Clinical Psychologist, Professor, Chief Science Officer, Clinical Psychology, Pepperdine University Graduate School of Education and Psychology, Los Angeles, CA, USA

### **ASD and the Vagus Nerve: An evidence based neural exercise for children and adults with ASD**

**11:00-11:15 am:** Dr. Iman Ghodratiostani

Senior Researcher, Neuroengineering Laboratory (NEL), University of São Paulo-USP, São Paulo, Brazil

### **Neuro-Cognitive Rehabilitation in Attention Disorders; the Role of Modern Technologies**

**11:15-11:30 am:** Session Discussion



### ***E3: Autism Spectrum Disorders Highlights***



*Chairs: Dr. Mohammad Nami (Head of the Department of Neuroscience, Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran)*

**1:30-1:45 pm:** Dr. Nicole Jafari

Founder/CEO: Cross Cultural Research & Educational Institute, CSULB & CSUF

#### **The Efficacy of Music Therapy as an Interventional Instrument: An Evaluative Study of Autistic Children**

**1:45-2:00 pm:** Dr. Javad Salehi Fadardi

Research Associate Professor, Department of Psychology, Ferdowsi University, Mashhad Iran, and Claremont Graduate University, Claremont, CA, USA

#### **Motivation, Brain and, then What?**

**2:00-2:15 pm:** Dr. Marsha Chinichian

Clinical Psychologist, Professor, The Pepperdine University Graduate School of Education and Psychology (GSEP), LA, CA Autistic Spectrum Disorders, CBT and beyond

#### **ASD and the Vagus Nerve: An evidence based neural exercise for children and adults with ASD**

**2:15-2:30 pm:** Dr. Mehdi Tehranidoost

Professor of Psychiatry, Department of Psychiatry, Division of Child and Adolescents Psychiatry, Tehran University of Medical Sciences, Tehran, Iran

#### **Investigating Deficits in Executive Functions of Adults with Attention Deficit Hyperactivity Disorder**

**2:30-2:45 pm:** Dr. Richa Mirsha

Associate Professor, Vishwaniketan's Institute of management, Entrepreneurship, and Engineering Technology, Khalapur, Maharashtra, INDIA

#### **Neuro-nutrition and attention span in patients with Neurodevelopmental, behavioral and intellectual disorders**

**2:45-3:00 pm:** Session Discussion



## ***E6: Neurogenetic and Epigenetic Mechanisms of Hypodopaminergia in Reward Deficiency Syndrome: Genetic Addiction Risk Testing with Pro-Dopamine Regulation***



*Chairs: David Baron*

*Senior Vice President and Provost of the Western  
Sciences University of Health Sciences*



*Rajendra D Badgaiyan*

*Chairman of the Department of Psychiatry and Behavioral  
at Richmond University Medical Center, and Professor of  
Psychiatry at Icahn School of Medicine at Mount Sinai*

**3:30-3:45 pm:** Dr. Mark S Gold

Emeritus Chair University of Florida, and Professor Department of Psychiatry, Washington University School of Medicine, St. Louis, MO

**How research showing Substance Use Disorder (SUD) are diseases of the brain changed theory and treatment.**

**3:45-4:00 pm:** Dr. Joseph A. Flaherty

Professor & Director, Alcohol Research Center, Department of Psychiatry, University of Illinois Chicago and Jesse Bwon VA Medical Center, Chicago IL

**Role of EZH2 mediated epigenetic reprogramming in adult psychopathology after adolescent alcohol exposure**

**4:00-4:15 pm:** Dr. Jean Lud Cadet

Chief, Molecular Neuropsychiatry Branch, NIH, NIDA, Baltimore, MD

**Epigenetic basis of Methamphetamine Use Disorder (MUD)**

**4:15-4:30 pm:** Dr. Panyotis K Thanos

Senior Research Scientist, Clinical & Research Institute on Addiction – and Associate Professor, Department of Pharmacology & Toxicology, Buffalo University, Jacobs School of Medicine & Biomedical Sciences, Buffalo, NY

**Mapping the brain circuitry of obesity and drug abuse**

**4:30-4:45 pm:** Dr. Kenneth Blum

Professor, Graduate College Western University Health Sciences, Pomona, CA and Chairman, The Kenneth Blum Behavioral & Neurogenetic Institute (Division of iVitalize, Inc.), Austin TX

**Reward Deficiency Syndrome (RDS) A Cytoarchitectural Common Neurobiological Trait of All Addictions**

**4:45-5:00 pm:** Session Discussion



## ***A2: Rising Mental Illness Disorders Related to the COVID-19 Pandemic***



***Dr. Nesrin Dilbaz***  
***Director in Ankara Numune Hospital***

**10:00-10:15 am:** Dr. Nesrin Dilbaz  
Director in Ankara Numune Hospital

### **Psychiatric disorders and their treatments during COVID-19**

**10:15-10:30 am:** Dr. Amy Hessler  
Director, Clinical Clerkship, University of Kentucky

**TBD**

**10:30-10:45 am:** Dr. Nevzat Tarhan  
Professor, Uskudar University,

### **Post-Covid Maturation**

**10:45-11:00 am:** Dr. Özlem Kızılkurt  
Asist. Prof. Faculty of Medicine / Department of Mental Health and Diseases / FHSS / Psychology

### **Psychological impact of Covid-19 pandemic: from the perspective of resilience and hopelessness**

**11:00-11:15 am:** Dr. Baris Metin  
Assistant Professor, Uskudar University

### **Neurological complications and electrophysiological findings during Covid-19 infection**

**11:00-11:30 am:** Session Discussion

**Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT**

**A15: Mood Disorders**



*Chairs: Foojan Zeine (Psychotherapist, Life Coach, PsyD, LMFT Personal Growth Institute)*



*Dr. Kevin Morris: CEO Morris Lifesciences and Technologies*

**1:30-1:45 pm:** Dr. Zhi-De Deng

Director of the Computational Neurostimulation Research Program, Noninvasive Neuromodulation Unit, at the National Institute of Mental Health.

**Advances in Transcranial Magnetic Stimulation and Electroconvulsive Therapy for Treatment of Depression**

**1:45-2:00 pm:** Dr. Foojan Zeine

Psychotherapist, Life Coach, PsyD, LMFT Personal Growth Institute

**Awareness integration Model to treat depression and anxiety**

**2:00-2:15 pm:** Dr. Roger S. McIntyre

Executive Director of the Brain and Cognition Discovery Foundation in Toronto, Canada. AND Director for the Depression and Bipolar Support Alliance (DBSA) from Chicago, Ill. University of Toronto, Canada

**Mood disorders and cognitive decline - E-health**

**2:15-2:30pm:** Dr. Sam Mandel

Anesthesiologist with a master in psychology. Founder/President- Ketamine Clinics. Founder/President American Society of Ketamine Physicians (ASKP), Ketamine Clinics Los Angeles

**Ketamine Infusion in Clinic**

**2:30-2:45 pm:** Dr. Lauren Taus

LCSW and Stephen Taus MD, Social worker, Psychedelic support

**The Power of Relationship, Preparation and Integration in Ketamine Assisted Psychotherapy**

**2:45-3:00 pm:** Session Discussion



## A28: The Role of Sleep in Psychiatric Disorders



*Chairs: Dr. Mohammad Nami (Head of the Department of Neuroscience, Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran)*



*Dr. Alero Mayuku-Dore*

**3:30-3:45 pm:** Dr. Amir Sharafkhaneh

Pulmonary Med, Sleep Expert, Pulmonary Med, Critical Care Medicine, Sleep Expert Baylor College of Medicine Houston, Tx, USA

### **Intermittent Hypoxia as a model of linking OSA and psychiatric symptoms: Context, Issue and Resolutions**

**3:45-4:00 pm:** Dr. KS Jagannatha Rao

President, Neurobiology, Neuroscience President, Neuroscience Center, INDICASAT-AIP, Panama City, Panama

### **Sleep and Brain Plasticity: Neuropsychiatric Implications**

**4:00-4:15 pm:** Dr. Shima Sazegari

Neurobiologist, Sleep Expert, Swiss Alternative Medicine Geneva, Switzerland

### **Inclusive Brain Health and the Integrative Approach to Sleep Efficiency**

**4:15-4:30 pm:** Dr. Mauro Manconi

Neurologist, Sleep Expert, Head of the Service at the Sleep and Epilepsy Centre of the Neurocenter of Southern Switzerland, Lugano, Switzerland

### **Nocturnal Epilepsy and Psychiatric Consequences: Context, Issue and Resolutions**

**4:30-4:45 pm:** Dr. Mohammad Nami

Head of the Department of Neuroscience, Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

### **Neuromodulation in Behavioral Sleep Disorders: Hits and Misses**

**4:45-5:00 pm:** Session Discussion

**Saturday July 10th 10:00-11:30 am PDT**

***B40: The Psychological, Physiological, and Social Factors of Substance Abuse and Addiction***



***Dr. Daniel Sipple***  
*Physical Medicine Physician,  
Midwest Spine and Brain  
Institute*



***Dr Eric Braverman***  
*Director of PATH medical*

**10:00-10:15 am:** Dr. Mark Ereth  
Emeritus Professor of Anesthesiology, Mayo Clinic College of Medicine

**Mitigating Post-Surgical Opioids with Peripheral Nerve Blocks**

**10:15-10:30 am:** Dr. Daniel Sipple  
Physical Medicine Physician, Midwest Spine and Brain Institute

**Upstream Prevention of Addiction: Sustained Release Local Anesthetics, Attachment Based Interventions**

**10:30-10:45 am:** Dr. Denise B. Kandel  
Head of the Department of Epidemiology of Substance Abuse at the New York State Psychiatric Institute, Professor of Sociomedical Sciences and Psychiatry at Columbia University

**Medical Use and Misuse of Prescription Opioids by Parents and their Adolescent Children in the US**

**10:45-11:00 am:** Dr. Kenneth Blum  
Professor, Graduate College Western University Health Sciences, Pomona, CA and Chairman, The Kenneth Blum Behavioral & Neurogenetic Institute (Division of iVitalize, Inc.), Austin TX

Dr. Eric R. Braverman  
Medical director of PATH Medical and coordinator of clinical research for PATH Foundation

Dr. David Baron  
Prof. and Executive Vice Chair, Dept of Psychiatry, Keck Hospital of USC, USC Norris Comprehensive Cancer Center

Dr. Mark S. Gold  
Emeritus Chair University of Florida, and Professor Department of Psychiatry, Washington University School of Medicine, St. Louis, MO

**High Genetic Addiction Risk Severity and Attenuated Affect in Chronic Opioid Use Disorder: Requiring Mandated Psychoactive Urine Screening**

**11:00-11:30** Session Discussion

**B53: Opioid Addiction: Treatment**



*Chairs: Dr. Nicholas J. Dogris & Tiffany Thompson CEO and Co-founder, NeuroField, Inc.*



*Dr. Brian Norling, Chief Executive Officer at MEMS Precision Technology, Inc*

**1:00-1:15 pm:** Dr. Nicholas J. Dogris

PhD & Tiffany Thompson, PhD, CEO and Co-founder, NeuroField, Inc.

**The Effect of tDCS/tACS/tRNS & pEMF Neuromodulation on Acute Opiate Detoxification.**

**1:15-1:30 pm:** Dr. Oliver Morgan

Professor, Counseling and Human Services, University of Scranton

**Addiction, Attachment, Trauma and Recovery"- Conceiving of the addict as a member of the collective within a social context, rather than an isolated individual is a paradigm shift in addiction treatment**

**1:30-1:45 pm:** Dr. Candy S. Hwang

Assistant Professor, Southern Connecticut State University

**A novel vaccine to treat heroin addiction and block lethal overdose is nearly ready for human testing**

**1:45-2:00 pm:** Dr. Jeff McNairy

Chief Medical Office, Chief Medical Officer at Rythmia Life Advancement Center, Rythmia Life Advancement Center.

**NuHeart/Afterglow; Addiction Treatment Using Plant Medicine.**

**2:00-2:15 pm:** Dr. David Frenz

Pain Psychiatrist, and Director of Pain Medicine, at M Health

**Use of Compounded Nasal Ketamine in Addiction Management**

**2:15-2:30 pm:** Session Discussion





*Chairs: Dr. Daniel Sipple (Physical Medicine Physician, Midwest Spine and Brain Institute)*



*Dr. Jake Hutchins, University of Minnesota Medical Center (Anesthesiology)*

**3:15-3:30 pm:** Dr. Greg Boyle

Founder, Catholic Church, Homeboy Industries

**Disorganized attachment and incarceration in drug abuse**

**3:30-3:45 pm:** Dr. Tom Meier

Faculty Director, Professor, CAO, Nuway

**Applied Behaviour Economics in Substance Abuse**

**3:45-4:00 pm:** Dr. Dave Wensel

Chief Medical Officer, Midland Care Connection

**PACE model for disenfranchised Veterans**

**4:00-4:15 pm:** Dr. Rajeev Chavan

Principal Controller of defence accounts India

**Societal impact of the opioid crisis in India**

**4:15-4:30 pm:** Session Discussion



*Chairs: Dr. Nevzat T. Tarhan (Professor of Psychiatry, President/Rector, Uskudar University, Istanbul Turkey)*



*Dr. Barish Metin (Assistant Professor, Uskudar University)*

**10:00-10:15 am:** Dr. Nevzat Tarhan  
Professor, Uskudar University

### **Introduction and Facilitating**

**10:15-10:30 am:** Dr. Osman Cerezci  
Assistant Professor, Uskudar University

### **Human Exposure to Electromagnetic Pollution in the living areas**

**10:30-10:45 am:** Dr. Barish Metin  
Assistant Professor, Uskudar University

### **Neuropsychiatric damage caused by wi-fi signals: Are we overlooking a serious threat**

**10:45-11:00 am:** Dr. Türker Tekin Ergüzel  
Assistant Professor, Uskudar University

### **Predicting Health Effects of Electromagnetic Pollution Using Fuzzy Logic**

**11:00-11:15 am:** Dr. Selim Seker  
Professor, Uskudar University

### **Estimating Biological Changes in Human Brain**

**11:15-11:30** Session Discussion



*Chairs: Dr. Mohammad Nami (Head of the Department of Neuroscience, Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran)*



*Dr. Alero Mayuku-Dore*

**1:00-1:15 pm:** Dr. Diana Oviedo

Research Coordinator, Affective Neuroscience, Cognitive Psychology, Neuroscience Center, INDICASAT-AIP, Panama City, Panama

### **COVID-Induced Anxiety Disorder linked to Long-COVID symptoms**

**1:15-1:30 pm:** Dr. Corey Emerick

Licensed Professional Counselor, Owner of SantaVie, Affective Neuroscience, Cognitive Psychology, The Santavie, Nashville, TN, USA From Fear Related Memories to PTSD; What Affective Neuroscience and Brain Mapping Inform Us

### **From Fear Related Memories to PTSD; What Affective Neuroscience and Brain Mapping Inform Us**

**1:30-1:45 pm:** Dr. Farshad Nazaraghaei

Founder of FG Meditation and IBH Co-Founder, Human Consciousness, Neurophysiology, Fars Meditation Academy, Iran & University of Banglore, India Conquering Worry through Geometric Somatic Breathing Based Meditation; A Clinical Report

### **Conquering Worry through Geometric Somatic Breathing Based Meditation; A Clinical Report**

**1:45-2:00 pm:** Dr. Ali Ghabeli,

Neurologist & Researcher, Neurology, Headache Disorders Fellow, Hull University Teaching Hospitals NHS Trust, Hull, East Yorkshire, UK

### **Headache and Anxiety Disorders; A two-way street**

**2:00-2:15 pm:** Dr. Mohammad Nami

\_Head of the Department of Neuroscience, Cognitive Neuroscience, Sleep Expert. Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

### **Treatment of anxiety disorders; A 2021 Update**

**2:15-2:30 pm:** Session Discussion

**C105: Panel Discussion on COVID19-Brain (from Pathophysiology to vaccination and Rehabilitation)**



*Chairs: Dr. Babak Kateb (Founding Chairman of the Board and Scientific Director of SBMT, President of Brain Mapping Foundation, Director of Brain Technology and Innovation Park, Director of National Center for Nano-Bio-Electronics (NCNBE) President and CEO of Smart Microscopy Inc., LA, CA, USA)*



*Dr. Vicky Yamamoto (Cancer Scientist, Dept. of Head & Neck Surgery Otolaryngology, USC-Keck School of Medicine, CA, USA)*

**3:30-3:45 pm:** Dr. Ashraf Elsayegh

Professor, Pulmonologist, Professor of Pulmonary Medicine, Cedars-Sinai Medical Center

**Pulmonary Considerations in COVID-19**

**3:45-4:00 pm:** Dr. Jason Cormier

Associate Professor, Jason Cormier, MD, Neurosurgeon, 19th President of SBMT, Associate Professor of Neurosurgery, LSU, UL

**A rare neurosurgical/spine case of COVID-19**

**4:00-4:15 pm:** Dr. Dawn Eliashiv

Neurologist Professor of Neurology, UCLA David Geffen School of Medicine

**Neurological Implications of COVID-19**

**4:15-4:30 pm:** Dr. Mehran Khorsandi

Interventional Cardiologist, Professor of Cardiology, Cedars-Sinai Medical Center

