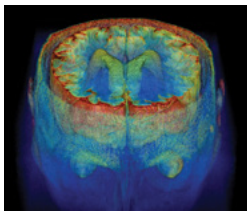
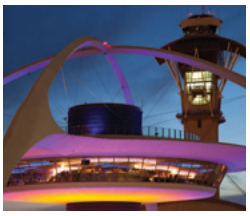
Society for Brain Mapping and Therapeutics
Breaking Boundaries of Science, Technology, Medicine, Art, & Healthcare Policy
SBMT





12th Annual

World Congress of Society for Brain Mapping and Therapeutics

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

LOS ANGELES CONVENTION CENTER

For more information visit:
www.WORLDBRAINMAPPING.ORG

L.A. Convention Center
March 6 - 8, 2015

1201 S. Figueroa St., Los Angeles, CA 90015

Audience includes: neurosurgeons, radiologists, neurologists, psychiatrists, rehabilitation medicine physicians, cardiologists, pulmonologists, bioethicists, oncologists, radiation oncologists, neuroscientists, engineers, physicists, cognitive neuroscientists, allied healthcare professionals, healthcare executives, government officials, policy makers, students, post-docs, residents, and fellows

Revision date (3/6/15)

City of Los Angeles

ERIC GARCETTI
MAYOR

March 6, 2015

Dear Friends,

On behalf of the City of Los Angeles, I welcome you to the 12th Annual World Conference of Society for Brain Mapping and Therapeutics and to the City of Los Angeles.

Since its inception, the Society for Brain Mapping and Therapeutics has been a pioneer in research, advocacy, and service to the medical research community. Los Angeles is proud to host this gathering of researchers, physicians, policy makers, scientists, and industry leaders to advance scientific and technological discoveries of the human brain. Your research and investments have led to advancements in brain mapping, surgical planning, and to life saving innovations for patients suffering from neurological disorders.

As home to some of the top medical research organizations in the world, Los Angeles is the perfect setting to welcome the Society for Brain Mapping & Therapeutics to connect individually and build collectively. I hope that all of the attendees enjoy what Los Angeles has to offer, and I send my best wishes for a successful and memorable event.

Thank you for choosing Los Angeles!

Sincerely,

ERIC GARCETTI
Mayor

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…)

Neurology (e.g. movement disorders, neurodegenerative diseases, neurooncology, neuromodulation, epilepsy, autism, brain and spinal cord function…)
Psychiatry (e.g. medical imaging for psychiatric conditions such as schizophrenia, depression, PTSD...)

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

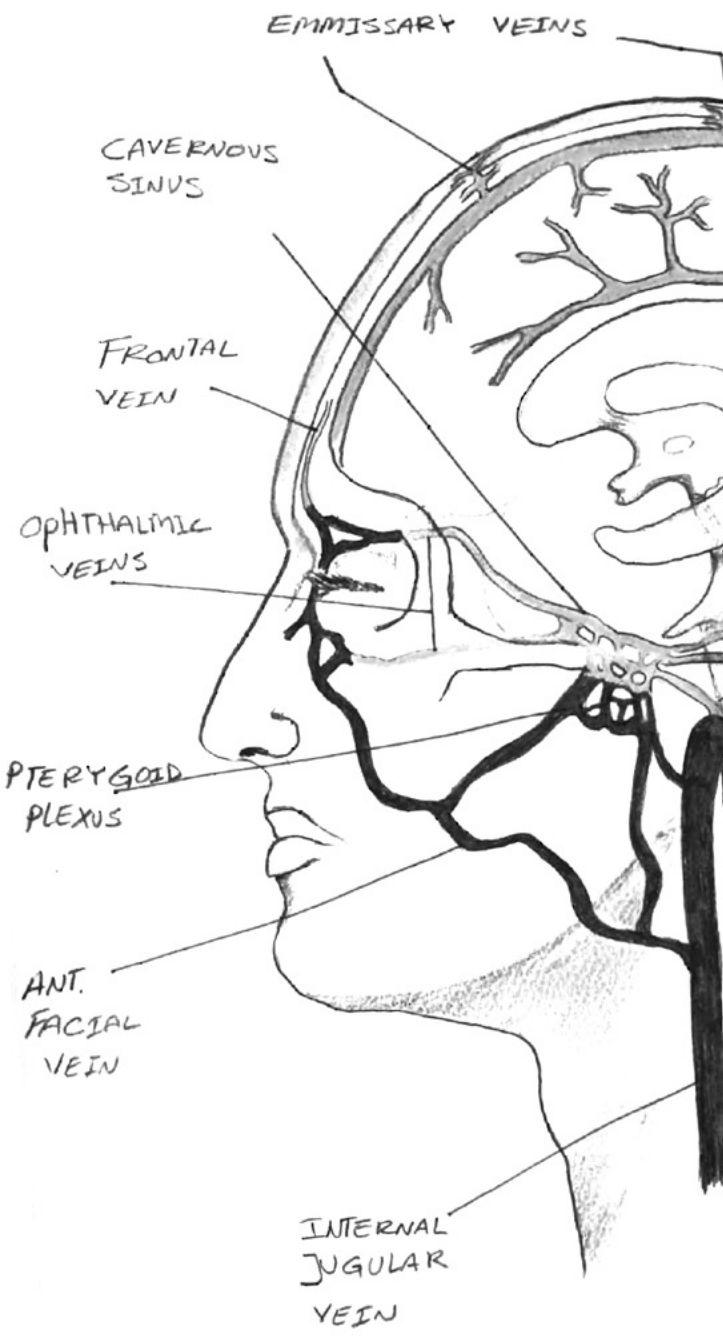
Neuroscience (e.g. stem cell, molecular neuroscience, image guided mapping of genes, proteomics, genomics, neurophysiology…)

Neuroengineering (e.g. 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 and imaging...)

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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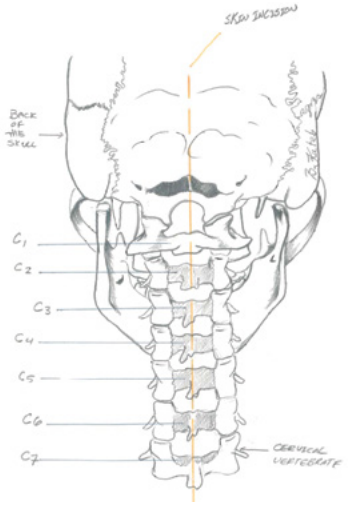
CONTINUING MEDICAL EDUCATION NEEDS ASSESSMENT



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 12th 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 Winthrop University, NY, USA.

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.

WINTHROP University Hospital

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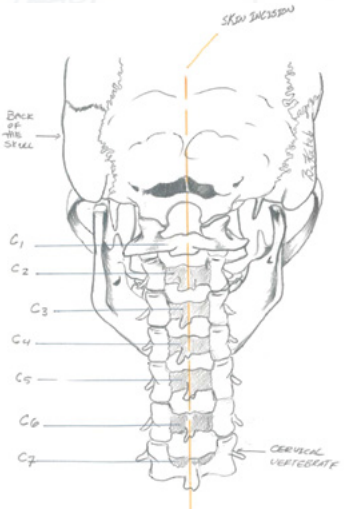
Continuing Medical Education

Robert D'Antuono
Peter Sandre

CONTINUING MEDICAL EDUCATION NEEDS ASSESSMENT



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 Winthrop University Hospital and Society for Brain Mapping & Therapeutics. Winthrop University Hospital is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Designation

Winthrop University Hospital designates this live activity for a maximum of 13.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

For information regarding claiming CME credit, contact Peter Sandre at psandre@winthrop.org .

In last decade 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 neurotrama. 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

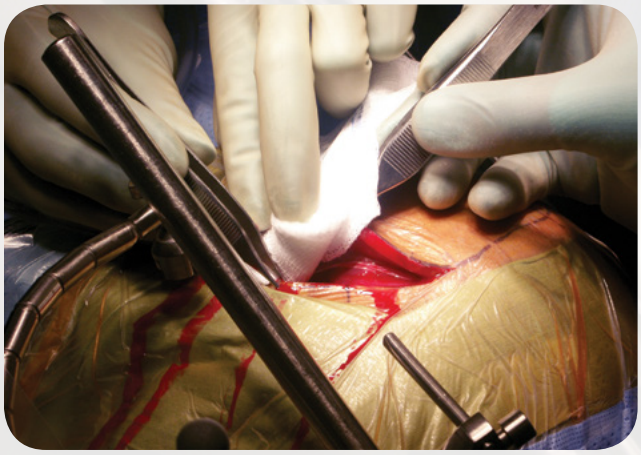
Society for Brain Mapping and Therapeutics controls the content and production of this educational activity and takes every step to ensure the presentation of balanced, objective information. In accordance with the Standards for Commercial Support established by the Accreditation Council for Continuing 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:

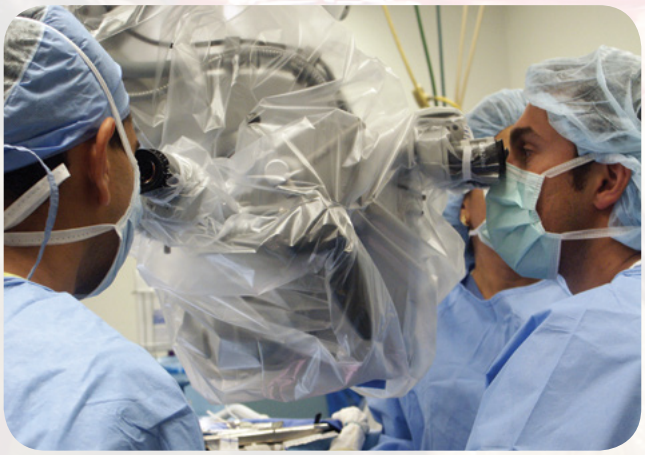
- Apply new findings in brain mapping (BM) & therapeutics relevant to their own sub-specialty.
- Describe the effect of the newly developed methods in medical imaging, medical devices, nanotechnology, and stem cell/cellular therapy.
- [When relevant] Design possible future research and developments in BM, therapeutics and nano-bio-electronics.
- Assess possible impacts of new research and development on their own clinical and scientific work.
- Explain ways to build a bridge amongst multiple disciplines.
- Build bridges amongst multiple disciplines.
- Assess cutting-edge technological advancements 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).
- Recognize advancements in other disciplines and explain how such advancements could help them formulate new diagnostics and treatment modalities.
- Understand and discuss the roles of governmental agencies, foundations, and industry upon research and development of the field.

SBMT MISSION STATEMENT



SBMT is a non-profit society organized for the purpose of encouraging basic and clinical scientists who are interested in areas of Brain Mapping, engineering, stem cell, nanotechnology, imaging and medical device 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/therapies 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 industry as well as philanthropic organization.

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.