**Cardiovascular Aspects of COVID-19**

**4:30-4:45 pm:** Dr. Vicky Yamamoto

Executive Director, Cancer Scientist, USC-Norris Comprehensive Cancer Center, USC-Keck School of Medicine

**The neuropsychiatric Impact of COVID-19 on the General Population**

**4:45-5:00 pm:** Session Discussion





## Society for Brain Mapping and Therapeutics (SBMT) **Alzheimer's Disease Conference 2021: Room 151**

Organized by:

Chris Wheeler, J. Wes Ashford, Margaret Fahnestock,  
Carr Smith, Maya Koronyo-Hamaoui, Maj-Linda  
Selenica, Rudy Tanzi, and Babak Kateb

### **Keynote speaker:**



**Dr. Qin Wong**

Professor, Department of Cell, Developmental and Integrative  
Biology, University of Alabama at Birmingham

Talk title:

**The adrenergic link between amyloid and tau**

Friday, July 9<sup>th</sup> 10:00-11:30 am PDT

## **A3 (SLU CME): Alzheimer's Disease Mechanisms I: Beyond A $\beta$ and Tau**



*Chairs: Dr. Margaret Fahnestock  
(Professor, Department of Psychiatry & Behavioural Neurosciences, McMaster University)*



*Dr. John Wesson Ashford  
Director, War Related Illness & Injury Study Center, VA Palo Alto Health Care System;  
Clinical Professor (Affiliated), Psychiatry and Behavioral Science, Stanford University*

**10:00-10:15 am:** Dr. Margaret Fahnestock  
Professor, Department of Psychiatry & Behavioral Neurosciences, McMaster University

**Role of the NGF receptor in age-related axonal degeneration.**

**10:15-10:30 am:** Dr. Cheryl Dreyfus  
Distinguished Professor and Chair, Department of Neuroscience & Cell Biology, Rutgers - Robert Wood Johnson Medical School

**A metabotropic glutamate receptor agonist maintains oligodendrocyte function in Alzheimer's disease.**

**10:30-10:45 am:** Dr. Michael V. Sofroniew  
Professor of Neurobiology, Brain Research Institute, UCLA

**Astrocytes in Alzheimer's disease: Protective or toxic?**

**10:45-11:00 am:** Dr. Maj-Linda Selenica  
Assistant Professor, Sanders Brown Center on Aging, UK, KY

**TDP-43 cytoplasmic sequestration is regulated by the hypusination of eIF5A in stress induced cellular models.**

**11:00-11:15 am:** Dr. Scott E. Counts  
Associate Professor of Translational Neuroscience, Michigan State University

**Mitochondrial unfolded protein response dysfunction during the progression of AD.**

**11:15-11:30 am:** Session Discussion



Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT

## **A16: Alzheimer's Disease Mechanisms II: Genetics**



*Chair: Dr. Carr J. Smith  
(Toxicology Advisor at Albemarle Corporation)*

**1:30-1:45 pm:** Dr. Carr J. Smith  
Toxicology Advisor, Albemarle Corporation

**Putative Survival Advantages in Young Apolipoprotein  $\epsilon$ 4 Carriers are Associated with Increased Neural Stress.**

**1:45-2:00 pm:** Dr. Bilal Kerman  
Assistant Professor of Medicine, Keck School of Medicine, University of Southern California

**Monitoring ApoE and ABCA1 Interactions in Alzheimer's Disease.**

**2:00-2:15 pm:** Dr. Iva Zovkic  
Assistant Professor of Psychology, University of Toronto

**Isoform-specific effects of histone variants on memory.**

**2:15-2:30 pm:** Dr. Giovanni Meli  
Group Leader, European Brain Research Institute, Rome

**New insights into subcellular A $\beta$  oligomers in Alzheimer's Disease cells and brains.**

**2:30-2:45 pm:** Dr. John Ringman  
Professor of Clinical Neurology, University of Southern California

**Spastic Paraparesis in Autosomal Dominant Alzheimer's disease: What's up with that?**

**2:45-3:00 pm:** Session Discussion



Friday, July 9<sup>th</sup> 3:30-5:00 pm

## **A29: Alzheimer's Disease Mechanisms III: Brain-Immune Interactions & Inflammation**



*Chairs: Dr. Maya Koronyo-Hamaoui  
(Associate Professor of Neurosurgery, Associate Professor of Biomedical Sciences,  
Research Scientist Maxine Dunitz Neurosurgical Institute, Cedars Sinai)*



*Dr. Chris Wheeler  
(Senior Research Scientist at Brain Mapping Foundation; Chief Science Officer at T-  
Neuro Pharma, Inc.)*

**3:30-3:45 pm:** Dr. Jorge I. Alvarez  
Assistant Professor, University of Pennsylvania, School of Veterinary Medicine, Dept. of Pathobiology

### **CNS vasculature and neuroinflammation**

**3:45-4:00 pm:** Dr. Sally Frautschy  
Professor in Residence of Neurology, David Geffen School of Medicine, University of California Los Angeles

### **Neuroinflammation in a hypertensive transgenic Alzheimer rat model of mixed model of dementia.**

**4:00-4:15 pm:** Dr. Helen S. Goodridge  
Associate Professor of Biomedical Sciences and Medicine, Cedars-Sinai Medical Center

### **Role of hematopoietic aging in cognitive decline.**

**4:15-4:30 pm:** Dr. Chris Wheeler  
Senior Research Scientist, Brain Mapping Foundation; Chief Science Officer, T-Neuro Pharma, Inc.

### **Antigen-specific CD8 T cells in blood elicit AD-like neurodegeneration in mice and track AD occurrence in patients**

**4:30-4:45 pm:** Mojtaba Barzegar  
CEO, iqBMI LLC, Tehran, Iran; Department of Neuroscience, Shiraz University of Medical Sciences, Iran

### **Quantitative Structured Reporting for AD**

**4:45-5:00 pm:** Session Discussion





Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT

## **B41 (SLU CME): Alzheimer's Disease Diagnosis I: Biomarkers**



*Chair: Dr. Chris Wheeler  
(Senior Research Scientist at Brain Mapping Foundation; Chief Science Officer at T-Neuro Pharma, Inc.)*

**10:00-10:15 am:** Dr. Hussein Yassine

Assistant Professor of Medicine, Keck School of Medicine, University of Southern California

**APOE4 and neuroinflammation in Alzheimer's disease: mechanisms and insights.**

**10:15-10:30 am:** Dr. George Perry

Professor, Semmes Foundation. Distinguished University Chair in Neurobiology,  
University of Texas, San Antonio

**Pathology in Alzheimer Disease: A Protective Response.**

**10:30-10:45 am:** Dr. Auriel Willette

Assistant Professor of Food Science and Human Nutrition, Iowa State University

**Rise, fall, or maintain: latent cognitive aging trajectories and neurobiological associations.**

**10:45-11:00 am:** Ariel Kuhn C.Ph., Ph.D. Candidate

Raskatov lab, Physical & Biological Sciences Division, University of California Santa Cruz

**Rethinking the non-amyloidogenic pathway: a potential role for Amyloid- $\alpha$  (aka p3) in Alzheimer's Disease.**

**11:00-11:15 am:** Dr. Elizabeth Head

Professor of Pathology, University of California Irvine

**Neuroimaging biomarkers for Alzheimer disease in Down syndrome.**

**11:15-11:30 am:** Session Discussion



Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

## **B54: Alzheimer's Disease Diagnosis II: Retinal Imaging**



*Chair: Dr. Maya Koronyo-Hamaoui  
(Associate Professor of Neurosurgery, Associate Professor of Biomedical Sciences,  
Research Scientist Maxine Dunitz Neurosurgical Institute, Cedars Sinai)*

**1:00-1:15 pm:** Steven Verdooner  
CEO, Neurovision Imaging

**Imaging amyloid beta in the retina.**

**1:15-1:30 pm:** Dr. Oana Dumitrascu  
Assistant Professor of Neurology, Cedars-Sinai Medical Center

**Retinal amyloid imaging in patients with amnesic MCI**

**1:30-1:45 pm:** Dr. Delia Cabrera DeBuc  
Research Associate Professor of Ophthalmology, University of Miami Health System

**Investigating Retinal Blood Flow Characteristics during the processes underlying amyloidosis using a non-invasive, laser speckle-based retinal imager.**

**1:45-2:00 pm:** Dr. Liang Gao  
Adjunct Assistant Professor of Electrical and Computer Engineering, University of Illinois

**Snapshot hyperspectral retinal imaging for early diagnosis of AD.**

**2:00-2:15 pm:** Dr. Swati S. More  
Associate Professor, Center for Drug Design (CDD), University of Minnesota

**Hyperspectral Imaging Signatures Detect Amyloidopathy in the Retina of Alzheimer's Disease patients.**

**2:15-2:30 pm:** Session Discussion



Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT

## **B67 (SLE CME): Alzheimer's Disease Diagnosis III: Brain Imaging, Brain Stimulation (rTMS)**



*Chairs: Dr. Allyson Rosen*

*(Clinical Associate Professor (Affiliated) [Vapahcs], Psych/Public Mental Health & Population Sciences Staff, Psychiatry and Behavioral Sciences)*



*Dr. Joy Taylor*

*(Clinical Professor in the Department of Psychiatry and Behavioral Sciences at Stanford University School of Medicine, Associate Director of the Stanford/VA California Alzheimer's Disease Center and the Associate Director of the Stanford/VA Aging Clinical Research Center)*

**3:00-3:15 pm:** Dr. Allyson Rosen

Director of Dementia Education, Mental Illness Research & Education Center, MIRECC, VA Palo Alto Health Care System, Stanford University

### **Neuronavigation for brain stimulation / rTMS**

**3:15-3:30 pm:** Dr. Joy Taylor

Clinical Researcher, Mental Illness Research & Education Center, MIRECC, VA Palo Alto Health Care System, Stanford University

### **Network-targeted Transcranial Magnetic Stimulation (TMS) for Mild Cognitive Impairment**

**3:30-3:45 pm:** Dr. Ansgar Furst

Associate Director of Neuroimaging Laboratory, War Related Illness & Injury Study Center, (WRIISC), VA Palo Alto Health Care System, Stanford University

### **Tracking pathways in the brain related to AD, TBI**

**3:45-4:00 pm:** Dr. Joseph Cheng

Mental Illness Research & Education Center, MIRECC, VA Palo Alto Health Care System, Stanford University

### **rTMS for Alzheimer's disease**

**4:00-4:15 pm:** Yu Zhang

War Related Illness & Injury Study Center, (WRIISC), VA Palo Alto Health Care System, Stanford University

### **Diffusion Tensor Tractography of the Brainstem and Relevant for rTMS**

**4:15-4:30 pm:** Session Discussion



Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT

## **C80: Lifestyle Intervention in Alzheimer's Disease Prevention and Treatment**



*Chairs: Dr. Carl W. Cotman  
(Professor of Neurology, School of Medicine. Director, Institute for Brain Aging and Dementia, Research and Graduate Studies)*



*Dr. Margaret Fahnestock  
Professor, Department of Psychiatry & Behavioral Neurosciences, McMaster University)*

**10:00-10:15 am:** Dr. Carl W. Cotman  
Professor of Neurology, University of California Irvine

### **Exercise and Cognitive Stimulation Drive Youthful Gene Signatures in the Aging Human Hippocampus**

**10:15-10:30 am:** Dr. Ashley Keiser  
Postdoctoral Fellow, University of California Irvine

### **Exercise opens a 'molecular memory window' to facilitate memory and synaptic plasticity**

**10:30-10:45 am:** Dr. Donna Korol  
Associate Professor of Biology, Syracuse University

### **Use it and boost it with physical and mental activity: A role for BDNF in brain plasticity associated with lifestyle enrichment**

**10:45-11:00 am:** Dr. Margaret Fahnestock  
Professor, Department of Psychiatry & Behavioral Neurosciences, McMaster University

### **Beneficial effects of a single session of high-intensity interval training (HIIT)**

**11:00-11:15 am:** Dr. Fernando Gomez-Pinilla  
Professor and Director of the Neurotrophic Research Laboratory with secondary appointment in Physiological Science, University of California Los Angeles

### **Single cell substrates of AD pathology and dietary treatment**

**11:15-11:30 am:** Session Discussion





Sunday, July 11<sup>th</sup> 1:00-2:30 pm PDT

## **C93 (SLE CME): Alzheimer's Disease Treatment I: Traditional Targets and New Horizons**



*Chairs: Dr. Maj-Linda Selenica  
(Assistant Professor, Sanders Brown Center on Aging)*



*Dr. Chris Wheeler  
(Senior Research Scientist at Brain Mapping Foundation & Chief  
Science Officer at T-Neuro Pharma, Inc.)*

**1:00-1:15 pm:** Dr. Hayk Davtyan  
Associate Research Professor, University of California Irvine

**Immunotherapeutic strategies in Alzheimer's disease: pre-clinical studies in transgenic mice.**

**1:15-1:30 pm:** Dr. Christopher Norris  
Professor, Pharmacology and Nutritional Sciences, University of Kentucky

**Astrocyte signaling as a therapeutic target for Alzheimer's disease and related disorders.**

**1:30-1:45 pm:** Dr. Scott Counts  
Associate Professor of Translational Neuroscience, Michigan State University

**Therapeutic targeting of the oxytocin receptor for vascular and mixed dementia**

**1:45-2:00 pm:** Dr. Ron Bruntz  
Scientist III, Molecular & Cellular Biochemistry, University of Kentucky

**ApoE genotypes differentially regulate central carbon metabolism.**

**2:00-2:15 pm:** Dr. Maj-Linda Selenica  
Assistant Professor, Sanders Brown Center on Aging. UK, KY

**The identification of citrullinated TDP-43- a novel PTM with implications for dementia**

**2:15-2:30 pm:** Session Discussion



Sunday, July 11<sup>th</sup> 3:30-5:00 pm PDT

## **C106 (SLU CME): Alzheimer's Disease Treatment II: Mechanistic & Alternative Targets**



*Chair: Dr. Greg Cole  
(Professor of Medicine & Neurology, UCLA; Assoc. Dir. For Research, GLA Veterans Administration)*

**3:30-3:45 pm:** Marissa Mekkttikul, C.Ph., Ph.D. Candidate  
Ph.D. Candidate, Department of Neurology, University of California Los Angeles

### **C5a and Traumatic Brain Injury.**

**3:45-4:00 pm:** Dr. Gregory M. Cole  
Professor of Medicine and Neurology and Associate Director of the UCLA Alzheimer's Center, University of California Los Angeles

### **Dietary Lipids, ApoE4 and Alzheimer Prevention.**

**4:00-4:15 pm:** Dr. Patricia Spilman  
Senior Staff Scientist at Drug Discovery Laboratory, Department of Neurology, University of California Los Angeles

### **ApoE4-targeted therapeutic candidate that normalizes SirT1 and improves cognition in an AD model.**

**4:15-4:30 pm:** Dr. Wes Ashford  
Director, War Related Illness & Injury Study Center, (WRIISC), VA Palo Alto Health Care System, Stanford University

### **Massive internet testing of theoretical but practical AD treatments (Statins, NSAIDs, Lithium, Magnesium, exercise and diet).**

**4:30-4:45 pm:** Dr. Edmond Teng  
Senior Medical Director, Genentech, South San Francisco

### **Targeting tau spread in neurodegenerative disease with monoclonal antibodies.**

**4:45-5:00 pm:** Session Discussion



# **Society for Brain Mapping and Therapeutics (SBMT)**

**Room 406B**

**Friday, July 9<sup>th</sup> 10:00-11:30 am PDT**

## **A4: Novel Therapeutics for Combat Related PTSD (SLU CME)**



*Chair: Dr. Michael Roy*

*(TBI Research Center, Director, Division of Military Internal Medicine and Professor of Medicine, Uniformed Services University, Bethesda)*

**10:00-10:15 am:** Dr. Pashtun Shahim

Staff Scientist, RMD at Clinical Center, National Institutes of Health Research Scientist Center for Neuroscience and Institutes of Health Research Scientist Center for Neuroscience and Regenerative Medicine, Bethesda.

### **Deep Data Analysis of Blood and Imaging Correlates of Post-traumatic Stress Symptoms Following Military Concussive TBI**

**10:15-10:30 am:** Dr. Rick Gray

Research Director, Research & Recovery Project, Cornell, NY

### **Reconsolidation of Traumatic Memories (RTM) protocol: a novel intervention for PTSD**

**10:30-10:45 am:** Dr. Jerzy Bodurka

Chief Technology Officer, Professor, Director MRI and EEG Facility, Laureate Institute for Brain Research and Associate University of Oklahoma

### **Update on Realtime Amygdala-Focused Neurofeedback to Treat PTSD**

**10:45-11:00 am:** Dr. Charles Tegeler

Professor of Neurology, Wake Forest University School of Medicine,

### **Symptoms, Imaging, and Autonomic Outcomes after HIRREM for Symptoms of Military-related Traumatic Stress**

**11:00-11:15 am:** Dr. Sarah Kruger

Biomedical Engineer and CAREN Operator, National Intrepid Center of Excellence, Walter Reed National Military Medical Center, Bethesda, MD

### **The 3MDR Clinical Trial to Treat PTSD after Mild TBI with and without Eye Movement**

**11:15-11:30 am:** Session Discussion



Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT

## **A17: Innovative Diagnostic and Treatment Approaches in Military TBI (SLU CME)**



*Chairs:*

*Dr. Michael Roy*

*(TBI Research Center, Director, Division of Military Internal Medicine and Professor of Medicine, Uniformed Services University, Bethesda)*



*Dr. Ken Green*

*Vice President, Strategic Initiatives for Government and Nonprofit Partnerships, SBMT*

**1:30-1:45 pm:** Dr. Michael Roy

Deputy Director, TBI Research Center, Director, Division of Military Internal Medicine and Professor of Medicine, Uniformed Services University, Bethesda

### **Allostatic Neurotechnology, a Novel Approach for Resetting the Brain to Relieve Post-Concussive Symptoms**

**1:45-2:00 pm:** Dr. Pinata Sessoms

Director, CAREN Naval Health Research Center, San Diego

### **Rehabilitation and Neuromarker Identification for mTBI Patients using Immersive Virtual Reality Environments**

**2:00-2:15 pm:** Dr. Paul Pasquina

Chair Department of Physical Medicine and Rehabilitation, Uniformed Services University, Bethesda, MD

### **The NCAA Study: What We Can Learn from Longitudinal Study of Military Service Academy Graduates**

**2:15-2:30 pm:** Dr. Tom DeGraba

Senior Research Scientist, National Intrepid Center of Excellence, Bethesda

### **Analyzing the NICOE Experience—What Works and What Does Not in treating complex TBI?**

**2:30-2:45 pm:** Dr. Dallas Hack

Colonel, US Army (Retired), Cohen Veterans Bioscience,

### **State of the Science on TBI in 2020**

**2:45-3:00 pm:** Session Discussion





Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

**A30a: Suicide (SLU CME)**



*Chairs: Dr. Ken Green  
Vice President, Strategic Initiatives for Government and Nonprofit  
Partnerships, SBMT*



*Dr. Michael Roy  
(TBI Research Center, Director, Division of Military Internal Medicine and  
Professor of Medicine, Uniformed Services University, Bethesda)*

**3:30-3:45 pm:** Dr. Daniel Perl

Director, Brain Bank and Neuropathology, TBI Research Center, Uniformed Services University, Bethesda, MD

**Neuropathologic Findings that Distinguish Suicide from other Causes of Death**

**3:45-4:00 pm:** Dr. Sharon Birman

USU

**Disseminating Evidence Based Practice in Suicide Prevention and Treatment for Military Communities**

**4:00-4:15 pm:** Dr. Ken Green

Vice President, Strategic Initiatives for Government and Nonprofit Partnerships, SBMT

**Understanding and Preventing Suicide. What we Know, What We Think We Know, and What We Will Never Know**

**4:15-4:30 pm:** Dr. David Luxton

Associate Professor, Psychiatry University of Washington School of Medicine, Seattle, WA and Rona Margaret Relova, VA Palo Alto Healthcare System

**Can AI Save Lives? Big Data and Machine Learning in Suicide Prevention**

**4:30-4:45 pm:** Dr. Colonel Caesar Junker

USAF Surgeon General's Office, USAF Surgeon General's Office

**Addressing Suicide in the US Air Force**

**4:45-5:00 pm:** Session Discussion



Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT

## **B42: Subconcussive Blast Exposure (SLU CME)**



*Chair: Dr. Michael Roy  
(TBI Research Center, Director, Division of Military Internal Medicine and  
Professor of Medicine, Uniformed Services University, Bethesda)*

**10:00-10:15 am:** Dr. Jennifer N. Belding  
Behavioral Health Researcher, Naval Health Research Center, San Diego, CA

### **Assessment of Blast in U.S Military Special Forces**

**10:15-10:30 am:** Dr. David Keyser  
Neurophysiologist, Uniformed Services University, Bethesda, MD

### **Investigating Training-Associated Blast Pathology: The INVICTA Study**

**10:30-10:45 am:** Dr. Suthee Wiri  
Senior Engineer, Applied Research Associates

### **Blast Gauge Assessment of Subconcussive Blast Exposure in Military Units**

**10:45-11:00 am:** Dr. Doug Brungart  
Chief Scientist for the Audiology and Speech Center, Walter Reed National Military  
Medical Center, Bethesda

### **Use of the WHATS system, a Soundbooth in a Headset, to Assess the Audiologic Impact of Subconcussive Blast Exposure**

**11:00-11:30 am:** Session Discussion

Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

**B55: Diagnostic, Pathology and Epidemiology of TBI**  
**(SLU CME)**



*Chair: Dr. Stuart Hoffman*

*Scientific Program Manager for Brain Injury, U.S. Department of Veterans Affairs*

**1:00-1:18 pm:** Dr. Clara E. Dismuke

Health Services Research Enhancement Award Program Ralph H. Johnson VA Medical Center Medical University of South Carolina Center for Health Economics and Policy Studies

**Association of Blast with VA Service Connected Disability, Comorbidities, Health-Services Utilization and Costs: Initial CENC Findings**

**1:20-1:38 pm:** Dr. David Tate

Neurology Associate Professor, University of Utah School of Medicine,

**TBI and Medical Imaging: A picture is worth a thousand words, but is it really saying anything important**

**1:40-1:58 pm:** Dr. Kathleen Carlson,

HSRandD, Center to Improve Veteran Involvement in Care (CIVIC), VA Portland Health Care System

**Opioid and Sedative-Hypnotic Medication Use among Veterans with TBI**

**2:00-2:18 pm:** Dr. Subburaman Mohan

VA Loma Linda Healthcare System

**Long Term Impact of Mild TBI on Bone Metabolism: Brain- Bone Connection**

**2:18-2:30 pm:** Session Discussion



Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT

**B68: Innovation in Neurotrauma**  
**(SLU CME)**



*Chair: Dr. Michael Roy  
(TBI Research Center, Director, Division of Military Internal Medicine and  
Professor of Medicine, Uniformed Services University, Bethesda)*

**3:00-3:15 pm:** Dr. Skip Rizzo

Director, Institute for Creative Technologies, University of Southern California  
IBM Research

**A Bravemind New World: Future Directions for Virtual Reality in the Treatment of  
Combat PTSD**

**3:15-3:30 pm:** Dr. Jeffrey Gold

Professor of Anesthesiology, Pediatrics and Psychiatry, Keck School of Medicine,  
University of Southern California

**Virtual and Augmented Reality via Head-Mounted Display to Decrease Procedure-  
Related Pain and Anxiety**

**3:30-3:45 pm:** Dr. Leslie Prichep

Chief Scientific Officer, BrainScope Inc

**BrainScope, a Field-Deployable Device to Identify the Impact of Traumatic Brain  
Injury**

**3:45-4:00 pm:** Dr. Christopher Rhea

Associate Professor, UNC Greensboro

**Objectively Monitoring Neuromotor Performance with a Smart Phone after Blast  
Exposure**

**4:00-4:15 pm:** Dr. Mark Ettenhoffer

Sr. Research Neuropsychologist / Associate Professor, Naval Medical Center San Diego

**The Eyes Have It: What We Can Learn about TBI and PTSD from Eye Tracking**

**4:15-4:30 pm:** Session Discussion





**Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT**

**C81: Neurotrauma care**



*Chairs: Dr. Jonathan Sackier  
(Founding Partner and Chief Medical Officer)*



*Dr. Michael Roy  
(TBI Research Center, Director, Division of Military Internal Medicine and  
Professor of Medicine, Uniformed Services University, Bethesda)*

**10:00-10:15 am: Dr. Keyne Johnson**

Pediatric Neurosurgeon, Brain and Spine Institute for Children, American Association of Neurological Surgeons, Cognitive Neuroscience Society

**Using Advanced Radiology Techniques to Diagnose Traumatic Brain Injury in 2020**

**10:15-10:30 am: Dr. Teodoro “Jun” Tigno**

Senior Research Scientist (HJF),  
Assistant Professor, USU Dept of Surgery

**Neurosurgery Critical Care on the Battlefield**

**10:30-10:45 am: Dr. Robert Shih**

Chief of Neuroradiology & MRI, (WRNMMC Radiology)

**Potential Applications of MRI with Ultra-High-Performance Gradients for TBI Microstructure Imaging**

**10:45-11:00 am: Dr. Gordon Baltzer**

President of MEGIN

**A refreshed and expanded role for MEG**

**11:00-11:15 am: Dr. Harry Kovelman**

CEO/President, Helius Medical Technologies

**Clinical trials of PoNS™ in various neurological diseases**

**11:15-11:30 am: Session Discussion**



Sunday, July 11<sup>th</sup> 1:00-2:30 pm PDT

## **C94: Rehabilitation of Chronic Brain Injury (SLU CME)**



*Chair: Dr. Stuart Hoffman  
Scientific Program Manager for Brain Injury, U.S. Department of Veterans Affairs*

**1:00-1:18 pm:** Dr. Miranda Lim

OHSU Assistant Professor, Neurology School of Medicine Behavioral Neuroscience Graduate Program School of Medicine

### **Sleep Disturbances in TBI: From Bench to Bedside, and Beyond**

**1:20-1:38 pm:** Dr. Ansgar Furst

Clinical Associate Professor, Stanford University, (Affiliated) [VAPAHCS]

### **Non-pharmacological Interventions for Insomnia in Mild TBI**

**1:40-1:58 pm:** Dr. Elizabeth Twamley

Professor in Residency, USCD Health Sciences

### **Compensatory Cognitive Training Interventions to Improve Cognition and Functioning in Neuropsychiatric Disorders**

**2:00-2:18 pm:** Dr. Amy Jak

Associate Director, Clinical Research Unit University of California, San Diego (UCSD) and a Staff Neuropsychologist and Director of the TBI Cognitive Rehabilitation Clinic at the Veterans Affairs San Diego Healthcare System

### **Treatment of Persistent Cognitive Symptoms Following Concussion.**

**2:18-2:30 pm:** Session Discussion

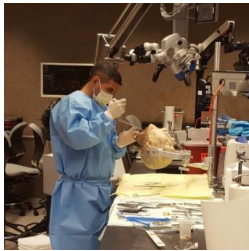


Sunday, July 11<sup>th</sup> 3:30-4:45 pm PDT

## **C107: Acquired Spine and Brain Injuries**



**Dr. Michael Roy**  
*(TBI Research Center, Director, Division of Military Internal Medicine and  
Professor of Medicine, Uniformed Services University, Bethesda)*



**Dr. Alejandro Mercado- Professor and Chairman of Neurosurgery,**  
*Neurosurgery, Hospital Military, Mendoza Argentina*

**3:30-3:45 pm:** Dr. Alejandro Esteban Mercado Santori  
Professor and Chairman of Neurosurgery, Neurosurgery, Hospital Militar, Mendoza  
Argentina

### **Combat Casualty Care**

**3:45-4:00 pm:** Mr. Michael Flomenhaft  
Flomenhaft, New York Traumatic Brain Injury (TBI)/Concussion Lawyer, The Flomenhaft  
Law Firm, PLLC

### **Legal Aspects of Neurotrauma**

**4:00-4:15 pm:** Dr. Meijun Ye  
Principal Investigator of Neurological Devices Laboratory, FDA

### **Translational Research In The Detection Of Brain Injury**

**4:15-4:30 pm:** Dr. Haroon F. Choudhri  
Hudson Neurosurgery

### **Management of Extreme Cervical Deformity**

**4:30-4:45 pm:** Session Discussion



# Society for Brain Mapping and Therapeutics (SBMT)

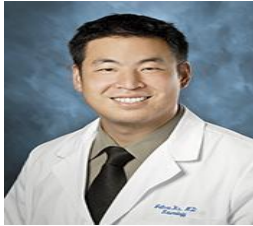
Room 407

**Thursday July 8<sup>th</sup> 01:30-02:45 pm PDT**

## ***E4: Neuro-Oncology: Metabolic Therapy***



*Chairs: Dr. Leigh Greathouse,  
Associate Professor of Nutrition Sciences at Baylor University*



*Dr. Jethro Hu, Cancer Institute (Samuel Oschin Comprehensive Cancer Institute), Brain Tumor Center (Johnnie L. Cochran, Jr. Brain Tumor Center), Neuro-Oncology, Cedars-Sinai*

**1:30-1:45 pm: Dr. Adrienne Scheck**

Senior Research Scientist, Arizona State University, School of Life sciences

### **Metabolic ketosis for the adjuvant treatment of malignant brain tumors**

**1:45-2:00 pm: Dr. Angela Poff**

Research Associate, Department of Molecular Pharmacology and Physiology at the University of South Florida

### **Exploiting cancer metabolism with hyperbaric oxygen - synergy with ketosis and other therapies**

**2:00-2:15 pm: Dr. Nelofer Syed**

Research Lecturer, Imperial College London | Imperial · Division of Brain Sciences  
University of Oklahoma

### **Ketogenic diet treatment of GBM and tumor metabolism**

**2:15-2:30 pm: Dr. Yoshua Esquenazi-Levy**

Assistant Professor, Vivian L. Smith Department of Neurosurgery  
Director of Surgical Neuro-Oncology, Mischer Neuroscience Institute, McGovern Medical School, University of Texas

### **Glioma and the Gut Microbiome**

**2:30-2:45 pm: Dr. Andrew Koutnik**

Research Scientist, Institute for Human & Machine Cognition

### **Nutritional Ketosis-Beyond Glioma?**

**2:45-3:00 pm: Session Discussion**



**Thursday July 8<sup>th</sup> 03:30-5:15 pm PDT**

**E7: Neuro-Oncology: Biomarkers and Diagnosis and Monitoring**



*Chairs: Dr. Chamindie Punyadeera,  
Associate Professor, University of Queensland  
Technology)*



*Juliana Müller Bark  
PhD Student at QUT (Queensland University of  
Technology)*

**3:00-03:15 pm:** Dr. Bob Carter  
Neurosurgeon | Neurosurgical Oncologist  
Chief, Neurosurgery Service, Mass General, Massachusetts General Hospital

**A non-invasive liquid biopsy test to detect and monitor brain tumors**

**3:45-4:00 pm:** Dr. Ella Mi  
Honorary Clinical Research Fellow, NIHR Academic Clinical Fellow in Medical Oncology,  
Oxford, Computational Oncology Group at Imperial College

**How can artificial intelligence improve the prognostication and management of glioblastoma?**

**4:00-4:15 pm:** Dr. Majid E Warkiani  
Associate Professor, School of Biomedical Engineering at University of Technology,  
Sydney, Australia

**Micro/Nano-engineered Systems for Liquid Biopsy**

**4:15-4:30 pm:** Dr. Simone Sredni  
Research Associate Professor of Neurosurgery, Northwestern University; Chicago

**Moving the needle with NGS: Technological Innovation with an Impact on Patients with Brain Cancer**

**4:30-4:45 pm:** Dr. Therese Becker  
Circulating Tumour Cell Program Leader, Ingham Institute for Applied Medical Research

**Is there a place for liquid biopsy to improve brain cancer prognosis and patient management?**

**4:45-5:00 pm:** Session Discussion

**Friday, July 9<sup>th</sup> 10:00-12:00 pm PDT**

## **A5: Mars Exploration: Impact of Change to CNS on Operational Performance**



*Chairs:*

*Dr. Ajitkumar Mulavara*

*Senior Neuroscientist for NASA HRP Integrated Portfolio- space radiation, cognitive/behavioral medicine, and sensorimotor risk*



*Dr. Alexandra Whitmire, Element Scientist, NASA, JSC*

**10:00-10:10 am:** Dr. Alexandra Whitmire  
Element Scientist, NASA, JSC,

### **The CBS Integrated Risk Overview and Problem statement**

**10:10-10:23 pm:** Dr. Alexander Stahn

Research Assistant Professor of Medical Science in Psychiatry  
Division of Sleep and Chronobiology, Department of Psychiatry, University of Pennsylvania, school of Medicine

### **Insights from neuroimaging of astronauts and subjects in space analog conditions**

**10:23-10:37 pm:** Dr. Susanna Rosi

Professor & Director of Neurocognitive Research, University of California San Francisco

### **Operationally-Relevant Performance: Acute & Long-term effects of Galactic Cosmic Radiation on CNS and Behavior**

**10:37-10:50 pm:** Dr. Catherine M Davis

Assistant Professor, Uniformed Services University of the Health Sciences

### **Fractionated ion delivery effects vs Acute dose effects on CNS/ behavior and operational performance outcomes**

**10:50-11:02 pm:** Dr. David F. Dinges

Professor and Director, Unit for Experimental Psychiatry, Perelman School of Medicine, University of Pennsylvania

### **Neurobehavioral biomarkers for monitoring behavior and operationally-relevant performances: ISS and ICE effects on CNS and crew Behavioral Medicine**

**11:02-11:15 pm:** Dr. Scott J Wood

USAF Sensorimotor Discipline Scientist, NASA, JSC

### **Sensorimotor Functional Task Performance Measures Following G-Transitions**

**11:15-12:00 pm:** Session Discussion

**Friday, July 9th 1:30-3:00 pm PDT**

**A18: Neuro-Oncology: Stem Cell Immunology and Molecular Targeting (SLU CME)**



*Chairs: Dr. Vicky Yamamoto- Cancer Scientist, Department of Otolaryngology/ Head and Neck Surgery, Keck School of Medicine of USC, Los Angeles, CA., SBMT*



*Dr. Jennifer Yu Associate Professor, Co-Leader, Department of Molecular Medicine, School of Medicine, Developmental Therapeutics, Case Comprehensive Cancer Center, Cleveland Clinic Cancer Center*

**1:30-1:45 pm:** Dr. Jennifer Yu

Associate Professor, Co-Leader, Department of Molecular Medicine, School of Medicine, Developmental Therapeutics Program, Case Comprehensive Cancer Center

**Glioma Stem Cells in therapeutic response**

**1:45-2:00 pm:** Dr. Rachel Sarabia-Estrada

Assistant Professor, Department of Neurosurgery, Mayo Clinic

**Pre-surgical irradiation in a human glioblastoma pre-clinical model**

**2:00-2:15 pm:** Paula Schiapparelli

Assistant Professor of Neurosurgery, Department of Neurosurgery, Mayo Clinic

**Targeting glioblastoma stem cell migration by inhibition of volume-regulating kinases**

**2:15-2:30 pm:** Dr. Clark Chen

Professor, University of Minnesota School of Medicine.