CHARTER OF SBMT

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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Director, Department of Astronomy and Physics, Directorate and a member of the SMAP science definition team

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Senior Research Scientist, NASA/JPL

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Bryan Aroz
Logistic Director of Conventions

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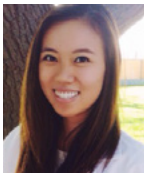
Amanda Nesbit
Research Associate, Beckman Research Institute, City of Hope National Medical Center



Jenny Lin
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Shahdad Syrus Sherkat
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Camille Amparo
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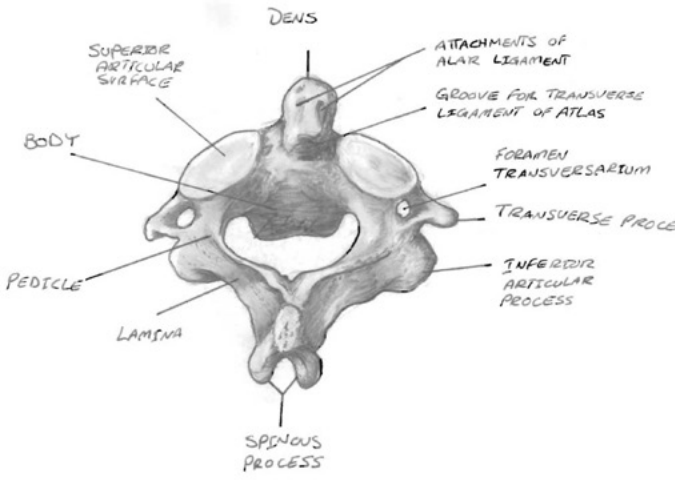
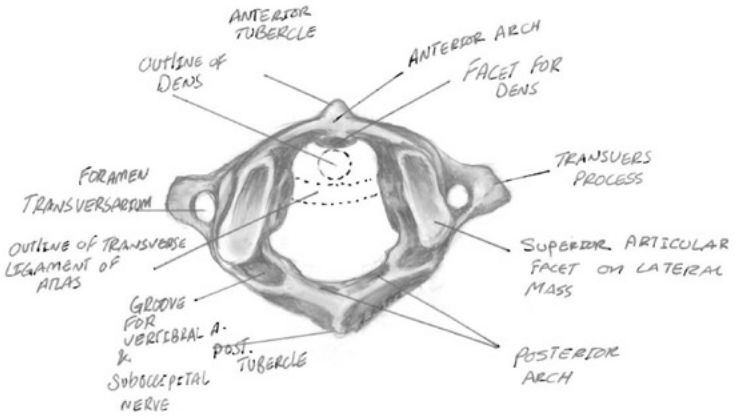
Research Scientist, Maxine Dunitz Neurosurgical Institute

Harry Kloor
Producer of Awards and Gala





THE SECOND CERVICAL VERTEBRA, or AXIS : POSTEROSUPERIOR ASPECT — THE FIRST CERVICAL VERTEBRA, or ATLAS : SUPERIOR ASPECT

SCIENTIFIC COMMITTEE

Deborah Zelinsky
Behavioral Optometrist, The Mind-Eye Connection, Northbrook, IL, USA

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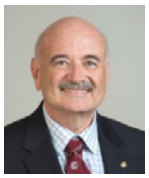

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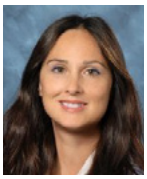

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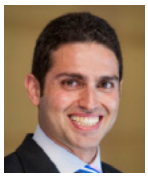

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Aaron G. Filler
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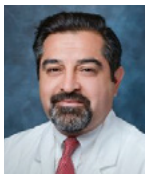

Dean Sherzai
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J. Wesson Ashford
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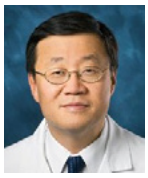
Yanhong Shi
Professor, Neurosciences, City of Hope



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Gordon Li
Assistant Professor of Neurosurgery, Stanford University

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Nancy Sicotte
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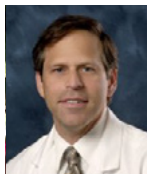
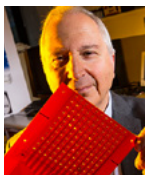
Assistant Professor of Neurology and Space Medicine and Associate Director of Biomedical Innovations Lab, Center for Space Medicine, Section of Neurocritical Care and Vascular Neurology, Department of Neurology, Baylor College of Medicine

James M. Ecklund
Chairman, Department of Neurosciences, Inova Health System



Adam Mamelak
Director, Functional Neurosurgery Program, Neurosurgery,Co-Director, Pituitary Center, Cedars-Sinai Medical Center

Ansgar Furst
Clinical Assistant Professor of Psychiatry and Neurology, Department of Psychiatry and Behavioral Sciences, Stanford University, Palo Alto, CA, United States



Anatoly Rozenfeld
Director, Centre for Medical Radiation Physics, University of Wollongong, Australia

Michele Tagliati
Director, Movement Disorders Program

John C. Liu
Vice Chair of Neurosurgery for Spine Services, CoMedical Director of the Cedars-Sinai Spine Center, Director of the Neurological Surgery Residency Program

J. Patrick Johnson
Department of Neurosurgery, Cedars Sinai Spine Center Los Angeles, CA; Professor of Neurosurgery, UC Davis Medical Center, Sacramento

Reinhard Schulte
Associate Professor, Basic Sciences Division of Physiology School of Medicine, Loma Linda University

Steve Goetsch

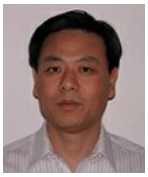
Rustum Karanjia
Ophthalmologist, Ophthalmology, Neuro-ophthalmology, Doheny Eye Center, University of California, Los Angeles

Doniel Drazin
Senior Resident, Department of Neurosurgery, Cedars-Sinai Medical Center

Danny J.J. Wang
Associate Professor, Department of Neurology, University of California, Los Angeles

SCIENTIFIC COMMITTEE

Ioana Cozmuta
Microgravity Lead, Space Portal, NASA Ames Research Center

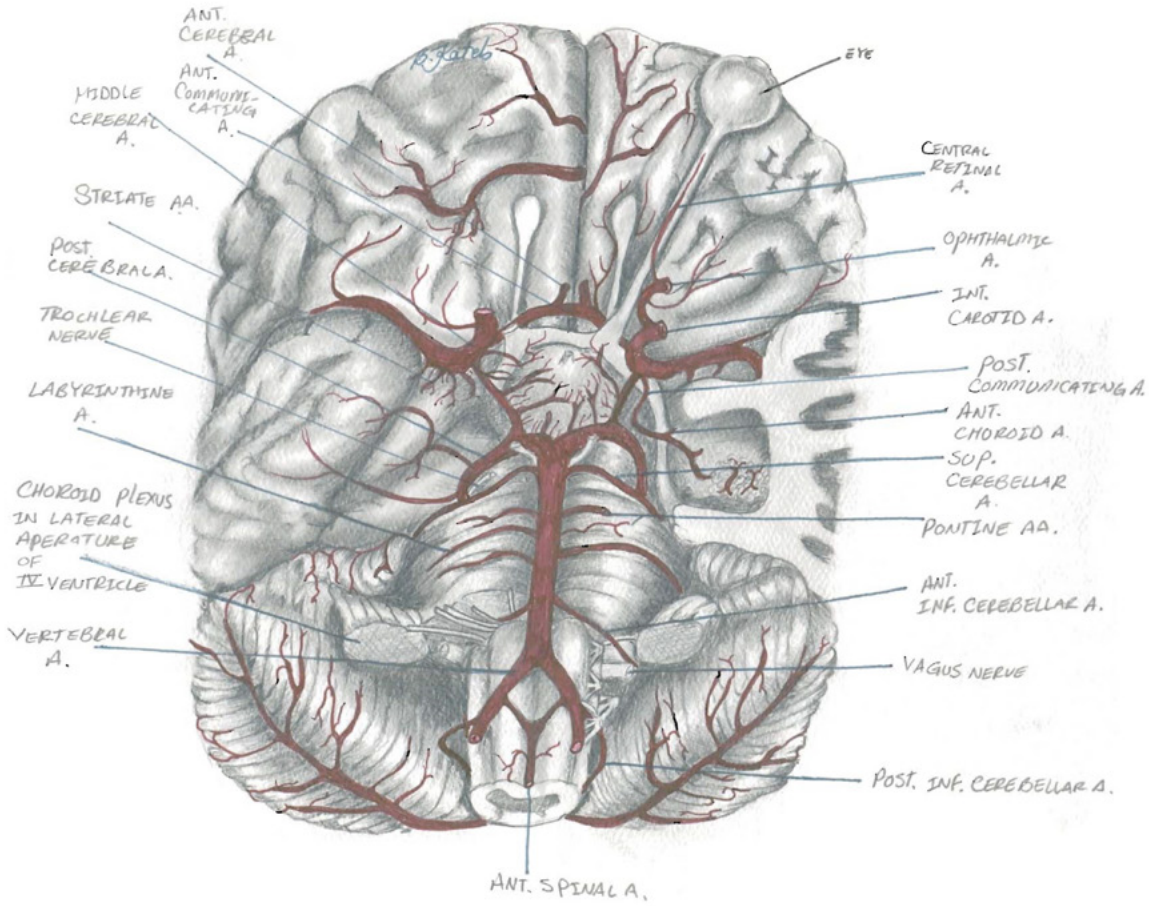


Debiao Li
Department of Medicine, UCLA Department of Bioengineering, UCLA; Director, Biomedical Imaging Research Institute, Cedars-Sinai Director, Research Imaging Core, Cedars-Sinai Medical Center

Alessandro Napoli
Assistant Professor, Sapienza University of Rome

Pia Winberg
Honorary Fellow
University of Wollongong, Faculty of Science Medicine & Health, School of Medicine CEO & Founder, Venus Shell Systems Pty. Ltd.

Gabriel Zada
Assistant Clinical Professor of Neurosurgery; Co-Director, Keck USC Pituitary Center; Director of the Keck USC Endoscopic Skull Base Surgery Program



LETTER FROM THE FOUNDER

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

Babak Kateb

Founding Chairman of the Board of Directors

CEO and Scientific Director

Society for Brain Mapping & Therapeutics (SBMT)

Director of National Centre for Nano-Bio-Electronics (NCNBE)

NASA Research Park

Research Scientist

Maxine Dunitz Neurosurgical Institute

Department of Neurosurgery

Cedars Sinai Medical Center

Founding Editor

SBMT-PLoSOne NeuroMapping & Therapeutics

Editor of The Textbook of Nanoneuroscience and Nanoneurosurgery

President and Scientific Director of Brain Mapping Foundation

Let me congratulate Dr. Shouleh Nikzad (the 12th President of SBMT) for her visionary leadership and for working closely with me and 12 different committees who helped us organize largest world congress for brain mapping so far! This year, we have more than 550 speakers in 110 scientific sessions and 10 keynote speakers, who highlight subspecialties and sectors within the field of brain mapping and therapeutics. We worked with 100 scientific session chairs and built the largest convention ever organized by any organization on the topic. I also thank our supporters, staff and volunteers for their amazing dedication and assistance with this convention.

SBMT and its members are now proud of over a decade of scientific accomplishments, which include more than 1000 publications, more than 3000 presentations, significant involvement in President Obama's BRAIN initiative, establishing G20 Brain Mapping and Therapeutics Initiative, establishment of African Brain initiative, establishment of Middle East and North Africa Brain Mapping Initiative, passing at least one congressional report language on the defense appropriation bill, establishment of a new Young Investigator award, establishing a new open access Journal with PLosOne called NeuroMapping and Therapeutics, publishing the inaugural textbook of NanoNeurosurgery, conducting countless game changing clinical trials on AD, PD, Brain Cancer and Neurotrauma, establishing our Atlas, establishing student chapters in universities, partnership with major associations, establishing new guideline committee for standardization, awarded near 70 scientists, engineers, physicians, advocated and policymakers establishing global partnerships in the field and facilitating commercialization of brain mapping and therapeutics technologies worldwide.

SBMT/IBMISPS had a very humble beginning, starting as a small summit of near 10+ scientists, physicians, and engineers at JPL and turn into a global phenomenon, which has impacted nations' healthcare policies. We went from an unknown organization with a cumbersome name (international Brain Mapping and Intraoperative Surgical Planning Society-IBMISPS) to the global multispecialty association in advance brain mapping and therapeutics: The Society for Brain Mapping and Therapeutics or SBMT. We have successfully brought together diverse scientific, medical, and engineering communities to tackle complex neurological disorders such as brain cancer, brain and spinal cord trauma, ALS,

Alzheimer's disease, and Parkinson's disease.