**Targeting mechanisms of acquired temozolomide resistance in glioblastoma**

**2:30-2:35 pm:** Dr. Mohamad Nezami

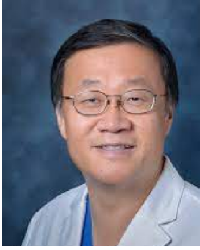
Assistant Professor of Neurological Surgery Department of Neurosurgery, Cleveland Clinic

**Precision Oncology: The role of Epigenetic influence and application of a customized epigenetic targeted therapy on Glioma stem cells and reversing radio-resistance**

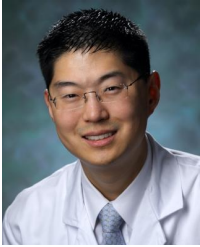
**2:45-3:00 pm:** Session Discussion

**Friday, July 9th 3:30-5:00 pm PDT**

***A30b: NeuroOncology: New Approaches in  
Immuno-Therapy***



*Chairs: Dr. John Yu  
(Neurosurgeon, Department of Neurosurgery at Cedars-Sinai Medical Center)*



*Dr Michael Lim  
Head of Department, Department of Neurosurgery, Stanford*

**3:30-3:45 pm:** Dr. Michael Lim

Professor of Neurosurgery and, by courtesy, of Radiation Oncology (Radiation Therapy) and of Medicine (Oncology), Stanford Medicine

**Status and prospect of immunotherapy for glioblastoma**

**3:45-4:00 pm:** Dr. Antoine M Snijders

Biologist, Staff Scientist, Lawrence Berkeley National Lab

**Genetically diverse mouse population- based approaches to study the immune response to radiation**

**4:00-4:15 pm:** Dr. Dwain Morris- Irvin

CEO, President at Innovest Global Inc., IVST, Biotech Division, Co- founder/ Chief Scientific Officer at Global Stem Care Laboratory, Co-founder, Chief Scientific Officer at StemVax Therapeutics

**New developments in immunotherapy for brain tumors**

**4:15-4:30 pm:** Dr. Robert Harii

18th President of SBMT and member of the Executive board of SBMT, Chairman, Founder and Chief Executive Officer, Celularity; Adjunct Professor of Neurosurgery, Weill Cornell Medical College, Former Chief Executive Officer of Celgene Cellular Therapeutics

**NK Cell Therapy for Recurrent GBM**

**4:30-5:00 pm:** **Session Discussion**

**Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT**

**B43: Neuro-Oncology: Ablative Therapies (SLU CME)**



*Chairs: Dr. Mark Torchia Vice-Provost, Executive Director, Centre for the Advancement of Teaching and Learning*



*Dr. Albert H Kim Associate Professor of Neurological Surgery, Neurology, and Developmental Biology, Washington University School of Medicine*

**10:00-10:15 am:** Dr. Mark Torchia

Vice-Provost, Executive Director, Centre for the Advancement of Teaching and Learning

**Hyperthermia and Ablative Therapy – Technologies**

**10:15-10:30 am:** Dr. Albert H Kim

Associate Professor of Neurological Surgery, Neurology, and Developmental Biology, Washington University School of Medicine

**LITT and the Blood Brain Barrier – Opportunities**

**10:30-10:45 am:** Dr. Veronica Chiang

Professor of Neurosurgery and Radiation Oncology, Yale University School of Medicine

**Surgical Management of Post-Radiation Metastatic Recurrence in the Brain**

**10:45-11:00 am:** Dr. Alireza Mohammadi

Neurosurgeon, Brain Tumor and Neuro-Oncology, Cleveland Clinic

**Laser interstitial thermal therapy in glioma**

**11:00-11:15 am:** Dr. Igor De Castro

Associate Professor, Mercer University Medical School Georgia Neurosurgical Institute Macon, Georgia

**Complete resection of high grade gliomas in eloquent areas**

**11:15-11:30 am:** Session Discussion



**Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT**

**B56: Neuro-Oncology: Precision Medicine (SLU CME)**

**AiM MED Robotic Session**



*Chairs:*

*Dr. Andrew S. Venteicher*

*Assistant Professor, University of Minnesota, School of Medicine*



*Dr. Terry Burns*

*Associate Professor of Neurosurgery and Neuroscience, Mayo Clinic, Rochester MN*

**1:00-1:15 pm:** Dr. Andrew S. Venteicher

Assistant Professor and Neurosurgical Director of the Center for Skull Base and Pituitary Surgery, Department of Neurosurgery, University of Minnesota, School of Medicine

**Towards a personalized medicine approach for patients with cranial base tumors**

**1:15-1:30 pm:** Dr. Jing Wu

Tenure Track Investigator, NCI/NIH

**Developing a CDK9 inhibitor towards a therapy in glioma**

**1:30-1:45 pm:** Dr. Panagiotis Z Anastasiadis

Professor of Cancer Biology, Cell Biology Program Director, Mayo Clinic Cancer Center, Jacksonville, FL

**A personalized targeted approach to treating malignant brain tumors: from bench to bedside**

**1:45-2:00 pm:** Dr. Julie Pilitsis

Professor, Director, Albany Medical College, AiM Medical Robotics

**Needle-based Therapeutic Ultrasound: A minimally invasive option for brain tumors**

**2:00-2:15 pm:** Dr. Terence (Terry) Burns

Assistant Professor of Neurosurgery and Neuroscience, Mayo Clinic, Rochester MN

**An implantable paradigm for in vivo drug testing**

**2:15-2:30 pm:** Session Discussion

**Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT**

**B69: NeuroOncology: Pediatric Neurooncology**



**Linda University Health**

***Chairs: Dr. Tanya Minasian, Neurosurgeon, Assistant Professor, Loma***



***Dr. Michelle Monje Associate Professor, Neurology Stanford***

**3:00-3:15 pm:** Dr. Tanya Minasian  
Neurosurgeon, Loma Linda University Health

**Supratentorial brain tumor resection in pediatric patients**

**3:15-3:30 pm:** Dr. Michelle Monje  
Associate Professor, Neurology Stanford

**The neuroscience of glioma: neuronal activity drives childhood glioma initiation and growth**

**3:30-3:45 pm:** Dr. Humsa Venkatesh,  
Instructor, Neurology & Neurological Sciences, Stanford University School of Medicine

**Synaptic integration of glioma into neural circuits**

**3:45-4:00 pm:** Dr. Shawn Hervey-Jumper  
Associate Professor, Neurological Surgery UCSF Weill Institute for Neurosciences,  
University of California, San Francisco

**Glioma remodeling of functional neural circuitry**

**4:00-4:30 pm:** Session Discussion

**Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT**

**C82: Neuro-Oncology: Radiation Technologies (SLU CME)**



*Chair: Dr. Robert Schulte  
(Professor, Basic Sciences, Division of Biomedical Engineering Sciences,  
School of Medicine, Loma Linda University)*



*Narayan Hosmane, Professor, Northern Illinois University*

**10:00-10:15 am:** Dr. Pierre- Gabriel Montay-Gruel

Postdoctoral Researcher, Radiation Oncology/ Radiation Therapy / Oncology / Radiation Biology / Neurobiology, University of California Irvine, USA

**The benefits of FLASH radiotherapy for brain tumor management**

**10:15-10:30 am:** Dr. Jan Eulitz

Medical Physics PhD Student, OncoRay – National Center for Radiation Research in Oncology

**Treatment planning for gliomas using a variable RBE model**

**10:30-10:45 am:** Dr. Jennifer Furkel

Researcher, Heidelberg University, German Cancer Research Center

**Targeting resistance in glioblastoma with carbon ion**

**10:45-11:00 am:** Dr. Hanna Koivunoro

Chief Medical Physicist, Neutron Therapeutics, Inc

**Accelerator based BNCT: New Opportunities for Malignant Brain Tumors**

**11:00-11:15 am:** Dr. Narayan Hosmane

Professor, Department of Chemistry, Northern Illinois University

**Boron and Gadolinium Compounds for Cancer Therapy**

**11:15-11:30** Session Discussion

**Sunday, July 11<sup>th</sup> 1:00-2:30 pm PDT**

**C95: Neuro-Oncology: Tumor Treating Fields  
(SLU CME)**



*Chair: Dr. Chirag Patel,  
Clinical Assistant Professor of Neurology and Neurological Sciences,  
Radiology, Stanford University School of Medicine*



*Co-Chair: Dr. Edwin Chang  
Research Associate, Molecular Imaging Program, Stanford University*

**1:00-1:15 pm:** Dr. Michael Story

Vice-Chair, Department of Radiation Oncology, University of Texas, Southwestern Medical Center

**TT Field Mechanisms of cell death: mitotic interference and beyond**

**1:15-1:30 pm:** Dr. Edwin Chang

Laboratory Scientist, Molecular Imaging Program, Stanford University

**TT Fields and their Effects on Preclinical Models of Cancer**

**1:30-1:45 pm:** Dr. Chirag Patel

Clinical Assistant Professor of Neurology and Neurological Sciences and, by courtesy, of Radiology, Stanford University School of Medicine

**Overview of TTFields Clinical Trials**

**1:45-2:00 pm:** Dr. Christoph Pohling

Post Doctoral Fellow, Stanford University, School of Medicine

**Experimental basics for preclinical studies of Tumor Treating Fields**

**2:00-2:15 pm:** Dr. Roger Stupp

Chief of Neuro-oncology in the Department of Neurology Paul C. Bucy Professor and Director, Malnati Brain Tumor Institute of the Lurie Compr. Cancer Center, Departments of Neurology, Neurological Surgery and Oncology Northwestern University

**Tumor Treating Fields – integration of this new paradigm in oncology**

**2:15-2:30 pm:** Session Discussion



Society for Brain Mapping and Therapeutics (SBMT)

**Optometry Track 2021 Program (Room 406A)**

**THE RETINA'S ROLE in THE BRAIN CONNECTOME**

**Mind EYE Institute Neuro- Optometry and Neuro-  
Ophthalmology section**

**Thursday, July 8<sup>th</sup> 10:00-11:30 am PDT**

**E2: The Retinal Role in The Brain Connectome, Retinal Neuromodulation**



*Chair: Christopher Tyler (Professor, Smith-Kettlewell Eye Research Institute, San Francisco, CA USA)*

**10:00-10:15 am (JHU CME): Dr. Heather Heitkotter**

Researcher at Medical College of Wisconsin, Milwaukee, WI, USA

**Multimodal assessment of photoreceptor structure and function in traumatic brain injury**

**10:15-10:30 am (JHU CME): Dr. Delia Cabrera**

Bascom Palmer Eye Institute, Miami, FL USA

**Seeing the Brain Through the Eye: 21<sup>st</sup> Century Neuroimaging Applications**

**10:45-11:00 am: Dr. Natasha Johnson**

Private Practice, Austin, Texas, USA

**Ataxia and Retinal Processing**

**10:45-11:00 am (JHU CME): Dr. Suraj Upadhyaya**

Assistant Professor at Midwestern College of Optometry, Downers Grove, IL USA

**Optometric Research at a Cellular Level**

**11:00-11:15 am: Dr. Vasillis Kokotos**

Optometrist and Professional Consultant, S.A. Bairamoglou S.A. Aston University

**Using Near Infrared Light to Image Brain Tissue: The Golden Optical Window**

**11:15-11:30 am: Session Discussion**





**Thursday, July 8<sup>th</sup>** THE RETINA'S ROLE in THE BRAIN CONNECTOME  
1:30-3:00 pm PDT

**E5: Cerebral vs. Ocular Blood Flow**



*Chair: Christopher Tyler (Professor, Smith-Kettlewell Eye Research Institute, San Francisco, CA*

**1:30-1:45 pm:** Dr. Allaudin Bhuiyan

Associate Professor at Icahn School of Medicine at Mount Sinai, Icahn School of Medicine at Mount Sinai, University of Melbourne, New York, USA

**Stroke Predication from Retinal Blood Vessels**

**1:45-2:00 pm:** Dr. Konstantin Kotliar

Department of Engineering and Technomathematics

**Neurovascular Coupling**

**2:00-2:15 pm:** Dr. Christopher W. Tyler

Smith-Kettlewell Eye Research Institute, San Francisco, CA USA

**Mechanisms of Hypersensitivity to Light in Traumatic Brain Injury**

**2:15-2:30 pm (JHU CME):** Dr. Shannon Mandel

Private Practice, Seattle, WA, USA

**The Pivotal Effect of Eyeglasses on Heart Rate Stability**

**2:30-2:45 pm:** Dr. Deborah Zelinsky,

O.D. Founder, Mind-Eye Institute, Northbrook, IL USA

**Post Illumination Pupil Response (PIPR)**

**2:45-3:00 pm:** Session Discussion



**Thursday, July 8<sup>th</sup> THE RETINA'S ROLE in THE BRAIN CONNECTOME**

**3:30-5:00 pm PDT**

**E8: Electrical Signaling Pathway**



*Chair: Christopher Tyler (Professor, Smith-Kettlewell Eye Research Institute, San Francisco)*

**3:30-3:45 pm:** Dr. Gianluca Lazzi

University of Southern California, Roski Eye Institute, CA

**Effects of Electromagnetic Fields on Eye and Brain**

**3:45-4:00 pm:** Dr. Anat Galor

Optometrist, Bascom Palmer Eye Institute, Miami, FL USA

**Photosensitivity: Is it Modifiable?**

**4:00-4:15 pm:** Dr. Eric Moulton

Assistant Professor of Anesthesia and Ophthalmology, Director | Brain and Eye Pain Imaging Lab | Department of Anesthesiology, Critical Care & Pain Medicine, Co-Director | Pain and Affective Neuroscience Center | Department of Anesthesiology, Critical Care & Pain Medicine, Boston Children's Hospital, Harvard Medical School

**Photosensitivity: Is it Modifiable? (part 2)**

**4:15-4:30 pm (JHU CME):** Dr. Lingyan Shi

Assistant professor at University of San Diego, CA USA

**Using Near Infrared Light to Image Brain Tissue: The Golden Optical Window**

**4:30-4:45 pm:** Dr. Mariela C. Aguilar

Director of Research Operations, Bascom Palmer Eye Institute, Miami, FL USA

**Quantifying Photosensitivity in Healthy and Light Sensitive Subjects**

**4:45-5:00 pm:** Session Discussion



**Friday, July 9<sup>th</sup>** **ROLE of RETINAL PROCESSING in MENTAL HEALTH**  
**10:00-11:30 am PDT**

**A6: Role of Optometry in Brain and Mental Fitness**



*Chair: Delia Cabrera Debuc Ph.D., Bascom Palmer Eye Institute, Miami, FL USA*

**10:00-10:15 pm (JHU CME):** Michael Flomenhaft, Esquire  
Founder, Flomenhaft Law Office for Brain Justice, New York, NY, USA

**Brain Injury from a Legal Point of View, Linking Neuroscience, Concussion and Chronic Pain**

**10:15-10:30 pm:** Dr. Robert Wilson  
Emergency Medicine Physician, US Air Force Base

**PTSD in Veterans**

**10:30-10:45 pm:** Dr. Gloria Gilbert  
The Downtown Clinic, Physiotherapy & Health Counseling

**Persistent Pain Symptoms May Mask the Effects of a Brain Injury**

**10:45-11:00 pm:** Dr. Sandra Groeltz  
Chaplain, Consultant for Veterans

**Veterans' Need for Spiritual Counseling**

**11:00-11:15 pm:** Dr. Andrea Adams-Miller  
Executive Director of the Keep Smiling Movement, The Red-Carpet Connection, Findlay, OH USA

**Biopsychosocial Effects of a Smile**

**11:15-11:30 pm:** Session Discussion



**A19: Relationship between External Eyesight and Internal Visualization**



*Chair: Delia Cabrera Debuc Ph.D., Bascom Palmer Eye Institute, Miami, FL USA*

**1:30-1:45 pm:** Dr. Monica Gori

Insituto Italiano di Tenologia – VIP Unit for Visually Impaired People, Faculty Member, Genua, Italy