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.

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 13th annual World Brain Mapping Congress in Rome, Italy! (Feb. 24-26, 2016).

Respectfully yours,

Dr. Babak Kateb,

Founding Chairman of the Board of SBMT, President of Brain Mapping Foundation, Director of National Center for NanoBioElectronics (NASA/JPL), Research Scientist, Department of Neurosurgery, Cedars-Sinai Medical Center.

SBMT - PRESIDENT'S LETTER

As the current (2014-15) President of Society for Brain Mapping and Therapeutics (SBMT), I have had the honor and privilege to see through an amazing year of accomplishments and growth in the organization.

This year we are convening in Los Angeles, the birthplace of SBMT, for the largest SBMT Annual World Congress to date! While geographically we are back in the same place, we have come a long way from the very first meeting where neurosurgeons and neuroscientists began to talk to researchers from NASA-JPL and Caltech.

I am pleased to report that this year we have gathered several hundred of the finest scientists and practitioners from vastly different fields under the same proverbial roof of our program. Our impressive keynote speakers represent different facets of SBMT's multidisciplinary nature in bringing basic science, technology (including space technology), clinical practice, and policy together for understanding and addressing important neurological disorders. The array of topics covered by our invited and contributed speakers include a rich mix of basic materials, brain bionics, nanoneurosurgery, robotic surgery, nano neuroscience, neurophotonics, dementia, deep brain stimulation, stem cells, and more. We look forward to excellent exchanges, learning from one another, and starting new collaborative efforts.

At the beginning of my term, I declared this year, the year of technology innovation, infusion, and translation. You will see this declaration manifested in our program with special Materials Science and Engineering Session, Technology in Brain Therapeutics, Nanoneurosurgery, New Horizons…

SBMT strives to achieve its mission goals through collaborations. We have had an excellent and productive year toward furthering this goal. In addition to facilitating conversations among scientists, we have engaged great scientific institutions for collaborative efforts. It is evident from the participation of outstanding scientists and institutions that our efforts are paying off.

We have kicked off discussions with two of the largest international engineering communities to join forces in order to expand our toolsets toward unraveling the

Shouleh Nikzad

President, SBMT 2014-15

Senior Research Scientist

Principal Member of Staff

Technical Supervisor and Lead,
Advanced UV/Vis/NIR Detector
Arrays and Imaging Systems, and
Nanoscience Group
Lead, Strategic Initiative on Gigapixel
Focal Plane Arrays

Deputy Lead,
Advanced Imaging Systems
Jet Propulsion Laboratory, California
Institute of Technology
Mail Stop 300-315
4800 Oak Grove Drive
Pasadena, CA 91109

Visiting Faculty (Associate),
Caltech Physics, Math and Astronomy
Pasadena, California

Visiting Scientist,
Cedar-Sinai Medical Center,
Neurosurgery
Los Angeles, California

complex and extremely important problem of neurological system and associated diseases. SPIE will be attending our meeting and they will have a booth in order to interact with SBMT members. They will also participate in the round table publication discussions taking place on the first day of the Annual Congress on March 6.

We have launched a Young Investigator Award (YIA) along with National Space Biomedical Research Institute (NSBRI). There will be presentations by the YIA finalists throughout the convention and the inaugural award will be presented this year at the Annual Congress. This is an exciting way to support young investigators to attend the SBMT meeting and to begin to build bridges with their counterparts in complementary fields.

We have incubated new student chapters in several new institutions including local California schools that will grow as bastions of future SBMT leaders. This year, with the generosity of the Donna and Benjamin M. Rosen Bioengineering Center at Caltech sponsored a number of graduate students to join SBMT and to attend SBMT's Annual Congress.

We have established an office of student volunteers and have had an enormous response from California schools. Student volunteers will have the opportunity to have access to the annual congress and to have an opportunity to work closely with the SBMT leadership.

Our publication format is also expanding to include both open access and more traditional print approaches. Please be sure to attend the publication round table discussion to hear from these option representatives.

We hope to see all of you at our Gala, which will be taking place in the Biltmore Hotel on Saturday 7 March 2015. We will be honoring a number of distinguished individuals and entities with SBMT's awards. As a preview, it is my honor to share with you that Professor Stephen Hawking will be this year's recipient of Beacon of Courage and Dedication! It goes without saying that as an ALS survivor and a giant in the field of physics who has been enabled by technology, he is an inspiration and symbol of everything we're trying to achieve in developing and applying technologies to understand and solve neurological challenges.

We will culminate this exciting year with our 12th Annual Congress in the Los Angeles Convention Center and I invite you all to make this a productive and memorable event.

LETTER FROM PRESIDENT ELECT

Dr. John Ouma

Chief and Professor of Neurosurgery

President Elect ,Society for Brain Mapping and Therapeutics(SBMT),USA

Dear Friends and Colleagues,

It is amazing how far The Society for Brain Mapping & Therapeutics has come in the last 12 years as the global think-tank in clinical neuroscience. SBMT started as a small think-tank summit of a few scientists, neurosurgeons, physicians, and engineers held at NASA/JPL in Pasadena California with the initial goal of bringing USC neurosurgeons and Caltech molecular and cellular biologists together.

Our first international convention was held in Clermont Ferrand, France in 2006. Since then we have held major annual World Congresses including the 2012 World Congress in Toronto, Canada; 2013 World Congress in Baltimore, USA; 2014 World Congress in Sydney, Australia, G20 Brain Mapping Summit in Queensland, Australia and the 2015 World Congress in Los Angeles, USA. We have now successfully accredited our past programs in joint sponsorship with the American Association of Neurological Surgeons (AANS), the International Society for Magnetic Resonance Imaging in Medicine (ISMRM), the American College of Radiation Oncology (ACRO), and Winthrop University.

While SBMT started as 'under-the-radar' meeting 13 years ago it is now the most advanced global think-tank in clinical translational neuroscience The organization has funded a joint Young Investigator award with the National Space Biomedical Research Institute (NSBRI) and has established its own Vascular Brain Atlas by Prof. Wieslaw Nowinski who is a member of our board.

Our record of accomplishment included 12 successful world congresses, two satellite conferences, one textbook, three special issues of Neuroimage, a new journal publication with PlosOne, contributing appropriate technical language, which was included in a defense appropriation bill, as well as significant involvement in President Obama's ambitious 'BRAIN' initiative.

SBMT is the force behind the G20 World Brain Mapping and Therapeutics Initiative and the organization initiated the African Brain Mapping and Therapeutics initiative. We held three annual Brain Mapping Days at the US Congress and started the first G20 Brain Mapping and Therapeutic summit in Australia last year, which will continue this year in Turkey. We have successfully

brought together diverse scientific, medical, and engineering communities to tackle complex neurological disorders such as brain cancer, brain and spinal cord trauma, ALS, Alzheimer's disease, and Parkinson's disease.

All 600 talks at the 2015 World Congress will be available for viewing on our SBMT University Channel very soon (protected by a password), which will be available only for congress attendees and SBMT members. We will be revamping the website and the SBMT operation to insure our growth is calibrated and managed accordingly. We have highlighted the pioneering work of SBMT members on our website and as the organization continues to grow we acknowledge we are still relatively a young organization with much room for progress.

In addition to making sure membership is growing, we will focus on holding more conventions and satellites symposiums in order to advance the field. We will be very aggressive in seeking global partnerships with governments, industry leaders, academic centers, associations, foundations and government agencies.

Thus, as an upcoming president I extend the hand of collaboration to all of you and look forward to seeing you all at the 13th Annual World Brain Mapping and Therapeutics of SBMT in Cape Town, South Africa, which will be held at **Capet Town Convention Center in 2016!**

Respectfully yours,

Dr. John Ouma

13th President of SBMT
Chief and Professor of Neurosurgery
University of the Witwatersrand, Johannesburg,
Johannesburg, South Africa

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
Basic and Clinical Research in image guided therapy. Novel research and development in brain mapping and intra-operative surgical planning. Clinical trials. Bio-Ethics.	Governmental Regulation Government Education Patient Advocacy Healthcare Policy Funding Opportunities	Graduate and Post GraduateInterdisciplinary FellowshipsStudent Travel awards University Student chapters mentorship programs Scholarships for undergraduatestudents studying neurological disordors.

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.

5 – World Congresses

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, USA

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) maging modalities for detecting mild/ mod TBI, micro-TBI Socioeconomic, Ethical, and Healthcare issues related to the brain mapping and intra-operative surgical planning

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) 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.

9 – Government Relationships

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 Annual Brain Mapping Days at the US Congress and Canadian Parliament. SBMT is planning to hold a Brain Mapping Day at the Australian Parliament in 2014.

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

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

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.

Friday 6 March 2015

Friday 6 March 2015											Friday 6 March 2015
7:00 am		Delegate Registration Opens				Delegate Registration Opens				7:00 am	
8:00 am - 8:15 am	Room 403 A&B	Conference Welcome & Overview: Shouleh Nikzad, 12th President				Conference Welcome & Overview: Shouleh Nikzad, 12th President				Room 403 A&B	8:00 am - 8:15 am
8:15 am - 8:30 am		Challenges & Promises of Brain Mapping & Therapeutics: Babak Kateb				Challenges & Promises of Brain Mapping & Therapeutics: Babak Kateb					8:15 am - 8:30 am
8:30 am - 9:00 am		Keynote 1: Congressman Chaka Fattah				Keynote 1: Congressman Chaka Fattah					8:30 am - 9:00 am
9:00 am - 9:30 am		Keynote 2: Keith L. Black				Keynote 2: Keith L. Black					9:00 am - 9:30 am
9:30 am - 10:00 am		Break (30 minutes)									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
10:00 am - 11:30 am	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
Title	Ocular Measurements as Novel Diagnostic Tools for Brain Function	Advanced Brain Mapping /Young Investigators Presentation	Hands-on Workshop: Transcranial Dopler for Stroke & TBI	Brain Banking Issues in Neuro-degenerative Disorders	Advances in Neurooncology & Neurosurgery	Deep Brain Mapping Using DBS MicroElectrode Recordings	Dementia: Immune & Inflammation in Alzheimer's Disease (CME)	Applications of New Technologies in Brain Trauma	SPECT & PE (CME) in Psychiatry: From Theory to Practice	New Horizons 1	Nano Neurosurgery & Nano Neuroscience (CME)
Chairperson(s)	Deborah Zelinsky	Vicky Yamamoto & Warren Grundgest	DWL USA Inc. Symposia [Sponsored session]	Konrad Talbot & Babak Kateb	Brian Nahed & Susan Chang	Ejaz Shamim & Casey Halpern	Maya Koronyo-Hamaoui	Mike Roy & Geoff Ling	Daniel G. Amen & Theodore Henderson	Shouleh Nikzad	Babak Kateb & Seyed Moien Moghimi
11:30 am		Lunch time begins									
12:00 pm - 12:30 pm | No CME		Lunch time Keynote: Keynote 3 | Morteza Gharib									
12:30 pm - 01:00 pm | No CME		Lunch time Keynote: Keynote 4 | Jakob Van Zyl									
1:30 pm		Lunch time ends									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
1:30 pm - 3:00 pm	B12	B69	B14	B19	B16	B84	B18	B105	B20	B21	B22
Title	Los Alamos National Lab: Magnetic Imaging & Ultra-low Field (CME)	Brain Trauma from Animal Modeling to Brain Policy & Ethics	Neuroprosthetic & Brain Bionics	Stem Cell (CME)	Pediatric Neurosurgery & Neuroscience (CME)	Nanotechnology & Nanomedicine	Imaging Dementia: Dementia and Connectomics (CME)	Autism	Spine Biologics	Oral Poster	Metadata & Informatics (CME)
Chairperson(s)	John George	Michael Roy & Michael E. Wolf	Jeff Rosenfeld & Pantaleo Romanelli	Kuldip Sidhu & Rasul Chaudhry	Moise Danielpour, P. David Adelson & Jessica Rose	Frank Boehm & Babak Kateb	Gautam Prasad, Allyson Rosen & Salil Soman	Evgny Tesimernov	Mike Chen	Ramin Rak & Michael E. Wolf	Stephan G. Erberich & Babak Kateb
3:00 pm - 3:30 pm		Break (30 minutes)									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
3:30 pm - 5:00 pm	B23 (CME)	B100	B25 (CME)	B26 (CME)	B27 (CME)	B106	B31 (CME)	B30 (CME)	B29	B58	B33
Title	Genomics & Proteomics	TBI Diagnostics & Imaging	Vascular & Blood Flow	Clinical Neuro-physiology & Epilepsy	Neonatal & Pediatric Neuroimaging	Neuro-photonics 1	Imaging Dementia: Using Imaging to Enhance Detection of Mild Neurocognitive Disorders	Neuro-mathematics	SBMT Committee Meeting	Oral Poster	Brain Ablation
Chairperson(s)	Vincent Funari	Michael Roy & Ken Green	Alexander A. Khalessi & Michael Alexander	Evgeny Tsimerinov	Jessica Rose, P. David Adelson & Moise Danielpour	Shouleh Nikzad & Warren Grundfest	Allyson Rosen	Babak Kateb & Kristin R. Swanson		Jesica Rose & John Adler	Mike Chen
5:00 pm - 5:15 pm		Break (15 minutes)									
5:15 pm - 6:15 pm	Room 403 A&B	A Roundtable of Publication Impact on Academic Research & Commercialization				A Roundtable of Publication Impact on Academic Research & Commercialization				Room 403 A&B	5:15 pm - 6:15 pm
6:15 pm - 7:00 pm		Opening Wine & Cheese Reception with Exhibitors									