**Linking Auditory and Visual Inputs**

**1:45-2:00 pm:** Dr. Melanie Woodhouse

Eye Four Eye Manly, Sydney, Australia

**Case Study in Spatial Awareness**

**2:00-2:15 pm:** Barbara Arrowsmith-Young

Founder, Arrowsmith Program (Brainex)

**Principles that Drive Neuroplastic Change**

**2:15 – 2:30 pm:** Dr. Robert Buck

Psychotherapist/Inventor and President of NeuView Glasses

**Visual Processing in Anxiety and Depression**

**2:30 – 2:45 pm:** Dr. Charles Spence

Professor of Experimental Psychology and Director, Crossmodal Research Laboratory, Oxford, England, UK

**Sensory Integration**

**2:45-3:00 pm:** Session Discussion

**A31: Influence of Systemic Considerations on Visual Processing**



*Chair: Delia Cabrera Debuc Ph.D., Bascom Palmer Eye Institute, Miami, FL USA*

**3:30-3:45 pm:** Dr. Lorene Wu  
Director Whole Life Center, LaGrange Park, IL USA

**Changes in Visual Awareness due to Depression and Anxiety**

**3:45-4:00 pm:** Dr. Delia Cabrera DeBuc  
Bascom Palmer Eye Institute, Miami, FL USA

**The Effect of Alzheimer's Disease on Visual Processing**

**4:00-4:15 pm:** Dr. Leighton Reynolds  
Private Practice – Neuropsychanalyst, with emphasis on Brain Injuries in Athletes

**Listening to the Brain: Complex Healing of Traumatic Brain Injuries**

**4:15-4:30 pm:** Dr. Erin McCarthy  
Cystinosis Foundation

**Effects of Cystinosis on the Eye and Implications in Everyday Life**

**4:30-4:45 pm:** Betsy Pilon  
Executive Director, Hope for HIE (Hypoxic Ischemic Encephalopathy)

**Visual Effects from Hypoxia at Birth**

**4:45-5:00 pm:** Session Discussion



**B44: The Importance of Movement**



*Chair: Deborah Zelinsky., Founder, Mind-Eye Institute, Northbrook, IL USA*

**10:00-10:15 am:** Dr. Shane Steadman  
Owner at Integrated Brain Centers

**Posture Shifts Affect Visual Perception**

**10:15-10:30 am:** Dr. Eytan Lerner  
Independent Practitioner of Anat Baniel Method, Canada

**The Effects of Neck and Spinal Stress on Spatial Awareness**

**10:30-10:45 am:** Dr. Matthew Wilkinson  
Independent Practitioner of Anat Baniel Method, Denver Area

**The Effects of Neck and Spinal Stress on Spatial Awareness (part 2)**

**10:45-11:00 am:** Dr. Andrea Hennen  
Independent Practitioner of Anat Baniel Method, Greater Denver Area Email:

**The Effects of Neck and Spinal Stress on Spatial Awareness (part 3)**

**11:00-11:15 am:** Dr. Gabriel Altman  
Co-Founder Kinetix 365, Beverly Hills, CA USA

**The Importance of Movement During Recovery from Brain Injury**

**11:15-11:30 am:** Session Discussion

**B57: The Importance of Vasculature to Brain Function**



*Chair: Deborah Zelinsky., Founder, Mind-Eye Institute, Northbrook, IL USA*

**1:00-1:15 pm:** Dr. Marsh Konigs

Assistant Professor, Neuroscience Emma Children's Hospital at Amsterdam University Medical Center

**The Impact of Disease on the Pediatric Brain**

**1:15-1:30 pm:** Dr. Albert Mensah

Co-founder, Mensah Medical, USA

**Blood Pressure and Eye/Ear Connectome**

**1:30-1:45 pm:** Dr. Glenn Egelman

Medical Director, TRICARE for the Defense, Washington, D.C. USA

**Visual Linkages to Heart Regulation**

**1:45-2:00 pm:** Adina Gutstein

Medical Science Liaison at Amryt Pharma. US Medical Affairs

Session Title: **Cardiac Changes Affecting Visual Processing**

**2:00-2:15 pm:** Claudia Mason

fashion model, spokesperson for American Stroke Association (ASA)

**Vertebral Artery Dissection**

**2:15 – 2:30 pm:** Session Discussion

**B70: Changes in Retinal Processing due to Stress**



*Chair: Deborah Zelinsky, Founder, Mind-Eye Institute, Northbrook, IL USA*

**3:00-3:15 pm:** Dr. Mark Allen

Co-Founder and Director of Research at Cognitive FX, Provo, UT, USA

**The Retina as an Interface to the Autonomic Nervous System**

**3:15-3:30 pm:** Dr. Matthew Antonucci

Co-Founder and Chief Clinical Officer Plasticity Brain Center, Orlando, FL, USA

**Brain Plasticity and Visual Processing**

**3:30-3:45 pm-:** The Late Edward Wittert

Psychologist, Private Practice, Chicago, IL USA (posthumously presented by Jonathan Hall, O.D.)

**An Investigation of the Effects of Experimentally Induced Stress Upon Figure Rotations**

**3:45-4:00 pm:** Dr. Glenn Egelman

Medical Director, TRICARE for the Defense Health Agency (DHA), Washington, D.C. USA

**How Eye Care in Veterans with TBIs can Affect Endocrine Functions**

**4:00-4:15 pm:** Dr. Clark Elliott

Associate Professor of Artificial Intelligence and Cognitive Science, DePaul University

**Retinal Processing's Effect on Decision Making**

**4:15-4:30 pm:** Session Discussion

**C83: Neuroendocrine Aspects of Visual Processing**



*Chair: Amy Pruszenski, O.D., Visual Victory Training, Portsmouth, NH, USA*

**10:15-10:30 am:** Dr. Vasilis Kokotas

Optometrist & Professional Consultant, S.A. Bairamoglou S.A. Aston University, Athens, Greece

**Retinoscopy: A useful tool for accessing the efferent retinal pathways**

**10:30-10:45 am:** Dr. Gerry Hsu

Founder Eclairermd, San Francisco, CA, USA

**A mathematical viewpoint of brain function**

**10:45-11:00 am:** Dr. Gabor Mark Somfai

Senior Consultant and Spross Research Fellow City Hospital Triemli in Zürich, Switzerland

**The Role of Thyroid Hormone Levels in Early Diabetic Retinal Changes in Diabetes**

**11:00-11:15 am:** Dr. Michal Schnaider Beerli

Professor of Psychiatry, Mount Sinai, NY, NY USA

**Blood Sugar and Retinal Function**

**11:15-11:30 am:** Session Discussion

**C96: Impact of Stable Visual Skills on Quality of Life**



*Chair: Dr. Amy Pruszenski Visual Victory Training Center, Portsmouth, NH, USA*

**1:00-1:15 pm:** Debra Grossman

Executive Director of Blind Services Association, Chicago, IL USA

**Updated Help for Quality of Life for the Legally Blind Population**

**1:15-1:30 pm:** Dr. Clark Elliott

Professor of Artificial Intelligence/Cognitive Science, Chicago IL

**A Follow-up on The Ghost in My Brain: Readers from Around the World**

**1:30-1:45 pm (JHU CME):** Dr. Nancy Major

Central Coast Vision and Learning Paso Robles, CA USA

**Patient Mood & Confidence Affected by Disrupted Visual Skills**

**1:45-2:00 pm:** Dr. Doug Major

Central Coast Vision and Learning Paso Robles, CA USA

**Plasticity of Visual Perceptual Systems**

**2:00 – 2:15 pm (JHU CME):** Dr. Jenny Garbus

Neuro Vision Rehabilitation Institute Valencia, CA USA

**Impact of Optometry on Brain Function after a TBI**

**2:15-2:30 pm:** Session Discussion





**C109: Updating the 150 year old Eye Examination**



*Chair: Dr. Amy Pruszenski Visual Victory Training Center, Portsmouth, NH, USA*

**3:30-3:45 pm:** Dr. Mark Dean  
Grand Strand Vision, Myrtle Beach, South Carolina, USA

**Adaptation to Spatial Distortions**

**3:45-4:00 pm (JHU CME):** Dr. Derek Tong  
Center for Vision Development, California USA

**Visual Testing in the 21st Century**

**4:00-4:15 pm (JHU CME):** Dr. DeAnn Fitzgerald  
President of the Neuro-Optometric Rehabilitation Association (NORA) Fitzgerald and Associates, Iowa, USA

**The Eye: Window to the Mind and Body**

**4:15-4:30 pm (JHU CME):** Dr. Fabian Tai  
Dr. Fabian Tai&Associates, Optometrist&Vision Therapy, Canada

**Effects of Optometric Dysfunction on Quality of Life**

**4:30-4:45 pm (JHU CME):** Dr. Amy Pruszenski  
Vision Therapy Specialist, Visual Victory Training, Portsmouth, NH, USA

**The Need for Neuro-Optometry during TBI Rehab**

**4:45-5:00 pm** Session Discussion



# 17/18th Annual

World Congress of Society for  
Brain Mapping and Therapeutics

*Breaking Boundaries of Science, Technology, Medicine, Art, and Healthcare Policy*



Judith Ann Thatcher was born on July 18, 1958, the last of four children in Brooklyn, NY. In 1969 her family moved to Uniondale Long Island, NY where she graduated from Uniondale High School in 1976 and moved to Tucson, AZ in 1979 where she had her two daughters. Judie moved to Pinellas County in 1989 and raised her family in Seminole, FL. Judie received her RN degree in 1990 and was an oncology nurse and worked for hospice giving people and families peace during their loved one's last days. She met Robert Thatcher in 2004 and was married in 2005. Together they shared a love of being on the water, traveling and spending time with family and friends. Starting in 2008, she was an executive assistant for Applied Neuroscience, Inc. She traveled the world and made sure everyone always knew how much she loved them.

Judie was an amazing mother, wife, grandma, sister, mother-in-law and friend to so many. Everyone who met her saw her genuine love for life and caring for others. She was an extremely generous and giving person to those she loved and the causes she cared deeply for and believed in. She was the definition of unconditional love. As a young mother she beat cancer and that fight stayed with her throughout her life.

**Society for Brain Mapping and Therapeutics (SBMT)**  
**Room 410**

**Friday, July 9<sup>th</sup> 10:00-11:30 am PDT**

***A7: Functional Brain Mapping I: New Advancements in Electrical Neuroimaging: Neurosurgical Planning and Pre vs Post Surgery***



*Chair: Dr. Robert Thatcher (CEO and director of Applied Neuroscience Research Institute)*

**10:00-10:15 am:** Dr. Robert Thatcher  
CEO and director of Applied Neuroscience Research Institute

**Neuro-navigation of Functional and Effective Connectivity in Epilepsy**

**10:15-10:30 am:** Dr. Joel Lubar  
President of Southeastern Neurofeedback Institute

**Electrical Neuroimaging of Epileptic Foci and Affected Networks**

**10:30-10:45 am:** Dr. Dale Foster  
Clinical Neuropsychologist, NeuroSource, LLC

**Electrical Neuroimaging for Pre vs Post Treatment Evaluation**

**10:45-11:00 am:** Dr. William Lambos  
Licensed Psychologist, Neuropsychologist, NESTRE Health and Performance, LLC

**3-Dimensional EEG Evaluation of Brain Networks**

**11:00-11:15 am:** Dr. Richard Abbey  
Clinical Neuropsychologist, Abbey Neuropsychology Clinic

**Electrical Neuroimaging and Diffusion Tensor Imaging**

**11:15-11:30 am:** Session Discussion

**Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT**

**A20: Functional Brain Mapping II: Epilepsy and Intraoperative Brain Mapping (JHU CME)**



***Chairs: Dr. Dawn Eliashiv (Professor, University of California of Los Angeles)***



***Dr. Warren Boling (Professor and Chairman, Loma Linda University)***

**1:30-1:45 pm:** Dr. Mohammad Dastjerdi  
Neurologist, Loma Linda University Medical Center

**Post-traumatic Epi-leptogenesis and Its Biomarkers**

**1:45-2:00 pm:** Dr. Warren Boling  
Professor and Chairman, Loma Linda University

**Surgical Treatment of Epilepsy. A Brief History and Future Directions**

**2:00-2:15 pm:** Dr. Keyne Johnson  
Pediatric Neurosurgeon, Brain and Spine Institute for Children, Orlando, FL

**The challenges in converting research and development into successful commercial products or services**

**2:15-2:30 pm:** Dr. Dawn Eliashiv  
Professor, University of California of Los Angeles

**Neuro stimulation network-based therapy for Epilepsy**

**2:45-3:00 pm:** Session Discussion



Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

**A32: Functional Brain Mapping III: MEG/EEG Clinical Applications (JHU CME)**



*Chairs: Janne Huhtala (Founder and CEO, RENITA Medical)*



*Dr. Robert Thatcher (CEO and director of Applied Neuroscience Research Institute)*

**3:30-3:45 pm:** Dr. Robert Thatcher  
CEO and director of Applied Neuroscience Research Institute

**Real-Time Electrical Neuroimaging of the Cerebellum, Red Nucleus and Sub-Thalamus: Future Applications in Parkinsonism and Ataxia**

**3:45-4:00 pm:** Dr. Dale Foster  
Clinical Neuropsychologist, NeuroSource, LLC

**Real-Time swLORETA EEG Neurofeedback of Veterans with PTSD**

**4:00-4:15 pm:** Dr. Richard Abbey  
Clinical Neuropsychologist, Abbey Neuropsychology Clinic

**Real-Time swLORETA EEG Neurofeedback of Autistic Spectrum Disorder**

**4:15-4:30 pm:** Dr. Joel Lubar  
President, President Southeastern Neurofeedback Institute

**Electrical Neuroimaging of in Epilepsy Patients**

**4:30-4:45 pm:** Dr. William Lambos  
Licensed Psychologist, Neuropsychologist, NESTRE Health and Performance, LLC

**Real-Time swLORETA EEG Neurofeedback of TBI Patients**

**4:45-5:00 pm:** Session Discussion



**Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT**

***B45: Functional Brain Mapping IV: Practical Advances in Electrical Neuroimaging: Hands On Training: Session***



*Chair: Dr. Robert Thatcher (CEO and director of Applied Neuroscience Research Institute)*

**10:00-10:15 am:** Dr. Robert Thatcher  
CEO and director of Applied Neuroscience Research Institute

**Electrical Neuroimaging and Diffusion Tensor Imaging of Functional and Effective Connectivity**

**10:15-10:30 am:** Dr. Ernesto P. Soler  
Senior Scientist, Applied Neuroscience Research Institute

**Time Domain Evaluation of Epileptic Foci and Networks**

**10:30-10:45 am:** Dr. Joel Lubar  
President, President Southeastern Neurofeedback Institute

**Real-time Electrical Neuroimaging of the Cerebellum, Red Nucleus and Subthalamus**

**11:00-11:15 am:** Dr. William Lambos  
Licensed Psychologist, Neuropsychologist, NESTRE Health and Performance, LLC

**Real-Time swLORETA EEG Neurofeedback in PTSD**

**11:15-11:30 am:** Session Discussion

## **B58: *Functional Brain Mapping VI: MEG/EEG Clinical Applications***



*Chairs: Dr. Leslie S. Prichep (Chief Scientific Officer, BrainScope Company, Inc.)*



*Dr. Robert Thatcher (CEO and director of Applied Neuroscience Research Institute)*

**1:00-1:15 pm:** Dr. Leslie S. Prichep  
Chief Scientific Officer, BrainScope Company, Inc.

### **Triage of acute traumatic brain injury using electrophysiological biomarkers**

**1:15-1:30 pm:** Dr. Robert Isenhardt  
Chief Scientific Officer, Wave Neuroscience

### **QEEG optimization of TMS treatment**

**1:30-1:45 pm:** Dr. Richard Abbey  
Clinical Neuropsychologist, Abbey Neuropsychology Clinic

### **Electrical Neuroimaging: Linking Symptoms to Dysregulated Networks**

**1:45-2:00 pm:** Dr. Ernesto P. Soler  
Senior Scientist, Applied Neuroscience Research Institute

### **MEG and EEG Neuroimaging of Functional and Effective Connectivity**

**2:00-2:15 pm:** Dr. William Lambos  
Licensed Psychologist, Neuropsychologist, NESTRE Health and Performance, LLC

### **Real-Time Electrical Neuroimaging and EEG Neuromodulation**

**2:15-2:30 pm:** Session Discussion

**Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT**

**B71: Functional Brain Mapping VII: TMS (Catherine Lapp, Nexstim)**



*Chairs: Dr. Narayanan Associate Professor; Director, Department of Pediatrics, University of Tennessee Health Science Center; Le Bonheur Neuroscience Institute, TMS laboratory and Director of Functional Neuroimaging Research, Le Bonheur Neuroscience Institute*



*Dr. Mark Liker, Neurosurgery, (Keck Hospital of University of Southern California) Division of Neurosurgery*

**3:00-3:15 pm:** Dr. Alexander Rotenberg

Professor and Director, Boston Children's Hospital and Harvard Medical School, Experimental Neurophysiology Core, Kirby Center for Neurobiology

**Presurgical motor mapping in pediatric epilepsy**

**3:15-3:30 pm:** Dr. Shalini Narayana

Associate Professor; Director, Department of Pediatrics, University of Tennessee Health Science Center; Le Bonheur Neuroscience Institute, TMS laboratory and Director of Functional Neuroimaging Research, Le Bonheur Neuroscience Institute

**Presurgical Language mapping in Pediatric Epilepsy**

**3:30-3:45 pm:** Dr. Fiona Baumer

Assistant Professor, Division of Pediatric Neurology, Department of Neurology, Stanford University School of Medicine

**TMS/EEG, Fundamentals of Connectivity Analysis & Clinical Applications**

**3:45-4:00 pm:** Dr. Mark Liker

Neurosurgery, (Keck Hospital of University of Southern California) Division of Neurosurgery

**The Works of TMS Functions**

**4:00-4:15 pm:** Dr. Maxwell Hand

Neuromodulation Specialist & Application Researcher, BrainStim Centers

**A Retrospective Chart Review on Effect of MeRT vs Nexstim rTMS Depression Protocols**

**4:15-4:30 pm:** Session Discussion

Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT

## **C84: Functional Brain Mapping VIII: MEG Sessors (JHU CME)**



*Chairs: Dr. Peter Schwindt Distinguished Member of Technical Staff, Sandia National Laboratories, NM, US*



*Dr. Amir Borna Senior Member of Technical Staff, Sandia National Laboratories, NM, US*

**10:00-10:15 am:** Dr. Peter Schwindt

Distinguished Member of Technical Staff, Sandia National Laboratories, NM, US

### **Moving Closer to the Brain: Introduction to On-Scalp Magnetoencephalography**

**10:15-10:30 am:** Dr. Vishal Shah

Chief Scientist, QuSpin, Inc., CO, US

### **Next Generation Magnetoencephalography (MEG)**

**10:30-10:45 am:** Mr. Ryan Hill

MEG Researcher, University of Nottingham, United Kingdom

### **Next Generation Neuroimaging with Optically Pumped Magnetometer Magnetoencephalography (OPM-MEG)**

**10:45-11:00 am:** Dr. Orang Alem

Founder/Scientist, University of Colorado, Fieldline, Inc.