Saturday 7 March 2015

7:00 am		Delegate Registration Opens									
8:15 am - 8:30 am	Room 403 A&B	Pantaleo Romanelli, 13th President									
8:30 am - 9:00 am		Keynote 5: Nan Sauer									
9:00 am - 9:30 am		Keynote 6: Michael W. Weiner									
9:30 am - 10:00 am		Break (30 minutes)									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
10:00 am - 11:30 am	B34	B35 CME	B36 CME	B39 CME	B38 CME	B41	B40 CME	B37	B42 CME	B43	B44 CME
Title	Ocular Measurements as Novel Therapeutic Tools for Brain Function	Genomics in Neurological Disorders	Peripheral Nerve	Cancer Stem Cell	Pediatric Neurosurgery & Neurosciences	Advances in Epilepsy	Imaging Dementia: Early Detection of Dementia Related Changes	Biologic & Engineering Platforms for Minimally Invasive Oncologic Biomarkers	Imaging and Electro-physiology of Brain Relays for Psychiatric Interventions	New Horizons 2	Nano-Neurosurgery & Nano-Neuroscience
Chairperson(s)	Deborah Zelinsky	Kenneth S. Kosik & Dean Sherzai	Mark Stecker & Aaron Filler	Vicky Yamamoto & Yanhong Shi	P. David Adelson, Moise Danielpour & Jessica Rose	Pantaleo Romanelli	J. Wesson Ashford	Clark C. Chen	Antonio De Salles	Shouleh Nikzad	John Yu & Babak Kateb
11:30 am		Lunch time begins									
12:00 pm - 12:30 pm | No CME		Lunch time Keynote: Keynote 7 | Rear Admiral Raquel C. Bono									
1:00 pm		Lunch time ends									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
1:00 pm - 2:30 pm	B48	B91 CME	B47	B45	B49 CME	B50	B51 CME	B52 CME	B53 CME	B54	B55 CME
Title	Los Alamos National Lab: Emerging Technologies for Neural Imaging & Therapeutics	TBI in Sports & Military	Epilepsy	Translational Stroke Research	Neuro-photonics 2	Oral Poster	Imaging Dementia: Structural Changes in Alzheimer's Disease	Current Therapeutics of Vascular Disorders in the Brain	SPECT & PET: Functional Neuroimaging in Predicting Treatment Response	Image-guided Robotic Radiosurgery	Neurological Considerations for Long-Duration Human Space Flight
Chairperson(s)	John George	Mike Roy & Michael E. Wolf	Jeff Chung & Evgeny Tsimerinov	Paul Lapchak	Vassiliy Tsytsarev & Babak Kateb	Jessica Rose & John Adler	J. Wesson Ashford	Martin M. Mortazavi & Michael Alexander	Daniel G. Amen & Theodore Henderson	Pantaleo Romanelli & Steve Chang	Eric Bershad & Jeff Sutton
2:30 pm - 3:00 pm		Break (30 minutes)									
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B
3:00 pm - 4:30 pm	B63 CME	B109	B59 CME	B89	B60	B61 CME	B62 CME	B56 CME	B64 CME	B65 CME	B66 CME
Title	Neuro-Ophthalmology: Vision & Brain Mapping	Oral Poster	Neuro-rehabilitation	Translational Stroke Research	NIH Funding for Brain Mapping	Demyelinating Disease	Imaging Dementia: Functional & Neuropathology Imaging in Alzheimer's Disease (Metabolism, Abeta, Tau)	Metadata & Millitary Medicine	Spinal Core Therapeutics	Deep Brain Therapeutics	Radiation Physics Technology
Chairperson(s)	Alfredo Sadun	Babak Ketab & Ramin Rak	Ken Green & Michael E. Wolf	Paul Lapchak	Peter Basser	Nancy Sicotte	Ansgar Furst & J. Wesson Ashford	James Ecklund & Babak Kateb	John C. Liu	Adam Mamelak & Michele Tagliati	Anatoly Rozenfeld & Shouleh Nikzad
6:00 pm - 11:00 pm		Black Tie Gala: Millennium Biltmore Hotel									

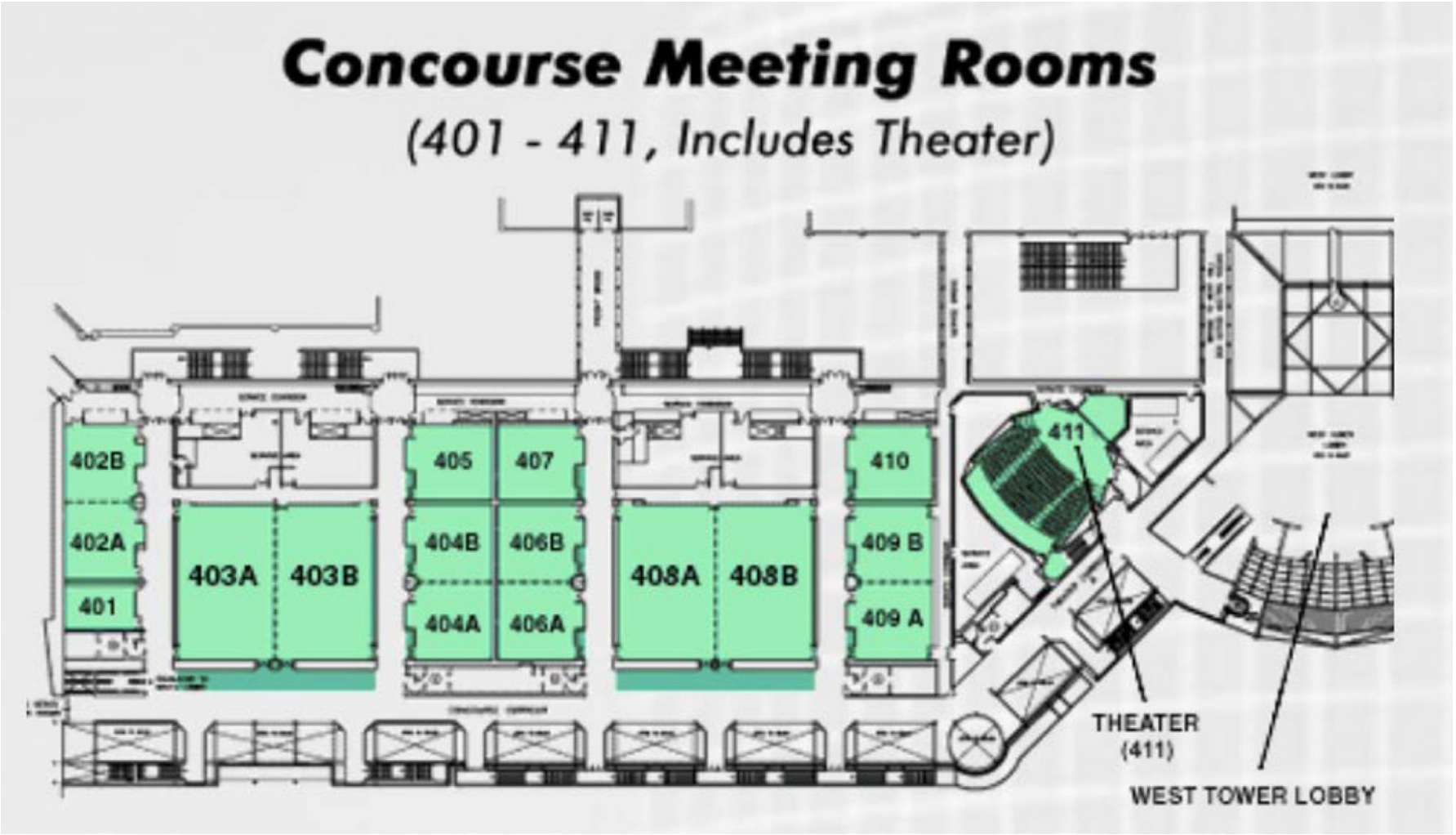
Saturday 7 March 2015

Sunday 8 March 2015

Sunday 8 March 2015												Sunday 8 March 2015
7:00 am		Delegate Registration Opens					Delegate Registration Opens					7:00 am
8:15 am - 8:30 am	Room 403 A&B	Day 2 Recap					Day 2 Recap				Room 403 A&B	8:10 am - 8:30 am
8:30 am - 9:00 am		Keynote 8: Douglas L. Davis					Keynote 8: Douglas L. Davis					8:30 am - 9:00 am
9:00 am - 9:30 am		Keynote 9: Jaime Henderson					Keynote 9: Jaime Henderson					9:00 am - 9:30 am
9:30 am - 10:00 am		Break (30 minutes)										
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B	
10:00 am - 11:30 am	B70	B104	B67	B73 CME	B71	B72 CME	B74 CME	B13	B75 CME	B76	B77 CME	
Title	SBMT Committee Meeting	Image Guided Therapy of the Spine	SBMT Committee Meeting	DARPA Session	Neuro-photonics 3	Existing & Future Consortia in Brain Tumor Research & Treatment	Imaging Dementia: Ocular Changes in Alzheimer's Disease	Oral Poster	SPECT & PET: Diagnostic Dilemmas & Innovative Topics	Multimodality Diagnostics & Therapeutics for Brain Cancer	Microgravity	
Chairperson(s)		Daniel Drazen & J. Patrick Johnson		Geoffrey Ling	Vassiliy Tsytsarev & Babak Kateb	Reinhard Schulte & Steve Goetsch	Maya Koronyo-Hamaoui & Alfredo Sadun		Daniel G. Amen & Theodore Henderson	Gordon Li & Ray Chu	Ioana Cozmuta	
11:30 am		Lunch time begins										
12:00 pm - 12:30 pm | No CME		Lunch time Keynote: Keynote 10 | Albert "Skip" Rizzo										
1:00 pm		Lunch time ends										
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B	
1:00 pm - 2:30 pm	B85 CME	B46	B80	B103 CME	B17	B83 CME	B82 CME	B78	B24	B87	B88 CME	
Title	Neuro-Ophthalmology: What the Eye Can Teach Us About the Brain	Oral Poster	Peripheral Nerve	Stem Cell	Personalized Brain Therapeutics	DBS Connectomics	Imaging Dementia: Alzheimer's Disease Therapeutics	New Horizons 3	Oral Poster	Neuro-Oncology	Biomechanics & Bioactive Nanostructured Materials for Brain Research	
Chairperson(s)	Rustum Karanjia & Alfredo Sadun	Jessica Rose & John Adler	Mark Stecker & Aaron Filler	Kuldip Sidhu & Rasul Chaudhry	Uttam Sinha & Frank Boehm	Casey Halpern & Ejaz Shamim	J. Wesson Ashford	Shouleh Nikzad		Mike Chen	Jean Paul (JP) Allain	
2:30 pm - 3:30 pm		Break (60 minutes) | Closing Wine & Cheese Reception with Exhibitors										
Room	402A	402B	404A	404B	405	406A	406B	407	409A	409B	403 A&B	
3:00 pm - 4:30 pm	B96 CME	B81 CME	B32	B92 CME	B15	B94 CME	B93	B95	B97 CME	B98 CME	B99 CME	
Title	Neuro-Ophtolmology: Trauma & Neuro Ophthalmology	Neuro-vascular Imaging in Stroke & Dementia	Focused Ultrasound	Cancer Stem Cell	Oral Poster	Aerospace Neurosciences	Oral Poster	Brain Bionics	Nutrition, Metabolites & Mental Health	Minimally Invassive Therapey	Materials Science & Engineering in Brain Mapping & Therapeutics	
Chairperson(s)	Alfredo Sadun	Danny JJ Wang & Debiao Li	Pantaleo Romanelli & Alessandro Napoli	Vicky Yamamoto & Yanhong Shi	John Adler & Jessica Rose	Michael E. Wolf		Shouleh Nikzad & Geoffrey Ling	Pia Winberg & Babak Kateb	Gabriel Zada	Jean Paul (JP) Allain	
4:30 pm - 4:45 pm		Break (15 minutes)										
4:45 pm - 6:15 pm	Room 403 A&B	A roundtable on G20 World Brain Mapping & Therapeutics Initiative / President Obama's Brain Mapping Initiative				A roundtable on G20 World Brain Mapping & Therapeutics Initiative / President Obama's Brain Mapping Initiative				Room 403 A&B	4:45 pm - 6:15 pm	
6:15 pm - 6:30 pm		Closing Remarks: Pantaleo Romanelli				Closing Remarks: Pantaleo Romanelli					6:15 pm - 6:30 pm	

Concourse Meeting Rooms

(401 - 411, Includes Theater)



DAY 1:
Friday, March 6th, 2015,
12th Annual Congress

KEYNOTE SPEAKER #1: *Congressman Chaka Fattah*

DAY 1 - Keynote 1: Congressman Chaka Fattah
8:30- 9:00 am; Room 403 A&B
G20 World Brain Mapping Initiative of SBMT, BRAIN Initiative and Fattah Neuroscience Initiative; How Should We Collaborate

Congressman Chaka Fattah is a senior member of the House Appropriations Committee, the committee responsible for setting spending priorities for over $1 trillion in annual discretionary funds. Congressman Fattah is Ranking Member on the Subcommittee on Commerce, Justice, Science and related agencies (CJS). The Subcommittee on CJS oversees close to $51 billion in discretionary spending including the Commerce and Justice Departments, NASA, NOAA, and the National Science Foundation (NSF). Fattah is also Chair of the Congressional Urban Caucus, a bipartisan group of Members representing America's metropolitan centers. These Members work collaboratively with other stakeholders to address the unique challenges facing America's urban communities.

Chaka Fattah is serving in his 11th term in the U. S. House of Representatives. Before his election to United States Congress in 1994, Fattah served six years as a Representative in the State House followed by six years as a State Senator. In May of 1986, Congressman Fattah earned a Master's degree in Governmental Administration from the University of Pennsylvania, Fels Institute of Government. Fattah is the recipient of numerous honors and awards including 10 honorary doctorates and the University of Pennsylvania's Fels Institute of Government Distinguished Alumni Achievement Award. Time Magazine named Fattah one of the 50 most promising leaders in the country. In 1984 Fattah attended Harvard University's John F. Kennedy School of Government where he received a certificate in the Program for Senior Executives in State and Local Government. The Congressman is married to Renee' Chenault-Fattah and has four children. Mrs. Fattah is a lawyer and TV News Anchor. Congressman Fattah and his family are long-time members of the Mt. Carmel Baptist Church in Philadelphia, PA. An avid golfer, Congressman Fattah is also a bike enthusiast.

KEYNOTE SPEAKER #2: *Keith L. Black*

DAY 1 - Keynote 2: Keith L. Black
9:00-9:30 am; Room 403 A&B
Imaging Techniques: from Brain Tumors to Alzheimer's

Keith L. Black is an internationally renowned neurosurgeon. His interest in science peaked at a young age of 17 years old, when he published his first scientific paper and was awarded the Westinghouse Science Award. He completed an accelerated college program at University of Michigan and earned his medical degree and bachelors degree in six years.

Keith L. Black currently serves as a chairman and professor in the Department of Neurosurgery at Cedars-Sinai, Director of the Maxine Dunitz Neurosurgical Institute and Ruth and the Lawrence Harvey Chair in Neuroscience. Prior to his work at Cedars-Sinai, he was a Professor of Neurosurgery at the University of California, Los Angeles (UCLA) for 10 years. He has also been awarded numerous awards, including the Ruth and Raymond Stotter Chair in the Department of Surgery and the Jacob Javits award from the National Advisory Neurological Disorders and Stroke Council of the National Institutes of Health. Dr. Black has done outstanding research in the field of neurology, including research on developing a vaccine to enhance the body's immune response to brain tumors, using gene arrays for development of molecular profiles of tumors, understanding the use of optical technology for brain mapping and focused microwave energy to non-invasively destroy brain tumors, and lastly, the development of noninvasive optical imaging for early diagnosis of Alzheimer's disease.

His work has been well known and published in more than 260 peer reviewed scientific papers and has published a book Brain Surgeon: A Doctor's Inspiring Encounters with Mortality and Miracles. Besides his extensive research contributions, he has also been a part of multiple editorial boards and was the head of the UCLA Comprehensive Brain Tumor Program.

KEYNOTE SPEAKER #3: *Morteza Gharib*

DAY 1 - Lunch Time Keynote 3: Morteza Gharib
12:00-12:30 pm;
California Institute of Technology
Bio-Inspired Design of Medical Devices:
Big Lessons from Tiny Zebrafish Heart

Moreteza Gharib is currently the Hans W. Liepmann Professor of Aeronautics and Professor of Bioinspired Engineering. He and his colleagues are currently studying the properties of the zebrafish embryonic heart to address problems as diverse as ringing in the ears to looking at applications in overheated electronics. He is constantly being inspired by nature and uses engineering to improve function. His contributions include research on fundamental analysis of bio-inspired medical devices, to advanced flow visualization techniques. His work is unconventional and impressive, as he is unafraid to delve into unusual topics such as his work with a SURF student. He and his student raised a 30,000 pound obelisk into place using a single kite and speculated the methods of Egyptians to have mirrored the movement when building the pyramids.

His work at California Institute of Technology has been revolutionary. He received his bachelors from Teheran University, his Masters from Syracuse University, and lastly, his doctorate degree from the California Institute of Technology, where he now holds the position of Vice Provost. Professor Gharib's current research interests in conventional fluid dynamics and aeronautics include Vortex dynamics, active and passive flow control, nano/micro fluid dynamics, bio-Inspired wind and hydro energy harvesting as well as advanced flow- Imaging diagnostics.

His Bio-mechanics and medical engineering research activities can be categorized in two areas: Fluid dynamics of physiological machines such as human cardiovascular system, and aquatic breathing/ propulsion; development of medical devices such as heart valves, cardiovascular health monitoring and drug delivery systems.

KEYNOTE SPEAKER #4:
Dr. Jakob Van Zyl

DAY 1 - Lunch Time Keynote 4: Jakob Van Zyl
12:30-1:00 pm;
NASA/JPL Overview of Space Technology Relevance in Medicine

Dr. Jakob van Zyl is the associate director of Project Formulation and Strategy at NASA's Jet Propulsion Laboratory. Formerly, he was the director for JPL's Astronomy and Physics Directorate. Van Zyl received an honors bachelor's degree cum laude in electronics engineering from the University of Stellenbosch, Stellenbosch, South Africa. He received both his master's and his doctorate in electrical engineering from Caltech.

Van Zyl joined JPL in 1986 and held positions of increasing responsibility in the synthetic aperture radar program. In addition, he managed the Radar Science and Engineering Section, the Earth Science Flight Missions and Experiments Office, and the Focused Physical Oceanography and Solid Earth Program Office. He was appointed deputy director for the Astronomy and Physics Directorate in 2002. He has been an adjunct faculty member in the Mechanical and Aerospace Engineering Department, University of Southern California, where he taught the class "Remote Sensing Systems from Space" from 1997 to 2001. Since 2002, he has been teaching the class "Physics and Techniques of Remote Sensing" at Caltech

Friday, March 6th, 2015,
12th Annual Congress

Keynote 1: Congressman Chaka Fattah 8:30- 9:00 am; Room 403 A&B
G20 World Brain Mapping Initiative of SBMT, BRAIN Initiative and Fattah Neuroscience Initiative; How Should We Collaborate
Keynote 2: Keith L. Black 9:00-9:30 am; Room 403 A&B
Imaging Techniques: from Brain Tumors to Alzheimer's

Ocular Measurements as Novel Diagnostic Tools for Brain Function - Friday, March 6, 10:00-11:30, 402A-B01
Session Chair- Deborah Zelinsky
1. The Eye: An Accessible Gateway to Altering Brain Function
Simon Kaja, Assistant Professor of Ophthalmology, University of Missouri, Kansas City School of Medicine, Kansas City, Missouri, USA
2. Suggested Enhancement to Current Military Vision Screening
Deborah Zelinsky, Behavioral Optometrist, The Mind-Eye Connection, Northbrook, IL, USA
3. Eye Movements as a Biomarker for Concussion
Steve Devick, Chief Executive Officer, The King Devick Test, Inc., Oakbrook Terrace, IL USA
4. Corneal Changes in Response to Oxidative Stress, Inflammation & Nerve Damage
Alireza Ziaei, Postdoctoral Fellow, Boston University School of Medicine, Boston, MA, USA
5. Customized Eyeglasses Create Changes in Electrophysiology of the Brain
Corey Feinberg, Director of Clinical Training, The Mind-Eye Connection, Northbrook, IL, USA