### **Towards a MEG system with microfabricated OPMs**

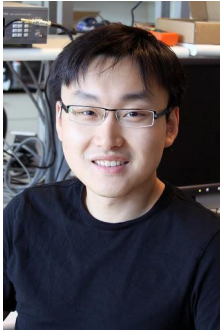
**11:00-11:15 am:** Dr. Amir Borna

Senior Member of Technical Staff, Sandia National Laboratories, NM, US

### **Non-Invasive Functional-Brain-Imaging with an OPM-based Magnetoencephalography System**

**11:15-11:30 am:** Session Discussion

## **C97: Functional Brain Mapping VIII: MEG/EEG Sensors**



*Chair: Dr. Yu Mike Chi (Cognionics, Inc., CEO and CGX LLC)*

**1:00-1:15 pm:** Dr. Prof. Walt Besio  
Professor, University of Rhode Island

### **Tripolar Concentric Ring Electrodes for Two-Way Brain Communication**

**1:15-1:30 pm:** Dr. Prof. Steven Cramer  
Professor of Neurology, UCLA, University of California of Los Angeles

### **EEG biomarkers of stroke recovery**

**1:30-1:45 pm:** Dr. Gary Vissing  
Business Development Manager, Datwyler Sealing Solutions

### **Soft Molded Dry EEG Electrodes**

**1:45-2:00 pm:** Dr. Prof. Uri Maoz  
Assistant Professor, Chapman University

### **Studying volition by combining EEG with physiological monitoring, TMS, flotation tank, and other measures**

**2:00-2:15 pm:** Prof. Tzyy-Ping Jung  
Co-Director, University of California, San Diego

### **Big and Crucial Issues (BCIs) in taking BCIs outside the Laboratory**

**2:15-2:30 pm:** Session Discussion



Sunday, July 11<sup>th</sup> 3:30-5:00 pm PDT

## **C110: Functional Brain Mapping VIII: Software Session for MEG/EEG**



***Chairs: Dr. Robert Thatcher***  
***(CEO and director of***  
***Applied Neuroscience***  
***Research Institute)***



***Dr. Ernesto Palmero Soler (Senior***  
***Scientist, Applied Neuroscience***  
***Research Institute)***



***Dr. Gordon Baltzer (President of MEGIN)***

**3:30-3:45 pm:** Dr. Robert Thatcher  
CEO and director of Applied Neuroscience Research Institute

### **Real-Time swLORETA Cerebellar EEG Neurofeedback of Parkinson Patients**

**3:45-4:00 pm:** Dr. Nicholas Peatfield  
Proto-Me, Modern Software Tools for MEG/EEG

### **Simultaneous Deep Brain Calcium Imaging and Ultrasound Based Neural Modulation**

**4:00-4:15 pm:** Dr. Ernesto P. Soler.  
Senior Scientist, Applied Neuroscience Research Institute

### **MEG and EEG Neuroimaging of Functional and Effective Connectivity**

**4:15-4:30 pm:** Dr. Joel Lubar  
President Southeastern Neurofeedback Institute

### **Electrical Neuroimaging and Seizure Localization**

**4:30-4:45 pm:** Dr. Dale Foster.  
Clinical Neuropsychologist, NeuroSource, LLC

### **Neuronavigation of EEG Functional and Effective Connectivity and Diffusion Tensor Imaging in TBI patients**

**4:45-5:00 pm:** Dr. Gordon Baltzer  
President of MEGIN

**Advances in MEG Software**  
**5:00-5:15 pm:** Session Discussion

Society for Brain Mapping and Therapeutics (SBMT)  
**Neuroengineering Conference 2021:**  
*Room 150A (Warren Grundfest Neuro-Engineering Memorial Lecture)*  
Organized by



Dr. Ted Berger | Dr. Roger Werne | Dr. Dong Song | Dr. Babak Kateb | Dr. Jean-Marie C Bouteiller

**Friday, July 9<sup>th</sup> 10:00-11:30 am PDT**

**A8: Neural Engineering I: Addressing Challenges in Cochlear Implants (JHU CME)**



*Chair: Dr. Fan Gang Zeng  
(Professor and Director Center for Hearing Research University of California Irvine)*

**10:00-10:15 am:** Dr. Prof. Fan-Gang Zeng  
Professor and Director  
Center for Hearing Research, University of California Irvine

**Challenges and Opportunities in Cochlear Implants**

**10:15-10:30 am:** Dr. Leonid Litvak  
Director of Research and Development, Advanced Bionics Corporation

**A Manufacturer's Perspective on Challenges in Cochlear Implantation**

**10:30-10:45 am:** Dr. Prof. Hiroyuki Mino  
Professor of Biomedical Engineering, Kanto Gakuin University

**Neural Modeling in Auditory Prostheses**

**10:45-11:00 am:** Dr. Prof. Gert Cauwenberghs  
Professor of Bioengineering, Co-Director, Institute for Neural Computation Jacobs School of Engineering; University of California, San Diego

**Unobtrusive In-Ear Electrophysiology**

**11:00-11:15 am:** Dr. Roger Miller  
Program Director, National Institutes of Health / National Institute on Deafness and Other Communication Disorders

**NIH Support for Cochlear Implant Research and Development**

**11:15-11:30 am:** Session Discussion

## **A21: Neuroengineering II: Neuro-Modulation and Ultrasound**



*Chairs: Dr. Seung-schik Yoo & Dr. Spencer Brinker  
(Associate Professor of Radiology Harvard Medical School / Brigham and Women's Hospital, Faculty/ Harvard Mind Brain Behavior, Director/Neuromodulation and Tissue Engineering Laboratory (NTEL))*



*Dr. Spencer Brinker  
(Associate Research Scientist Yale School of Medicine)*

**1:30-1:45 pm:** Dr. Hyungmin Kim

Senior Researcher, Korea Institute of Science and Technology (KIST) on leave to CalTech)

### **Modulation of Human Anti-Saccade Behavior Using Transcranial Focused Ultrasound**

**1:45-2:00 pm:** Dr. Alexander Bystritsky

Professor Emeritus, Professor Emeritus University of California of Los Angeles

### **Safety of the Neuro-Modulatory FUS in Human Epilepsy Experimental Treatments**

**2:00-2:15 pm:** Mr. Joshua Cain on behalf of Dr. Martin Monti

Associate Professor, University of California of Los Angeles

### **Low Intensity Focused Ultrasound as a Non-Invasive Intervention in Disorders of Consciousness**

**2:15-2:30 pm:** Dr. Spencer Brinker

Associate Research Scientist, Yale School of Medicine

### **Big-Beam Transcranial Ultrasound Stimulation: A Human-Scale Benchtop Feasibility Study**

**2:30-2:45 pm:** Dr. Hyunchul Kim

Postdoctoral Fellow, Harvard Medical School, Brigham and Women's Hospital

### **Transcranial Focused Ultrasound Modulates Cortical and Thalamic Motor Areas in Awake Sheep**

**2:45-3:00 pm:** Session Discussion

Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

## **A33: Neural Engineering III: Computational Models for Neural Prosthesis (JHU CME)**



*Chair: Dr. Dong Song  
(Research Associate Professor Center for Neural Engineering  
Department of Biomedical Engineering Neuroscience Graduate Program University of  
Southern California)*

**3:30-3:42 pm:** Dr. Yuxiao Yang  
Assistant Professor, University of Central Florida

### **Closed-loop BCI for Neuropsychiatric Disorders**

**3:42-3:54 pm:** Dr. Theodoros Zanos  
Assistant Professor, The Feinstein Institute for Medical Research

### **Modeling the Brain-Body Axis for Diagnostic and Closed-Loop Bioelectronic Devices**

**3:54-4:06 pm:** Dr. Spencer Kellis  
Research Assistant Professor, Keck School of Medicine of USC

### **Generating Somatosensory Percepts for Bidirectional Brain-Machine Interfaces**

**4:06-4:18 pm:** Dr. Dong Song  
Research Assistant Professor, University of Southern California

### **Computational Models for Hippocampal Memory Prostheses**

**4:18-4:30 pm:** Dr. Yiwen Wang  
Assistant Professor, The Hong Kong University of Science and Technology

### **Building Motor Brain Machine Interface Towards a Smart Learner**

**4:30-4:42 pm:** Dr. Gregory Clark  
Professor, University of Utah

### **Biomimetic sensorimotor control of a dexterous, sensorized bionic arm**

**4:45-5:00 pm:** Session Discussion

**Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT**

***B46: Neuroengineering IV: Neuroengineering Research and Development in the Department of Energy***



*Chairs: Dr. Roger Werne & Dr. Elsie Quite-Randall  
(Senior Advisor Innovation and Partnerships Lawrence Livermore National Laboratory & Lawrence Livermore National Laboratory)*



*Dr. Elsie Quite-Randall  
(Senior Advisor Innovation and Partnerships Lawrence Livermore National Laboratory & Lawrence Livermore National Laboratory)*

**10:00-10:15 am:** Dr. Elsie Quite-Randall

Deputy Director of Innovation and Partnerships; Lawrence Livermore National Laboratory

**Accessing unique facilities and expertise at DOE National Laboratories**

**10:15-10:30 am:** Dr. Narayanan Kasthuri

Assistant Professor, Argonne National Laboratory

**Neuro Engineering Research and Development at Argonne National Laboratory**

**10:30-10:45 am:** Dr. Amy Gryshuk

Director, Strategic Engagements & Alliance Management for the Physical & Life Sciences Directorate

**Neuroscience and Neurotechnology at Lawrence Livermore National Laboratory**

**10:45-11:00 am:** Dr. Peter Schwindt

Principal Investigator, Sandia National Laboratory

**Neuro Engineering Research and Development at Sandia National Laboratories**

**11:00-11:30 am:** Session Discussion



**B59: Neural Engineering V: Multiscale (Hierarchical) Models of the Nervous System (JHU CME)**



*Chair: Dr. Jean-Marie C. Bouteiller  
(Research Assistant Professor Department of Biomedical Engineering Viterbi School of Engineering University of Southern California)*

**1:00-1:15 pm:** Dr. Jean-Marie C. Bouteiller  
Research Assistant Professor, University of Southern California

**Bridging Scales in Multiscale Models of the Nervous System**

**1:15-1:30 pm:** Dr. James Kozloski  
Research Staff Member, Manager, Multiscale Computational Modeling — Heart, Brain and Spinal Cord  
IBM Research

**Multiscale Population Modeling for Addressing Divergence in Therapeutic Design for Neural Tissue**

**1:30-1:45 pm:** Dr. Hugo Geerts  
Head of QSP Neurosciences, Certara

**A Computer-Based Quantitative Systems Pharmacology Model for Understanding the Neurobiology Behind the Effect of Genotypes on Bold fMRI Readouts**

**1:45-2:00 pm:** Dr. Gene Yu  
Postdoctoral Research Associate, University of Southern California

**A Large-scale Neuronal Network Model of the Tri-synaptic Pathway of Rat Hippocampus**

**2:00-2:15 pm:** Dr. Christopher T. Lee,  
Hartwell Foundation Postdoctoral Fellow, UC San Diego

**3D Mesh Processing Using GAMer 2 to Enable Reaction-Diffusion Simulations in Realistic Dendritic Spine Geometries**

**2:15-2:30 pm:** Session Discussion

## ***B72: Neuroengineering VI: Neuromorphic Computing***



*Chair: Dr. Roger Werne  
(Senior Advisor Innovation and Partnerships Lawrence Livermore National Laboratory)*

**3:00-3:15 pm:** Dr. James Kozloski

Research Staff Member, Manager, Multiscale Computational Modeling — Heart, Brain and Spinal Cord  
IBM Research

### **Constraints from Cortical and Subcortical Global Brain Anatomy for Brain Inspired Computing**

**3:15-3:30 pm:** Dr. Frances S. Chance

Principal Member of Technical Staff  
Department of Cognitive and Emerging Computing, Sandia National Laboratory

### **Lessons from Dragonflies in Brain-inspired Computing**

**3:30-3:45 pm:** Dr. Lawrence Spracklen

Director of Machine Learning Architecture, Numenta

### **Can Neuroscience insights transform AI?**

**3:45-4:00 pm:** Dr. Katherine Shuman

Research Scientist, Oak Ridge National Laboratory

### **Brain Inspired Computing: Neuromorphic Computing and Neural Hardware**

**4:00-4:15 pm:** Dr. Ian Karlin

Principal HPC Strategist, Lawrence Livermore National Laboratory

### **Cerebras CS-1: Tightly coupled large scale data-flow for Neural Network Processing**

**4:15-4:30 pm:** Session Discussion

Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT

## **C85: Neuroengineering VII: New Neural Interface for Recording and stimulation.**



*Chairs: Dr. Dong Song & Dr. Ellis Meng  
(Research Associate Professor Center for Neural Engineering Department of Biomedical Engineering Neuroscience Graduate Program University of Southern California)*



*Dr. Ellis Meng  
Professor of Biomedical Engineering and Electrical and Computer Engineering Vice Dean for Technology Innovation and Entrepreneurship Viterbi School of Engineering University of Southern California*

**10:00-10:15 am:** Dr. Walid Soussou  
CEO, Wearable Sensing, QUASAR.

### **Wearable Sensor Suite for Non-invasive Neurophysiological Monitoring in Naturalistic and Virtual Reality Environments**

**10:15-10:30 am:** Dr. Dong Song  
Research Assistant Professor, University of Southern California

### **Next-Generation Interface Systems for Supporting Cortical Prostheses**

**10:30-10:45 am:** Dr. Ellis Meng  
Professor of Biomedical Engineering and Electrical and Computer Engineering Vice Dean for Technology Innovation and Entrepreneurship Viterbi School of Engineering University of Southern California

### **Polymer Implantable Microelectrode Array Neural Interfaces**

**10:45-11:00 am:** Dr. Jack Whalen  
CEO, Platinum Group Coatings, LLC (PGC) University of Southern California

### **EPIC Microelectrodes for Bi-Directional Sensing and Stimulation**

**11:00-11:15 am:** Dr. Patrick Tresco  
Professor, University of Utah

### **Exploring the link Between Recording Array Design and Biocompatibility**

**11:15-11:30 am:** Session Discussion

## **C98: Neural Engineering VIII: Artificial Retina (JHU CME)**



*Chair: Dr. James Weiland (University of Michigan, BME and Ophthalmology)*

**1:00-1:15 pm:** Dr. Jeiran Choupan

Research Scientist, University of Southern California

### **Microstructural properties of visual pathway in blinding diseases**

**1:15-1:30 pm:** Dr. Michael Beyeler

Assistant Professor, University of California Santa Barbara

### **Predicting the Perceptual Experience of Retinal Prosthesis Patients**

**1:30-1:45 pm:** Dr. Prof. Gert Cauwenberghs

PhD Professor of Bioengineering

Co-Director, Institute for Neural Computation Jacobs School of Engineering; University of California, San Diego

### **High-density Integrated Neural Interfaces**

**1:45-2:00 pm:** Dr. James Weiland

Professor, University of Michigan

### **An Overview of Visual Prostheses**

**2:00-2:15 pm:** Dr. Noelle Stiles

Research Associate, University of Southern California

### **Neuroimaging in the Blind with Retinal Prostheses: Does Sensory Reorganization During Blindness Limit Visual Restoration?**

**2:15-2:30 pm:** Session Discussion

## **C111: Neuroengineering IX: Ultrasound**



*Chair: Dr. Qifa Zhou  
(Professor of Ophthalmology and Biomedical Engineering Viterbi School of Engineering USC)*