Advanced Brain Mapping/ Young Investigators Presentation - Friday, March 6, 10:00-11:30, 402B-B02
Session Chair- Vicky Yamamoto
1. Changes in Brain Perfusion After Lipid Intake in Normal Weight Women
Michael E Wolf, President, NeuroCite, LLC, Young Investigator Award Nomine
2. Association Between Physical Fitness and Aging Brain
Benjamin Aribisala, Professor of Computer Science, Computer Science Department, Faculty of Science, Lagos State University, Lagos, Nigeria; Honorary Fellow Centre for Clinical Brain Sciences (CCBS), Neuroimaging Sciences, The University of Edinburgh, Young Investigator Award Nominee
3. TBD
Reza Tadayon-Nejad, Psychiatry Resident (Neuroscience Research Track), Department of Psychiatry, University of Illinois at Chicago, Young Investigator Award Nominee
4. Spectrum of Pontine Anomalies by DTI: Correlation With Conventional MR and Genetic Analysis
Nancy Rollins, Charles Cameron Sprague, M.D., Chair in Medical Science, Radiology, Pediatrics, UT Southwestern Medical Center

5. Single Cell Proteomic Analysis of Brain Tumors
James Heath, Elizabeth W. Gilloon Professor of Chemistry, California Institute of Technology

DWL Workshop (No CME) - Friday, March 6, 10:00-11:30, 404A-B03
Session Chair- Dan Henry

Brain Banking Issues in Neurodegenerative Disorders - Friday, March 6, 10:00-11:30, 404B, B04
Session Co-Chairs- Babak Kateb, Konrad Talbot
1. On the Need for a New U.S. Network of Brain Banks & the Challenges It Presents
Konrad Talbot, Associate Professor, Neurosurgery, Cedars-Sinai
2. Brain Banking Enhanced by Brain Atlasing
Wieslaw Nowinski, Principal Scientist, Lab Director, Biomedical Imaging LabAgency for Science, Technology and Research, Singapore
3. The Essential Role of a Neuropathology Core in the Alzheimer's Disease Neuroimaging Initiative (ADNI) & the Dominantly Inherited Alzheimer Network (DIAN)
Nigel Cairns, Professor, Neurology and Pathology & Immunology, Department of Neurology, Washington University in St. Louis, School of Medicine
4. Twenty-first Century Brain Banking: Practical Necessities & Lessons from the Past
Jean Paul Vonsattel, Professor, Department of Pathology and Cell Biology, College of Physicians and Surgeons, Columbia University
5. Development of an Integrative Database for Neurodegenerative Disease Biobank
Jon B. Toledo, Research Associate, Center for Neurodegenerative Disease Research, University of Pennsylvania

Advances in Neurooncology & Neurosurgery - Friday, March 6, 10:00-11:30, 405- B05
Session Co-Chair- Brian Nahed, Susan Chang
1. Preoperative Physiologic Imaging Techniques to Delineate Functional Pathways- fMRI/DTI for Language, Vision, Motor & Sensory Pathways
Bradley Buchbinder, Assistant Professor, Department of Radiology, Massachusetts General Hospital
2. Importance of Extent of Resection for Glioma & Surgical Techniques in Eloquent Cortex
Mitchell Berger, Professor and Chairman, Department of Neurological Surgery, Berthold and Belle N. Guggenhime Endowed Chair, Director, Brain Tumor Surgery Program, Director, Neurosurgical Research Centers, Brain Tumor Research Center, University of California, San Francisco Medical Center
3. Intraoperative Adjunctive Techniques for Maximal Safe Resection
Sameer Sheth, Assistant Professor, Neurosurgery, Columbia University Medical Center, New York Presbyterian Hospital
4. Novel Intratumoral Therapeutics for Glioma Using Convection Enhanced Delivery
Michael Vogelbaum, Associate Director, Brain Tumor and Neuro-Oncology Center, Cleveland Clinic
5. Research Update: Approaches to Non Invasive Brain Mapping Using Transcranial Magnetic Stimulation
Phiroz Tarapore, Assistant Professor, Neurological Surgery, University of California, San Francisco School of Medicine

Deep Brain Mapping using DBS MicroElectrode Recordings - Friday, March 6, 10:00-11:30, 406A, B06
Session Co-Chairs: Ejaz Shamim, Casey Halpern

1. DBS introduction and indication
Ejaz Shamim, Chief of Service Neurology DCSM, Kaiser Permanente, Mid-Atlantic Permanente Medical Group, Specil Volunteer, National Institute of Neurological Disorders and Stroke, Bethesda

2. Awake vs. Asleep DBS: What Is The Evidence
Allen Ho, Neurosurgery Resident, Stanford University School of Medicine

3. Deep Brain Stimulation: Small Opportunity to the Big Challenges
Yousef Salimpour, Professor, Department of Biomedical Engineering, Johns Hopkins Parkinson's Disease and Movement Disorders Center, Johns Hopkins School of Medicine

4. Clinical and Research Uses for DBS
Sumeet Vedera, Neurological Surgery, Neurological Surgery, School of Medicine, University of California, Irvine

5. Brain Machine Interface (BMI): Motor Control from the Posterior Parietal Cortex
Brian Lee, Resident, Neurological Surgery, Keck School of Medicine, University of Southern California

Dementia: Immune and Inflammation in Alzheimer's Disease - Friday, March 6, 10:00-11:30, 406B-B07
Session Chair: Maya Koronyo

1. Neuroinflammation and Arginine Metabolism: The Impact on Tau Neuropathology
Daniel C. Lee, Assistant Professor, University of South Florida College of Pharmacy, Byrd Alzheimer's Institute in the Department of Molecular Pharmacology and Physiology

2. The Autophagy Protein beclin 1 Regulates Microglial Phagocytosis and is Impaired in Alzheimer's Disease
Kurt M. Lucin, Assistant Professor, Department of Biology, Eastern Connecticut State University

3. Aberrantly Expanded CD8 T Cells Localize to Brain and Induce Alzheimer's Disease Hallmarks in Non-Transgenic Mice
Christopher J. Wheeler, Associate Professor of Neurosurgery, Principal Investigator, Immunology Program, Department of Neurosurgery, Cedars-Sinai Medical Center

4. Identifying the Right Target: Structures of the Amyloid β-protein and the Immune Responses They Elicit.
Eric Hayden, Postdoctoral Scholar, Neurology, University of California at Los Angeles, David Geffen School of Medicine

5. The Immunogenicity of Tau Protein in Animal Models Reveals New Therapeutic Perspective
Maj-Linda B. Selenica, Assistant Professor, College of Pharmacy, University of South Florida, USA, USF Health, Byrd Alzheimer Institute, USA

Applications of New Technologies Brain Trauma - Friday, March 6, 10:30-11:00, 407-B08
Session Co-Chairs: Michael Roy, Geoffrey Ling

1. An App a Day Keeps the Doctor Away; GETSmart: Guided Education and Training via Smart Phones to Promote Resilience
Michael Roy, 9th President, SBMT, Director of Internal Medicine, Arlington, Virginia

2. VR and Physiology Enhancement of CBT for PTSD Treatment and Prevention
Brenda Wiederhold, Executive Director of the Virtual Reality Medical Center (VRMC), Chief Executive Officer of the Interactive Media Institute, Professor, Department of Psychiatry, University of California, San Diego
3. fMRI of Mirror Therapy for PLP
Jack Tsao, Captain, US Navy Bureau of Medicine and Surgery, Walter Reed National Military Medical Center
4. Virtual Reality Health Gaming: From Research to Practice
Howard Rose, Creative Design, Customer Relations, President, Firsthand Technology

SPECT & PET in Psychiatry: From Theory to Practice - Friday, March 6, 10:00-11:30, 409A-B09
Session Co-Chairs: Daniel Amen, Theodore Henderson
1. 10 Clinical Lessons from the World's Largest Molecular Brain Imaging Database
Daniel Amen, CEO, Child/Adolescent/Adult Psychiatry, Nuclear Brain Imaging, Amen Clinics, Inc.
2. Distinguishing Between PTSD & TBI with SPECT
Kristen Willeumier, Director of Research, Director of Nutrition and Nutraceuticals , Amen Clinic
3. How SPECT Imaging Can Help with Diagnosis & Treatment of Traumatic Brain Injury: A World Literature Review
Cyrus Raji, Senior Resident, Department of Neurosurgery, University of California, Los Angeles
4. Building a New SPECT Practice in a General Hospital Setting in Canada: Barriers & Opportunities
Rob Tarzwell, Clinical Assistant Professor, Programs: Adult Psychiatry, Psychotherapy, Department of Psychiatry, St, Paul's Hospital
5. How SPECT Helps Clinicians & Families in Autistic Spectrum Disorders
Mike Uszler, Medical Director of DrSpectScan.com ; Assistant Clinical Professor of Molecular and Medical Pharmacology, University of California, Los Angeles

New Horizons 1 - Friday, March 6, 10:00-11:30, 409B-B10
Session Co-Chairs: Shouleh Nikzad, Margie Homer
1. Electronic Nose
Margie Homer, Senior Engineer and Chemist, Jet Propulsion Laboratory, California Institute of Technology
2. Biomimetic Technologies and Novel Actuation Techniques
Yoseph Bar-Cohen, Senior Research Scientist, Jet Propulsion Laboratory, California Institute of Technology
3. 3D Visual Field Test as a Prime Example of Tele-Ophthalmology on Earth and in Space
Wolfgang Fink, Edward and Maria Koenjian Professor of Microelectronics, University of Arizona
4. Bioelectric Signal Array Processing for Reliable Prosthetic Interface
Chris Assad, Senior Engineering Staff, Jet Propulsion Laboratory, California Institute of Technology
5. Progress for Paraplegic
Joel Burdick, Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering and Research Scientist, Jet Propulsion Laboratory

NanoNeurosurgery & NanoNeuroscience - Friday, March 6, 10:00-11:30, 403A&B-B11
Session Co-Chairs: Babak Kateb, Seyed Moein Moghimi
1. Blood-Brain Barrier and Brain Drug Targeting
William Pardridge, Professor of Medicine, Director of the Blood Brain Barrier Research Laboratory, David Geffen School of **Medicine at UCLA, Division of Endocrinology, Diabetes and Hypertension**
2. Development of optical-MRI Nanoprobes: Optimization of Safety Profile and Contrast Properties
Dmitri Simberg, Assistant Professor, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado Anschutz Medical Campus
3. A Versatile Peptidic Nanoplatform Network for Efficient Targeting of the Blood-Brain-Barrier
Seyed Moein Moghimi, Researcher, Department of Pharmacy, University of Copenhagen
4. Nano and Microfabricated Sensor Systems for Local In-vivo Measurement of Analyte concentrations
Axel Scherer, Neches professor of Electrical Engineering, Applied Physics and Physics, California Institute of Technology

11:30 am: Lunch Time

12:00- 12:30 pm: Lunch Time Keynote 3: Morteza Gharib
California Institute of Technology
Bio-Inspired Design of Medical Devices: Big Lessons from Tiny Zebrafish Heart

12:30-1:00 pm: Lunch Time Keynote 4: Jakob Van Zyl
NASA/JPL Overview of Space Technology Relevance in Medicine

Los Alamos National Lab: Magnetic Imaging and Ultra-low Field - Friday, March 6, 1:30-3:00,402A-B12
Session Chair- John George
1. ULF MRI & MEG for Studies of Brain Structure & Function
Michelle Espy, Physicist, Los Alamos National Laboratory
2. Magnetic Nanoparticle Measurement & Imaging in situ
Andrei Matlashov, Scientist, Los Alamos National Laboratory
3. Functional Brain Imaging at ULF; Blood flow & Current Density Imaging
John George, Technical Staff Member (Research Scientist), Physics Division, Biological and Quantum Physics Group, Los Alamos National Laboratory
4. Atomic Magnetometer for Cryogen-free MEG, MRI, & Microscopic Imaging
Igor Savukov, Scientist, Los Alamos National Laboratory
5. Non-cryogenic Militesla Brain MRI
Matt Rosen, Professor, Radiology, Harvard Medical School, Assistant, Biomedical Engineering, Massachusetts General Hospital, Senior Research Scientist, Harvard University, Department of Physics

Brain Trauma from Animal Modeling to Brain Policy & Ethics - Friday, March 6, 1:30-3:00, 402B-B69
Session Co-Chairs: Michael E. Wolf, Michael Roy

1. What is in the Toolbox? Mobile Health Solutions for TBI & Rehabilitation Medicine
Ron Propoatich, Executive Director, Center for Military Medicine Research, Health Sciences, University of Pittsburgh, Visiting Professor of Medicine, Division of Pulmonary, Allergy and Critical Care Medicine, University of Pittsburgh

2. Rodent Models of Brain Trauma
Fabio Leonessa, Assistant Professor, Department of Neuroscience, Uniformed Services University of the Health Sciences

3. Ethics of Brain Research from Basic to the Clinical Science and Beyond
James Giordano, Chief, Neuroethics Studies Program, Pellegrino Center for Clinical Bioethics, Professor, Department of Neurology, and Graduate Liberal Studies Program, Georgetown University, Washington, DC, US

4. Establishment of the Military Brain Bank
Daniel Perl, Professor of Pathology and Director, Neuropathology Core, Center for Neuroscience and Regenerative Medicine, Uniformed Services University of the Health Sciences

Neuroprosthetics & Brain Bionics - Friday, March 6, 1:30-3:00, 404A-B14
Session Co-Chairs: Jeff Rosenfeld, Pantaleo Romanelli

1. Brain Computer Interface Project for Motor Compensation
Napoleon Torres, Neurosurgeon/Biomedical researcher/Project Manager CEA LETI /Clinatec Institute

2. The Development of a Cortical Bionic Vision Device
Jeff Rosenfeld, Professor of Neurosurgery, Melbourne University,Melbourne,Australia

3. A Novel Neuroprosthesis for Epilepsy and BCI.
Pantaleo Romanelli, Scientific Director,AB Medica,Milano,Italy

4. Novel Soft and Flexible Microelectrodes with Active Electronics
Christina Schwartz and Martin Schuettler

5. UCLA Program in Restoring Active Memory
Dejan Markovic, Professor, Electrical Engineering, University of California, Los Angeles

Stem Cell - Friday, March 6, 1:30-3:00, 404B-B19
Session Co-Chairs: Kuldip Sidhu, Rasul Chaudhry

1. Regeneration of Intervertebral Disc Degeneration Using Cell Therapy
Rasul Chaudhry, Professor of Biological Sciences, Oakland University, MI

2. Stem Cells for Osteogenesis – Bone Tissue Regeneration and Repair
Timothy Moseley, Divisional Scientist for Biologics Research and Development, NuVasive, Inc.

Pediatric Neurosurgery & Neuroscience - Friday, March 6, 1:30-3:00, 405-B16
Session Co-Chairs: Moise Danielpour, P. David Adelson, Jessica Rose

1. Tumor Modeling of Pediatric Glioma
Joshua Breunig, Director, RMI Confocal Microscopy Core, Regenerative Medicine Institute, Cedars-Siani Medical Center

2. Role of Inflammation in Progression of Pediatric Brain Tumors
Nalin Gupta, Professor in Residence of Neurological Surgery and Pediatrics ; Dennis Bruce Dettmer Endowed Chair in Pediatric Neurosurgery ; Director, Pediatric Neurological Surgery Program, Principal Investigator, Brain Tumor Research Center, University of California, San Francisco
3. Mapping of the Spinal Tumor for Resection in Intrinsic Spinal Cord Tumors in Children
George Jallo, Professor of Neurosurgery, Pediatrics and Oncology, Director, Clinical Pediatric Neurosurgery, Department of Neurosurgery, Johns Hopkins University
4. Immunotherapeutic Strategies for Pediatric Brain Tumors
Ian Pollack, Chief, Pediatric Neurosurgery, Co-director, Brain Tumor Center, University of Pittsburgh Cancer Institute; Professor of Neurosurgery, Walter Dandy Professorship in Neurosurgery, University of Pittsburgh School of Medicine

Nanotechnology and Nanomedicine - Friday, March 6, 1:30-3:00, 406A-B84
Session Co-Chair: Frank Boehm, Babak Kateb
1. Rapid and Label-Free Detection of DNA and Signaling Proteins
Andrea M Armani, Associate Professor, University of Southern California
2. Smart Design Nanosystems for Effective Gene and Drug Delivery across the Blood Brain Barrier
Krishnan Chakravarthay, CEO, NanoAxis, LLC, The Johns Hopkins Hospital; The Johns Hopkins Hospital
3. Nanosensor Technologies Comprising Ophthalmic Interfaces
Angelika Domschke, President, Angelika Domschke Consulting, LLC
4. Neuregulin-Targeted Nanobiologic Exhibits Tumor-Homing and Potential for Targeting Brain Metastases
Lali Medina-Kauwe, Research Scientist, Biomedical Sciences, Cedars-Sinai Medical Center
5. Nanorobotic Agents for Targeting the Brain With a High Therapeutic Index
Bong Lee, Research Scientist, Neurosurgery, Cedars-Sinai Medical Center

Imaging Dementia: Dementia and Connectomics - Friday, March 6, 1:30-3:00, 406B-B18
Session Co-Chairs: Gautam Prasad, Allyson Rosen, Salil Soman
1. Diffusion Imaging and Genomics in Mapping Dementia in the Brain
Neda Jahanshad, Assistant Professor of Neurology, Laboratory of Neuro Imaging, Keck School of Medicine, University of Southern California
2. Connectomics in Dementia
Madelaine Daianu, Postdoctoral Scholar, Laboratory of Neuro Imaging Keck School of Medicine, University of Southern California
3. Using Distributions of Cortical Valued Features for Classification in Alzheimer's Disease
Shantanu Joshi, Assistant Professor, Department of Neurology, University of California, Los Angeles, Brain Mapping Center
4. Learning the Human Connectome to Optimally Classify Alzheimer's Disease
Gautam Prasad, Postdoctoral Scholar, Laboratory of Neuro Imaging Keck School of Medicine, University of Southern California

5. Identifying Patients at Increased Risk for Cognitive Decline after Carotid Intervention Using Pre-operative Structural Connectivity Analysis
Salil Soman, Instructor of Neuroradiology, Harvard Medical School, Beth Israel Deaconess Medical Center

Autism - Friday, March 6, 1:30-3:00, 407-B105
Session Chair: Evgeny Tsimerinov
1. Latest In Autism: An Overview
Pantea Hannauer, Pediatric Neurology Specialist, Pediatric Minds
2. Presentation: A Yoga Intervention for Autism
Jane Tavyev Asher, Assistant Clinical Professor in Neurology and Pediatrics, Cedars-Sinai Medical Center
3. CD103-Deficient Mice Exhibit Reduced CD8 T cells & DCX in Brain, & a Sex-Dependent Phenotype Suggestive of High-Functioning Autism
Christopher J. Wheeler, Research Scientist, Maxine Dunitz Neurosurgical Institute, Cedars-Sinai Medical Center
4. Seizure & Autism: Does VNS Benefits Both?
Evgeny Tsimerinov, Associate Director of the Clinical Neurophysiology Laboratory at Cedars-Sinai Medical Center

Spine Biologics - Friday, March 6, 1:30-3:00, 409A-B20
Session Chair: Mike Chen
1. Iliac Crest Bone Graft vs. Allograft or Non-illiac Crest Autograft in the Cervical and Lumbar Spine: A Systemic Review
Alexander Tuchman, Resident Physician, Neurosurgery, Keck school of Medicine, University of Southern California
2. Bone Healing through Synthetic Scaffolds: Scientists shifting the Strategy for Surgeons
Jenny Lin, Research Associate, City of Hope
3. Characterization of the Native Progenitor Population in Cellular Bone Allografts
Mike Chen, Associate Professor of Department of Neurosurgery, City of Hope Cancer Center
4. Biologic Treatments for Spinal Disc Degeneration
Hyun Bae, Medical Director, Director of Education, Cedars Sinai Spine Center

Oral Poster - Friday, March 6, 1:30-3:00, 409B-B21
Session Co-Chairs: Ramin Rak, Michael E. Wolf
1. Replication Study on High Sensitivity and Specificity in Brain Injury Diagnostic Method Using Statistical Parametric Mapping of Positron Emission Tomography
Ayla Walsh, Junior Specialist, UC Irvine, School of Medicine
2. Pulsed Low Dose-rate Radiation Therapy in the Management of Brain Tumors
Asael Papour, Graduate Student, University of California, Los Angeles, Electrical Engineering
3. Brain and Soul Mapping: Awake Brain Surgery and Archimedes Microgravity Principle Which Could Enhance our Understanding on Stem Cells, Brain Networks and the Seat of the Soul
Zamzuri Idris, Head at Department of Neurosciences Universiti Sains Malaysia, Deputy Director at Neuroscience Service and Research Centre, Associate Professor

4. Protein Polymer Nanomedicines for Cancer
John Andrew MacKay, Dept. of Pharmacology and Pharmaceutical Science, Dept. of Biomedical Engineering, University of Southern California
5. Rapid Optical Imaging for Brain Tissue Characterization and Biobanking Using Contrast Based Spectro-Temporal Autofluorescence Signatures
Asael Papour, Graduate Student, University of California, Los Angeles, Electrical Engineering

Metadata and Informatics - Friday, March 6, 1:30-3:00, 403A&B-B22
Session Co-Chairs: Stephan Erberich, Babak Kateb
1. Joint Diffusion and Structural Analysis of Brain MRI Data
Natasha Lepore, Department of Radiology Children's Hospital Los Angeles
2. Some Structural Image Analysis Methods for Detection and Delineation of Features
Lakshman Prasad, Space Data Systems Group (ISR-3) Intelligence and Space Research Division Los Alamos National Lab
3. High Performance Computing and Research Informatics at Cedars-Sinai Medical Center
Spencer Soohoo, Director, Scientific Computing, Enterprise Information Services, Cedars-Sinai Medical Center
4. ImageInbox - Medical Image Communication in Research and Clinical Applications
Stephan G. Erberich, Professor of Research Radiology Department of Radiology Keck School of Medicine University of Southern California

Genomics and Proteomics - Friday, March 6, 3:30-5:00, 402A-B23
Session Chair- Vincent Funari
1. Clinical Exome Sequencing in Neurological Disorders
Hane Lee, Assistant Adjunct Professor, Pathology & Laboratory Medicine, UCLA Clinical Genomics Center
2. Whole-Genome DNA Methylation in Mouse Models of Neural Development and Learning
Matteo Pellegrini, Professor, Department of Molecular, Cell and Developmental Biology, University of California, Los Angeles
3. Single-nucleus Sequencing of Neuronal Transcriptome in Human Adult Brains
Kun Zhang, Associate Professor, Department of Bioengineering, University of California at San Diego
4. Single Cell Analysis of Highly Heterogeneous Neuronal Populations
Véronique Lisi, Postdoctoral scholar, Neuroscience Research Institute, UCSB
5. Single Cell Transcriptome Analysis of Long Noncoding RNAs in Cell Fate Reprogramming
Daniel Kim, Beckman Fellow, California Institute of Technology

TBI Diagnostics and Imaging - Friday, March 6, 3:30-5:00, 402B-B100
Session Co-Chairs: Michael Roy, Ken Green
1. Transcranial Doppler Ultrasound as a Quantitative Biomarker in Evaluation of Patients with TBI
Alex Razumovsky, Sentient NeuroCare Services Director, Sentient Medical Monitoring and Diagnostics