**3:30-3:45 pm:** Dr. Qifa Zhou

Professor of Ophthalmology and Biomedical Engineering Viterbi School of Engineering, USC

### **Ultrasound Stimulation on the Retina and Visual Cortex for Vision Restoration**

**3:45-4:00 pm:** Dr. Meng Cui

Assistant Professor of Purdue  
ECE and Biology, Purdue University

### **Simultaneous Deep Brain Calcium Imaging and Ultrasound Based Neural Modulation**

**4:00-4:15 pm:** Dr. Elisa Konofagou

Professor of Biomedical Engineering, Columbia University

### **Central and Peripheral Nervous System Modulation with Focused Ultrasound**

**4:15-4:30 pm:** Dr. Zion Zibly,

Senior Physician, Department of Neurosurgery Member of Israeli Neurosurgical Society, Congress of Neurological Societies, North American Neuromodulation Society, European Neurosurgical Association Boards, The Israeli Journal of Neurology, Sheba Medical Center

### **MR Guided Focused Ultrasound: From High to Low Frequency**

**4:30-4:45 pm:** Dr. Junjie Yao

Assistant Professor of Biomedical Engineering, Duke University

### **Photoacoustic Brain Imaging: Smaller, Deeper, and More Colorful**

**4:45-5:00 pm:** Dr. George Fischer

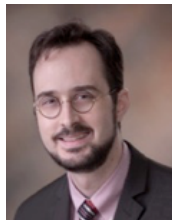
Professor of Robotics Engineering and Director of Practice Point Center, Worcester Polytechnic Institute (and AiM Medical Robotics)

### **MRI-Guided Robotic Delivery of Needle-based Therapeutic Ultrasound**

**5:00-5:15 pm:** Session Discussion



Society for Brain Mapping and Therapeutics (SBMT)  
**Spine Conference 2020:**  
*Room 150B (John McDonald III Memorial Spine Program)*  
Organized by



Dr. Tobias Mattei



Dr. Namath Hussain

**Friday, July 9<sup>th</sup> 10:00-11:30 am PDT**

**A9: (JHU CME) -Surgical Treatment of Spinal Fracture-Dislocations:  
Technical Nuances and Biomechanical Considerations**



*Chairs: Dr. Namath Hussain  
(Loma Linda University / Department  
of Neurosurgery)*



*Chair: Dr. Tobias Mattei  
(Neurosurgery Division  
Saint Louis University)*

**10:00-10:15 am:** Dr. Jacob Koffler

Neural Engineering Lab, Department of Neurosciences, School of Medicine, UCSD

**Acute ischemic stroke interventions.**

**10:15-10:30 am:** Dr. J. Pablo Villablanca

Director, Interventional Spine Service, Medical Director of MRI, UCLA

**Advanced imaging of the spine in cervical spondylotic myelopathy.**

**10:30-10:45 am:** Dr. Anthony Yeung

Desert Institute for Spine Care

**The role and future of endoscopic imaging for the treatment of spine and brain conditions.**

**10:45-11:00 am:** Dr. Tobias Mattei

Department of Neurological Surgery - Saint Louis University

**Surgical Treatment of Spinal Fracture-dislocations: Technical Nuances and Biomechanical Considerations.**

**11:00-11:15 am:** Dr. Keyne Johnson

Brain and Spine Institute for Children, American Association of Neurological Surgeons,  
Cognitive Neuroscience Society

**Comparing the motion of a single piece disc arthroplasty design and a ball and socket multiple piece design using dynamic radiography.**

**11:15-11:30 am:** Session Discussion

**A22: (JHU CME) Rehabilitation and Biologics in Spine Surgery**



*Chairs: Dr. Namath Hussain  
(Loma Linda University / Department of Neurosurgery)*

**1:30-1:45 pm:** Dr. Cristina Sadowsky  
Kennedy Krieger Institute / Johns Hopkins School of Medicine

**Spinal Cord Injury Rehabilitation – State of the Science.**

**1:45-2:00 pm:** Dr. Robert Watkins  
Marina Spine Center

**Clearing Athletes to Play after Spinal Injury.**

**2:00-2:15 pm:** Dr. Albert Recio  
Kennedy Krieger Institute Johns Hopkins School of Medicine

**Adaptation Required For Sailing in Patients with Spinal Cord Injury: A Guideline per AIS Neurological Level of Injury.**

**2:15-2:30 pm:** Dr. Jason Cormier  
Acadiana Neurosurgery

**Motorsports Safety Group Safety Initiative. Racing is a Contact Sport.**

**2:30-2:45 pm:** Dr. Krishnan Chakravarthy  
University of California San Diego

**Spinal Cord Stimulation Treatment for Chronic Pain: Current Field and Future Prospects.**

**2:45-3:00 pm:** Session Discussion

**Friday, July 9<sup>th</sup> - 3:30-5:00 pm PDT**

**A34: Spinal Cord Trauma from Research to Clinical Care**



***Chairs: Dr. Namath Hussain***  
***(Loma Linda University / Department of Neurosurgery)***



***Chairs: Dr. Jason Cormier***  
***(Acadiana Neurosurgery)***



***Chairs: Dr. Ann Choe***  
***(Johns Hopkins School of Medicine)***

**3:30-3:45 pm:** Dr. Michael G. Fehlings

Department of Surgery / Halbert Chair in Neural Repair and Regeneration / Co-Chairman Spinal Program / University of Toronto

**Repair and regeneration of the injured spinal cord using next generation engineered neural stem cells.**

**3:45-4:00 pm:** Dr. Ann Choe

Johns Hopkins School of Medicine

**Advanced MR Imaging in Individuals with Spinal Cord Injury.**

**4:00-4:15 pm:** Dr. Christopher S. Ahuja

Division of Neurosurgery, Department of Surgery, University of Toronto, Inteligex Inc.

**Bioengineered human neural stem cell therapies to regenerate the injured spinal cord.**

**4:15-4:30 pm:** Dr. Namath Hussain

Loma Linda University

**Surgical Anatomy of the Lumbosacral Plexus and Lateral Approaches to the Lumbar Spine.**

**4:30-4:45 pm:** Dr. Jason Cormier

Acadiana Neurosurgery

**A Clinical Review of Surgical Treatment Options for Cervical Degenerative Disc Disease.**

**4:45-5:00 pm:** Session Discussion

**B47: (JHU CME) Management of the Spine Disorders**



*Chairs: Dr. Cristina Sadowsky  
(Kennedy Krieger Institute, Johns Hopkins School of Medicine)*



*Dr. Mike Chen  
Associate Professor, Division of Neurosurgery, Department of Surgery, City of Hope*

**10:00-10:15 am:** Dr. Tariq Sohail  
Doctors Hospital & Medical Centre

**Management strategies for the Kyphotic deformity in Tb spine.**

**10:15-10:30 am:** Dr. Yongxin (Leon) Zhao  
Department of Biological Sciences, Carnegie Mellon University

**Expansion Pathology: Nanoscale Imaging of Clinical Specimens with Optical Microscopy and Steps Toward Whole Tissue Multiplex Nanoscopy.**

**10:30-10:45 am:** Dr. Shahram Hadidchi  
Department of Radiology, Wayne State University/Detroit Medical Center

**Artificial Intelligence in Neurosurgery, Neurology and Neuroradiology.**

**10:45-11:00 am:** Dr. Tariq Sohail  
Doctors Hospital & Medical Centre

**Late onset paraplegia in spinal tuberculosis.**

**11:00-11:15 am:** Prof. Afsaneh Rabiei  
North Carolina State University

**Introducing the Novel Composite Metal Foams for Protection Against Traumatic Brain Injuries.**

**11:15-11:30 am:** Session Discussion

## Legally Mine Conference 2020: *Room 150B*

Organized by



Dan McNeff

**Saturday, July 10<sup>th</sup> 01:00-02:30 Pm**

**B60: Legally Mine USA: A Common Sense Approach to: Lawsuit Prevention, Tax Reduction & License Protection**

**1:00-02:30 pm:** Dan McNeff (CEO, Legally Mine)

**Legally Mine USA: A Common Sense Approach to: Lawsuit Prevention, Tax Reduction & License Protection.**





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# EDUCATIONAL LECTURE

**SATURDAY, JULY 10TH**

LOCATED IN ROOM 150B

**JOIN US FROM 1:00 – 2:30 PM FOR AN  
EDUCATIONAL LECTURE**

## EDUCATIONAL OBJECTIVES:



*Tax Strategies: Learn \*BRAND NEW\* R&D tax strategies released this year that will work for you and put money back in your practice and family's pocket. Get paid for C.E.!*

*Asset Protection: Essential tools to ensure that your practice and family's assets are protected from the threat of lawsuits.*

*License Protection: Proven strategies to protect your Medical License.*

*Estate Planning: What are the best tools to protect your family if something happens to you?*

Daniel J. McNeff is the CEO of Legally Mine. In addition to running his own businesses for the last 20 years, he has served as the Senior Vice President of one of the Nation's largest financial services company for 15 years.

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**JOIN US AT OUR BOOTH TO LEARN MORE!**

**Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT**

**B73: Poster Session**

**Sunday, July 11<sup>th</sup> 10:00-11:30 pm PDT**

**C86: Innovation in Spine Surgery**



**Chairs: Dr. Namath Hussain**  
(Loma Linda University / Department of Neurosurgery)



**Chairs: Dr. Jason Cormier**  
(Acadiana Neurosurgery)

**10:00-10:15 am: Dr. Mike Chen**  
City of Hope

**Lateral extracavitary approach for spine tumors: long term follow up results.**

**10:15-10:30 am: Dr. Hani Mhaidli**  
President of Association of Iberian and Latin American Spine Societies (SILACO), Past President of the Spanish Spine Society, SRS Board of directors 2016-2018, Las Palmas de Gran Canaria, SPAIN

**Surgical treatment of cervical rheumatoid arthritis.**

**10:30-10:45 am: Dr. Erin M Dunbar**  
Piedmont Brain Tumor Center, Medical Neuro-Oncology, Atlanta, Georgia

**Brachytherapy with gammatile including trials as well as routine/trial treatment with SRS (linac/GK) with primary/metastatic cns tumors and other related high impact topics.**

**10:45-11:00 am: Dr. Raúl Rincon-Navarro**  
Director of Neuro Spine & Pain Clinic Los Cabos, México. NASS, WEDNS, SMCN (Mexican Neurosurgical Society), AOSpine

**Endoscopic Spine Surgery: beyond Disc Herniation.**

**11:00-11:15 am: Dr. Brian Mehling**  
BHI Therapeutic Sciences

**Umbilical Cord Blood Stem Cell Therapy for Spinal Cord Injury.**

**11:15-11:30 am: Dr. Kai-Uwe Lewandrowski**  
Founder & President, Center For Advanced Spine Care of Southern Arizona  
Surgical Institute of Tucson

**Prognosticators of Successful Lumbar Endoscopic Decompression: Transforaminal Endoscopic Decompression for Herniated Disc and Spinal Stenosis.**

***Neurosymposium of National Skull Base Foundation (NSBF)  
Room 150B***

Organized by



Dr. Martin Mortazavi



Dr. Babak Kateb

**Sunday, July 11<sup>th</sup> 1:00-2:30 pm PDT**

***C99: (SLU CME) Neurosymposium of National Skull base Foundation (NSBF)***

**1:00-1:20 pm:** Dr. Martin M. Mortazavi

Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience

**Current Concepts of Management of Skull Base Meningiomas.**

**1:20-1:40 pm:** Dr. Farhad Rafii

West Hills Hospital, Medical Center

**Cardiac Clearance of Acute Neurosurgical Patients.**

**1:40-2:00 pm:** Dr. Phil Taussky

The University of Utah

**Pipeline Management of Wide Neck Aneurysms.**

**2:00-2:20 pm:** Dr. Martin M. Mortazavi

Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience

**Surgical Management of Cerebral Aneurysms.**

**2:20-2:30 pm:** Session Discussion

**Sunday, July 11<sup>th</sup> 3:00-4:30 pm**

***C112: (SLU CME) Neurosymposium of National Skull base Foundation (NSBF)***

**03:00-03:20 pm:** Dr. Ashkan Mowla

Keck School of Medicine, University of Southern California (USC)

**Unruptured Brain Aneurysm: A Ticking Bomb?**

**03:20-03:40 pm:** Dr. Saleem Abdulrauf

Abdulrauf institute of Neurosurgery, Department of neurological surgery, Saint Louis University, Walter E. Dandy Neurosurgical Society

**Awake Craniotomy for Aneurysm Clipping and By-pass.**

**03:40-04:00 pm:** Dr. Martin M. Mortazavi

Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience

**Surgical Management of Gliomas.**

**04:00-04:20 pm:** Dr. Andrei Alexandrov

Semmes-Murphey Professor and Chairman, Department of Neurology, The Tennessee Health Science Center

**Artificial Intelligence and Imaging Selection for Stroke Treatment.**

**04:20-04:30 pm:** Session Discussion



## **Society for Brain Mapping and Therapeutics (SBMT) Conference 2021:**

### **Room 153C**

Organized by:



Dr. Martin Mortazavi



Dr. Justin Dye



Dr. Saleem Abdulrauf



Dr. Robert Hariri



## **Session A11- Stroke Management**

### ***A11: (JHU CME) Stroke Management***



*Chair:*

*Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*

**10:00-10:15 am:** Dr. Reza Jahan

Professor, Medical Director Translational Research Imaging Center, Director of Academic Affairs, Division of Interventional Neuroradiology, Department of Radiology, David Geffen School of Medicine at UCLA

#### **Acute ischemic stroke interventions**

**10:15-10:30 am:** Dr. Hekmat Zarzour

Assistant Professor of Neurological Surgery, Vickie and Jack Farber Institute for Neuroscience Thomas Jefferson University Hospital, Division Chief of Neurosurgery Jefferson New Jersey

#### **Risk of mechanical thrombectomy recanalization failure: Intraoperative nuances and the role of intracranial atherosclerotic disease**

**10:30-10:45 am:** Dr. Gabor Toth

Associate professor, Cleveland Clinic

#### **Improving the efficacy of mechanical thrombectomy for acute stroke: the first pass effect**

**10:45-11:00 am:** Dr. Ambooj Tiwari

Clinical Assistant Professor, NYU School of Medicine

#### **ML-based Exploration of Renal Dysfunction in a patient undergoing Mechanical Thrombectomy for Stroke**

**11:00-11:15 pm:** Dr. Alauddin Bhuiyan

Founder and CEO, Associate Professor, iHealthScreen Inc., Department of Ophthalmology, Icahn School of Medicine at Mount Sinai, NY

#### **A Machine Learning Prediction Model to Identify Individuals at Risk of 5-year Incident Stroke based on Retinal Imaging**

**11:15-11:30 am:** Session discussion

Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT

## **Session A24 - NeuroVascular Disorders**



*Chair:*

*Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*

**1:30-1:45 pm:** Dr. Zhaoyang Fan

Assistant Professor, Radiology, University of Southern California

### **Intracranial Vessel Wall Imaging: Technical Development and Clinical Applications**

**1:45-2:00 pm:** Dr. Danny JJ Wang

Professor of Neurology and Radiology, Laboratory of FMRI Technology (LOFT), Mark & Mary Stevens Neuroimaging and Informatics Institute, Keck School of Medicine, University of Southern California (USC)

### **High resolution neurovascular imaging at 7 Tesla**

**2:00-2:15 pm:** Dr. Eric W. Wang

Associate Professor, Departments of Otolaryngology, Neurological Surgery, and Ophthalmology / Vice Chair, Clinical Services, Department of Otolaryngology / University of Pittsburgh School of Medicine / Director of Education, UPMC Center for Cranial Base Surgery

### **Management of Internal Carotid Artery Injury during Endoscopic Skull Base Surgery**

**2:15-2:30 pm:** Dr. Reza Jahan

Professor, Medical Director Translational Research Imaging Center, Director of Academic Affairs, Division of Interventional Neuroradiology, Department of Radiology, David Geffen School of Medicine at UCLA

### **Venous sinus stenting for IIH.**

**2:30-2:45 pm:** Dr. Iype Cherian

Director, Counselor General, Member, Associate Chief editor, Reviewer, Neurosciences, Krishna Institute of Medical Sciences, Karad, Maharashtra, Asian Congress of Neurological surgeons, WFNS Anatomy Committee, Surgical Neurology International (Head Trauma), World Neurosurgery

### **The dawn of Microneurosurgery in Head trauma- A journey through the anatomy and Physiology of Cisternostomy**

**2:45-3:00 pm:** Session discussion

Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

## **Session A36: Aneurysm management**



*Chair: Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*

**3:30-3:45 pm:** Dr. Martin M. Mortazavi

Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience

### **Modern Technical Concepts for Clip-Reconstruction of Fusiform Aneurysms**

**3:45-4:00 pm:** Dr. Justin Dye

Assistant Professor of Neurosurgery, Loma Linda University

### **Cerebral Blister Aneurysms: challenges and management**

**4:00-4:15 pm:** Dr. J. Pablo Villablanca

Professor, Diagnostic Neuroradiology, Director, Interventional Spine Service, Medical Director of MRI

### **Advanced visualization and characterization of cerebral aneurysms including time-resolved CTA and PC- MR flow hemodynamics.**

**4:15-4:30 pm:** Dr. George Teitelbaum

Neurovascular Intervention Director, Pacific Neuroscience Institute (PNI)

### **Intracranial aneurysm Pipeline embolization via radial artery approach**

**4:30-4:45 pm:** Dr. Viktor Szeder

Associate Clinical Professor of Radiology and Neurosurgery, Co-Director, Fellowship Training Program, Medical Director Translational Research Imaging Center, Director of Academic Affairs, Division of Interventional Neuroradiology, Department of Radiology, David Geffen School of Medicine at UCLA

### **Transvenous endovascular treatment of brain AVMs**

**4:45-5:00 pm:** Session discussion

Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT

**Session B49:**

**10:00-11:30-** *Poster session*

Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

**Session B62:**

**1:00-2:30-** *Poster session*

Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT

## **Session B75: Neurovascular Disorders and Skull Base Disorders**



*Chairs: Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*



*Dr. Saleem Abdulrauf- Professor and Founding Chairman of the Department of Neurosurgery at Saint Louis University (SLU), St. Louis, Missouri, USA*

**3:00-3:15 pm:** Dr. Vivien Lee  
Neurologist, Ohio State University Hospital Program

**Early neurologic decline in acute ischemic stroke patients receiving thrombolysis with large vessel occlusion and mild deficits**

**3:15-3:30 pm:** Dr. Robert Hariri  
18th President of SBMT and member of the Executive board of SBMT, Chairman, Founder and Chief Executive Officer, Celularity; Adjunct Professor of Neurosurgery, Weill Cornell Medical College, Former Chief Executive Officer of Celgene Cellular Therapeutics

**Management of neurotrauma from surgical intervention to stem cell therapy**

**3:30-3:45 pm:** Dr. Fabien Scalzo  
Associate professor, Pepperdine & UCLA

**Machine Learning in Neurovascular Care**

**3:45-4:00 pm:** Dr. Jorge Herrera  
Neurosurgeon, Barcelona University

**Unesco neuroscience initiative**

**4:00-4:15 pm:** Dr. Martin M. Mortazavi  
Chairman and Director, Cerebrovascular, Skull Base & Tumor Program California Institute of Neuroscience

**Tuberculum Sellae and Olfactory Groove Meningiomas: Proposal of a new classification system to predict surgery and outcome**

**4:15-4:30 pm:** Session Discussion



Sunday, July 11<sup>th</sup> 10:00-11:30 PDT

## **Session C88: Neurovascular Disorders**



Chairs: *Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*



*Dr. Saleem Abdulrauf- Professor and Founding Chairman of the Department of Neurosurgery at Saint Louis University (SLU), St. Louis, Missouri, USA*

**10:00-10:15 am:** Dr. Brian Mehling

Orthopedic trauma surgeon, Chief Medical Officer, BHI Therapeutic Sciences

### **Stem Cells and Stroke Recovery: A Retrospective Study**

**10:15-10:30 am:** Dr. Jeffrey Farkas

Neurosurgeon, NYU School of Medicine / Chair, Interventional Neuro Associates, New York

### **Flow Reversal in the setting of Carotid Revascularization**

**10:30-10:45 am:** Dr. Nestor Gonzalez

Cedars-Sinai Medical Center, Los Angeles

### **Intracranial atherosclerosis, a challenging form of stroke requiring strategies outside the box for treatment.**

**10:45-11:00 am:** Dr. Zion Zibly

Neurosurgeon, Department of Neurosurgery, The Chaim Sheba Medical Center, Tel Hashomer, Israel

### **A novel swine model of subarachnoid hemorrhage-induced cerebral vasospasm**

**11:00-11:15 am:** Dr. Rebeca Pérez-Alfayate

Hospital Clínico San Carlos

### **Awake surgery for AVM.**

**11:15-11:30 am:** Session Discussion

Sunday, July 11<sup>th</sup> 1:00-3:00 PM PDT

## **Session C101: Neurovascular/Skull Base Disorders**



*Chairs: Dr. Justin Dye- Assistant Professor of Neurosurgery, Loma Linda University*



*Dr. Saleem Abdulrauf- Professor and Founding Chairman of the Department of Neurosurgery at Saint Louis University (SLU), St. Louis, Missouri, USA*

**1:00-1:15 pm:** Dr. Aziz Alali

Assistant professor of neurosurgery, Saint Louis University, Saint Louis

### **Cavernous malformation: what is it and when to treat?**

**1:15-1:30 pm:** Dr. Robert G Louis

Chief of Division of Neurosurgery, Director of Skull Base and Pituitary Tumor Program, Pickup Family Neurosciences Institute, Hoag Memorial Hospital, Pickup Family Neurosciences Institute, Hoag Memorial Hospital, Newport Beach, CA

### **Advances in skull base neurosurgery**

**1:30-1:45 pm:** Dr. Roland Torres

Neurosurgeon, Department of Neurosurgery, Stanford Univ. Medical School, Stanford, USA.

### **Traumatic epistaxis: Skull base defects, intracranial complications and neurosurgical considerations**

**1:45-2:00 pm:** Dr. Alexander A. Khalessi

Department of Neurosurgery, University of California-San Diego, La Jolla, California

### **Epidemiology, Natural History, and Clinical Presentation of Large Vessel Ischemic Stroke.**

**1:45-2:30 pm:** Session Discussion

## **Session C114:**

**3:30- 5:00- *Poster session***



**Society for Brain Mapping and Therapeutics (SBMT)  
Conference 2021:**

**Room 409 B**



Friday, July 9<sup>th</sup> 10:00-11:30 am PDT

## **Session A13- Nanoneuroscience/ Nanoneurosurgery 1**



- Dr. Nikita Chintam

### ***Chairs:***

***-Dr. Babak Kateb- Chairman, CEO and Scientific Director, Society for Brain Mapping Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery***

**10:15-10:30 am:** Dr. Narayan Hosmane  
Professor in Department of Chemistry, Northern Illinois University

### **Dendrimers or Nanostructured Boron and Gadolinium Compounds for BNCT**

**10:30-10:45 am:** Dr. Babak Kateb  
Chairman, CEO and Scientific Director -Society for Brain Mapping & Therapeutics (SBMT)-Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery

### **Nano-BioElectronics**

**10:45-11:00 am:** Dr. Ebrahim Mostafavi  
Postdoctoral Fellow, Committee member, Society for Brain Mapping and Therapeutics  
Stanford University School of Medicine

### **The use of microfluidic-based systems in Nanoneuroscience**

**11:00-11:15 pm:** Dr. Deblina Sarkar  
Assistant Professor at MIT, AT&T Career Development Chair Professor at MIT Media Arts and Sciences, Founder and Director of Nano-Cybernetic Biotrek research lab

### **Seeing the invisible: Novel technology revealing hidden biomolecular nanostructures in the brain**

**11:15-11:30 am:** Session discussion





Friday, July 9<sup>th</sup> 1:30-3:00 pm PDT

## **Session A26 - Stem Cell**



*Chairs:*

*Dr. Bernard Siegael- Founder & Chair-World Stem Cell Summit Executive Director-Regenerative Medicine Foundation*



*Dr. Brian Mehling- founder and chief medical officer of Blue Horizon International (BHI) Therapeutic Sciences*

**1:30-1:45 pm:** Dr. Kuldip Sidhu

Professor, Executive Director, CK Cell Technologies Pty Ltd

**A new paradigm in developing non-cellular therapeutics with stem cells-derived exosomes - a lesson from spine and wound trials**

**1:45-2:00 pm:** Dr. Jorge Hernandez-Rodriguez

Professor, Researcher, CINVESTAV 3D

**Part 1: 5-HT1A Molecular Signaling Path in Fetal Brainstem - Neopallium Heterochronic Cultures**

**2:00-2:15 pm:** Dr. Jorge Hernandez-Rodriguez

Professor, Researcher CINVESTAV 3D

**Part 2: 5-HT1A Molecular Signaling Path in Fetal Brainstem - Neopallium Heterochronic Cultures**

Friday, July 9<sup>th</sup> 3:30-5:00 pm PDT

## **Session A38: AI Neuro: Machine Learning and Computing in Clinical Neuroscience**



*Chairs:*

*-Dr. Babak Kateb- Chairman, CEO and Scientific Director, Society for Brain Mapping Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery*

*-Dr. Nikita Chintam*

**3:30-3:45 pm:** Dr. Daniel Tward

Assistant Professor, University of California, Los Angeles

### **Identifying Structural Changes in the Brain Specific to Early Alzheimer's Disease**

**3:45-4:00 pm:** Dr. Brock Wester

Vice Chair (Applied Biomedical Engineering), Johns Hopkins University

### **BossDB-Data Ecosystem for Volumetric Neuroscience Data and Connectomics**

**4:00-4:15 pm:** Dr. James R Kozloski

Manager, Research Staff Member, IBM Research

### **Multimodal Brain Imaging Fusion Augments Blood Biomarkers for Post-Concussion Syndrome**

**4:15-4:30 pm:** Dr. Lawrance Spracklen

Chief Technology Officer, R Squared AI

### **Neuromorphic Computing**

**4:30-4:45 pm:** Dr. Harry Kloor

CEO and CoFounder, Beyond Imagination Inc.

### **Avitar in Medicine**

**4:45-5:00 pm:** Session discussion



Saturday, July 10<sup>th</sup> 10:00-11:30 am PDT

## **Session B51: AI Neuro: Machine Learning and Computing in Clinical Neuroscience**



### ***Chairs:***

***-Dr. Babak Kateb- Chairman, CEO and Scientific Director, Society For Brain Mapping & Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department Neurosurgery***

***-Dr. Nikita Chintam***

**10:00-10:15 am:** Dr. Hojjat Azadbakht  
Chief Executive Officer, AINOSTICS

### **AI Machine Learning in Medicine/Neurological Disorders**

**10:15-10:30 am:** Dr. Catherine Schuman  
Research Scientist, Beyond Moore group at Oak Ridge National Laboratory

### **Brain Inspired Computing: Neuromorphic Computing and Neural Hardware**

**10:30-10:45 am:** Dr. Mohammad Nami  
Head of the Department of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

### **Applications of AI/ML in Cognitive Neuromedicine, Today and Tomorrow**

**10:45-11:00 am:** Dr. Kallol Roy  
Assistant Professor of Machine Learning, University of Tartu

### **When in doubt play Inductive Bias: A New Paradigm for Brain-Inspired Machine Learning**

**11:00-11:15 am:** Dr. Lara Jehi  
Chief Research Information Officer, Cleveland Clinic

### **AI and Advance Data in Neuroscience: Prognosis after Epilepsy Surgery**

**11:15-11:30 am:** Session discussion

Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

**Session B64: Stem Cell**



*Chairs:*

*-Dr. Bernard Siegel- Founder & Chair-World Stem Cell Summit Executive Director-  
Regenerative Medicine Foundation*

*-Milena Asiryan*

**1:00- 2:30 pm:** *Round table discussion*

Saturday, July 10<sup>th</sup> 3:00-4:30 pm PDT

## **Session B77: Nanoneuroscience/Nanoneurosurgery 2**



***Chairs:***

***-Dr. Babak Kateb- Chairman, CEO and Scientific Director, Society for Brain Mapping & Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery***

***- Dr. Nikita Chintam***

**3:00-3:15 pm:** Frank Boehm

CEO at NanoApps Athletics, NanoApps Athletics

### **Application of a conceptual nanomedical platform to facilitate the mapping of human brain**

**3:15-3:30 pm:** Dr. Hossein Ameri

Associate Professor of Clinical Ophthalmology ,Director, USC Retinal Degeneration Center  
Department of Ophthalmology, Keck School of Medicine

### **Bionic Vision**

**3:30-3:45 pm:** Dr. Nikhil Krishna Murthy

Neurosurgeon, Northwestern Department of Neurosurgery

### **Micro and nanotechnology in nerve repair**

**3:45-4:00 pm:** Dr. Zion Zibly

Senior Physician, Sheba Medical Center

### **Using nanoparticles in diagnosis and treatment of CNS infection**

**4:00-4:15 pm:** Dr. Steven A. Toms

Professor, Warren Alpert Medical School of Brown University

### **Application of nanotechnology to disease of spine**

**4:15-4:30 pm:** Session Discussion





Sunday, July 11<sup>th</sup> 10:00-11:30 am PDT

## **Session C90: Augmented Reality-Neurophotonics**



***Chairs:***

***Dr. Babak Kateb- Chairman, CEO and Scientific Director, Society for Brain Mapping & Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery***



***Dr. Nasser H Kashou- Associate Professor, IEEE Senior Member, Director, Image Analysis Lab (IAL), Functional Near-Infrared Spectroscopy (FNIRS) Lab***

**10:00-10:15 am: Dr. Nasser H Kashou**

Associate Professor, IEEE Senior Member, Director, Image Analysis Lab (IAL), Functional Near-Infrared Spectroscopy (FNIRS) Lab

### **The Role of Functional Near Infrared Spectroscopy (FNIRS) in Neural Engineering**

**10:15-10:30 am: Dr. Babak Kateb**

Chairman, CEO and Scientific Director, Society for Brain Mapping & Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery

### **AI, Predictive Modeling and Neurophotonics in intraoperative Brain Mapping**

**10:30-10:45 am: Dr. Aaron Filler**

Medical Director, Institute for Nerve Medicine, Santa Monica, California

### **Diffusion Sensor Imaging and its Application**

**10:45-11:00 am: Dr. Johnney Duerinck**

Neurosurgeon and Clinical Researcher, UZ Brussel

### **Augmented Reality assistance in Neurosurgery - current and future prospects**

**11:00-11:15 am: Dr. Frederick VanGestel,**

PhD Researcher Neurosurgery, UZ Brussel

### **Augmented Reality assistance in Neurosurgery - current and future prospects**

**11:15-11:30 Session Discussion**



## **Session C103: Stem Cell**



*Chair-Dr. Vicky Yamamoto- Cancer Scientist, Department of Otolaryngology/ Head and Neck Surgery, Keck School of Medicine of USC, Los Angeles, CA.*



*Dr. Bernard Siegel- Founder & Chair-World Stem Cell Summit Executive Director-Regenerative Medicine Foundation*

**1:00-1:15 pm:** Dr. Bernard Siegel

Founder & Chair-World Stem Cell Summit Executive Director-Regenerative Medicine Foundation, World Stem Cell Summit Regenerative Medicine Foundation

### **Regenerative Medicine and Cloning**

**1:15-1:30 pm:** Dr. Evan Snyder

Professor, Director-Center for Stem Cells and Regenerative Medicine Sanford Children's Health Research Center, Sanford Burnham Prebys Institute & Dept. of Pediatrics, University of California-San Diego (UCSD)

### **Generation of Complete Multi-Cell Type Lining Organoids from Human Embryonic and Patient-Specific Induced Pluripote**

**1:30-1:45 pm:** Dr. Aubrey de Grey

Chief Science Officer and Co-founder, SENS Research Foundation

### **The Coming of Age of AGE**

**1:45-2:00 pm:** Dr. Robert Hariri

18th President of SBMT and member of the Executive board of SBMT, Chairman, Founder and Chief Executive Officer, Celularity; Adjunct Professor of Neurosurgery, Weill Cornell Medical College, Former Chief Executive Officer of Celgene Cellular Therapeutics

### **Role of Exosomes in neuronegenerations and repair**

**2:00-2:15 pm:** Dr. Michael Fehlings

Professor, University of Toronto

### **Next generation bioengineered neural stem cells for repair and regeneration of the injured spinal cord**

**2:15-2:30 pm:** Session Discussion

Saturday, July 10<sup>th</sup> 1:00-2:30 pm PDT

## **Session C116: Nanoneuroscience/Nanoneurosurgery 3**



*Chairs: Dr. Manuel Perez - Professor, Cedars-Sinai Medical Center*



*Dr. Babak Kateb-Chairman, CEO and Scientific Director, Society for Brain Mapping & Therapeutics (SBMT) Brain Mapping Foundation, National Center for NanoBioElectronics, Brain Technology and Innovation Park, Loma Linda University, Department of Neurosurgery*

**3:30-3:45 pm:** Dr. Rutledge Ellis Behnke

Professor & Co-founder, Director Nanomedicine Translational Think Tank  
University of Heidelberg, Arch Therapeutics Inc., MIT,

### **Molecular Medical Devices for Nanoneurosurgery**

**3:45-4:00 pm:** Dr. Manuel Perez

Professor, Cedars-Sinai Medical Center

### **NCI - Nanoimaging programme**

**4:00-4:15 pm:** Dr. John Yu

Professor, Cedars-Sinai Medical Center

### **Nanoparticle based treatment and imaging of brain tumors**

**4:15-4:30 pm:** Dr. Marjan Assefi

Research assistant, Editor, University of North Carolina at Greensboro

### **Effect of Nanoparticles on Genes Nano-biology**

**4:30-4:45 pm:** Dr. Paul R. Carney

Professor of child health and neurology, University of Missouri- Columbia

### **Nanoneuroscience for Epilepsy Management**

**4:45-5:00 pm:** Session Discussion



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**BRYAN T. HANYPSIAK, MD**

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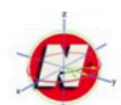


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