2. Traumatic Vascular Injury: An Overlooked Endophenotype after TBI
Ramon Diaz-Arrastia, Professor of Neurology, Uniformed Services University of the Health Sciences, and Director of Clinical Research at the Center for Neuroscience and Regenerative Medicine (CNRM)
3. Clinical and Research Neuroimaging to Understand Traumatic Brain Injury
Maheen Adamson, Stanford University
4. Now You See It: Translational Imaging of Mild Traumatic Brain Injury
Chris Giza, Professor, Department of Pediatric Neurology, Neurosurgery, Bioengineering, University of California, Los Angeles

Vascular and Blood Flow - Friday, March 6, 3:30-5:00, 404A-B25Session Co-Chairs: Michael Alexander, Alexander Khalessi
1. Applications for Computational Fluid Dynamics in Cerebrovascular Neurosurgery
Jonathan Russin, Assistant Professor of Clinical Neurological Surgery, Assistant Surgical Director, Center for Neurorestoration, Keck Medicine of University of Southern California
2. Three Dimensional Volumetric Modeling: Preparation and Planning in the Management of Giant Vascular Malformations in Children
Michael Levy, Professor and Division Head, Rady Children's Hospital Division of Pediatric Neurosurgery University of California, San Diego Division of Neurosurgery; Director of Endovascular Neurosurgery, Surgical Director of NeuroCritical Care, Assistant Professor of Surgery and Neurosciences, University of California, San Diego
3. Biofluid Mechanics & Management of Intracranial Aneurysms
Satoshi Tateshima, Neurosurgeon, Diagnostic Radiologist, David Geffen School of Medicine, University of California, Los Angeles
4. Translational Studies of Chronic Cerebral Hypoperfusion and Cognition
William Mack, Assistant Professor, Department of Neurological Surgery, Zilkha Neurogenetic Institute, LA Basin Clinical and Translational Science Institute, Keck Medicine of University of Southern California
5. Patterns of Endothelial Trauma from Mechanical Thrombectomy in Acute Ischemic Stroke: Validation and Lessons Learned from a Live Cell Artificial Vessel System
J. Scott Pannell, Endovascular Neurosurgery Fellow, Department of Radiology, University of California, San Diego, School of Medicine

Clinical Neurophysiology and Epilepsy - Friday, March 6, 3:30-5:00, 404B-B26
Session Chair: Evgeny Tsimerinov
1. All the Brain and No Seizures: Preservation of Eloquent Cortex and Minimally Invasive Resective Epilepsy Surgery
Dawn Eliashiv, Co-Director of the UCLA Seizure Disorder Center, Professor of Neurology at the David Geffen School of Medicine, University of California, Los Angeles
2. Optimization of Care of a Focus Related Seizures in Children
Shifteh Sattar, Assistant Clinical Professor, Neurology Division, University of San Diego School of Medicine

3. Probing the Mechanisms of Learning and Memory at the Single-Neuron Level in Humans
Ueli Rutishauser, Assistant Professor of Neurosurgery, Department of Neurosurgery, Neurology and Biomedical Sciences, Cedars-Sinai Medical Center, Los Angeles ; Visiting Associate (Faculty), Division of Biology and Biological Engineering, California Institute of Technology, Pasadena

4. Advances of Brain Neuromodulation in Neurodegenerative Disorders
Evgeny Tsimerinov, Associate Director of the Clinical Neurophysiology Laboratory at Cedars-Sinai

Neonatal Pediatric Neuroimaging - Friday, March 6, 3:30-5:00, 405-B27
Session Co-Chairs: Jessica Rose, P. David Adelson, Moise Danielpour
1. Neonatal neuroimaging & Neurointensive Care.
Hannah Glass, Associate Professor, Neurology, University of California, San Francisco
2. Metabolic Maturation of the Term and Preterm newborn.
Stefan Bluml, Assoc Prof of Research Radiology Director, New Imaging Technologies Laboratory Department Radiology, Keck School of Medicine of University of Southern California
3. Neonatal Brain Structure and Physiological Correlates of Language Development at 18-22 Months in Children Born Preterm with VLBW.
Rachel Vassar, Research Assistant, Stanford University School of Medicine Medical student, Boston University School of Medicine
4. Brains Under Construction: Fetal MRI with Neurodevelopmental Correlates
Lisa Paquette, Assistant Professor of Clinical Pediatrics, Division of Neonatal Medicine, Keck School of Medicine, University of Southern California
5. Neonatal Brain Microstructure and Physiological Correlates of Neurodevelopment and Gait in Children Born Preterm.
Jessica Rose, Associate Professor of Orthopaedic Surgery at the Lucile Salter Packard Children's Hospital and the Stanford University Medical Center

Neurophotonics 1 -Friday, March 6, 3:30-5:00, 406A-B28
Session Co-Chairs: Shouleh Nikzad, Warren Grundfest
1. Improving the Performance of Integrated Photonic Emitters and Detectors
Michele Povinelli, USC, Associate Professor, Electrical Engineering
2. Dynamic Optical Contrast Imaging for Tissue Differentiation
Warren Grundfest, University of California, Los Angeles, Professor, Electrical Engineering, Surgery, and Bioengineering, Member, Brain Research Institute; JCCC Cancer Molecular Imaging, Neuroengineering Training Program
3. Optical Components Thinner than a Free-space Wavelength and Their Application for Microscopy
Andrei Faraon, California Institute of Technology, Assistant Professor, Applied Physics and Materials Science
4. Micro implants
Y.C. Tai, California Institute of Technology, Anna L. Rosen Professor of Electrical Engineering and Mechanical Engineering; Chair of Medical Engineering

5. Democratization of Next-Generation Imaging, Sensing and Measurement Tools Through Computational Photonics
Aydogan Ozcan, University of California, Los Angeles, Chancellor's Professor, Electrical Engineering & Bioengineering Departments, HHMI; Professor, Howard Hughes Medical Institute, Associate Director, California NanoSystems Institute (CNSI)

Imaging Dementia: Using Imaging to Enhance Detection of Mild Neurocognitive Disorders - Friday, March 6, 3:30-5:00, 406B-B31
Session Chair: Allyson Rosen
1. High Resolution Hippocampal Imaging
Susanne Mueller, Associate Professor, Radiology, University of California, San Francisco School of Medicine
2. Maladaptive Myelin Development in PTSD
Linda Chao, Associate Professor, Radiology, University of California, San Francisco, School of Medicine
3. Changes in White Matter Integrity in Parkinson's Disease & Prediction of Disease Progression Using Diffusion Tensor Imaging
Norbert Schuff, Professor, Radiology, University of California, San Francisco, School of Medicine
4. Connectivity of Language-related Networks in TBI Patients: Graph Analysis
Gloria Yang, Director, Center for Cognition and Mind Sciences Director, Lab for Language and Cognitive Neurology Section Chief, Center for Teaching and Learning Development Associate Professor, Department of Foreign Languages and Literature National Tsinghua University, Taiwan
5. Structural MRI Correlates of Carotid Interventions
Allyson Rosen, Assistant Professor of Psychology, VA Palo Alto Health Care System, Stanford University

Neuromathematics - Friday, March 6, 3:30-5:00, 407-B30
Session Co-Chairs: Babak Kateb, Kristin Swanson
1. Bridging Scales Through Patient-Specific Computational Modeling
Kristin Swanson Director, Mathematical NeuroOncology; Professor, Neurosurgery, Radiology and Engineering Sciences, Northwestern University
2. Connecting Treatment Response to Each Patient's Brain Through Computational NeuroAnatomy & Changes in Cognition & Function
Lei Wang, Assistant Professor in Psychiatry and Behavioral Sciences and Radiology, Northwestern University
3. Deconvolving NeuroImaging to Elucidate the Ecology & Evolution of Brain Cancer
Robert Gatenby, Chair, Department of Integrative Mathematical Oncology and Department of Diagnostic Imaging, Moffitt Cancer Center
4. Patient-specific Metrics of Invasiveness Reveal Significant Prognostic Benefit of Extensive Resection in a Subset of Less Diffuse Malignant Gliomas
Anne Baldock, MD/PhD student at the University of California, San Diego, School of Medicine
5. Small Invasive Growth Associate with Seizure at Presentation
Joe Juliano, Medical Student, Keck School of Medicine, University of Southern California

SBMT Committee Meeting - Friday, March 6, 3:30-5:00, 409A-B29

Oral Poster - Friday, March 6, 3:30-5:00, 409B-B58
Session Co-Chair: Jessica Rose, John Adler

1. The Relationship of Vagus Somatosensory Evoked Potentials (VSEP) with Cognitive Change
Thomas Polak, Department of Psychiatry, Psychosomatics & Psychotherapy, University of Wuerzburg

2. The Role of Preoperative Functional MRI in the Surgical Management of Patients with Glioma
Melanie Morrison

3. The Molecular Basis for Memory: Syntaxin and NMDA Receptors in the Hippocampal Postsynaptic spine
Svend Davanger, Professor, Division of Anatomy, Institute of Basic Medical Sciences

4. A Universal Cortical Processing Module based on Sparse Representations
Garrett Kenyon, Technical Staff Member, Physics Division (P-21), Los Alamos National Laboratory

5. Mapping The Corticospinal Tract: Mr. Hardi Q-Ball Tractography of the Different Components According to Their Functional Origin and Validation with Intraoperative Mapping
Castellano Antonella, Neuroradiology Unit, San Raffaele Hospital and Vita-Salute University Via Olgettina

6. Intraoperative Optical Spectroscopy Brain Mapping During Tumor Resection
Neal Prakash, Chief of Neurology, City of Hope National Cancer Center

Brain Ablation - Friday, March 6, 3:30-5:00, 403A&B-B33
Session Chair: Mike Chen

1. Laser Ablation of Brain Tumors Using the NeuroBlate System
Gene Barnett, Associate Dean for Faculty Affairs, Cleveland Clinic Lerner College of Medicine of Case; Western Reserve University ; The Rose Ella Burkhardt Chair in Neurosurgical Oncology ; Professor and Director, Rose Ella Burkhardt Brain Tumor & Neuro-Oncology Center ; Cleveland Clinic Neurological Institute ; Vice Chair, Department of Neurological Surgery

2. Functional Selective Amygdalohippocampectomy with Laser Ablation for Epilepsy
Casey Halpern, Assistant Professor of Neurosurgery, Stanford University Medical Center

3. Neurosurgery With Incisionless Ablation
Eyal Zadicario, Vice President of Research & Development and Neuro Programs, InSightec

4. MRGFUS for the Treatment of Movement Disorders and Pain
Ernst Martin, Professor,Neuroscience Center-Children Hospital,University of Zurich, Zurich,Switzerland

5. Tumor Treating Fields (TTFields) for Glioblastoma: Clinical Application
Aafia Chaudhry, Director Medical Affairs, Novocure

Project Formulation from Design to Publication and Commercialization
Moderators: Allyson Rosen, Babak Kateb
Room 403 A&B

5:15: How Publication Strategies Could Make or Break a Discovery
Babak Kateb , Allyson Rosen

5:30: The PLOSOne Model: Dissemination on a Large Scale and Alternative Metrics
Damian Pattinson

5:45: The Cureus Model: Accelerating Clinical Translation
John Adler

6:00: PeerJ: Re-conceptualizing Impact
Peter Binfield

6:15: Los Alamos National Lab Technology Transfer
David Persiri

6:30: Cyberonics: A Successful Case Study for Commercialization
Reese Terry

6:45: Discussion and Overview

DAY 2:
Saturday, March 7th, 2015,
12th Annual Congress

KEYNOTE SPEAKER #5: *Nan Sauer*

DAY 2 - Keynote 5: Nan Sauer
8:30-9:00 am; Room 403 A&B
Los Alamos National Overview of Technology and Their Application in Brain Mapping and Therapeutics

LOS ALAMOS, New Mexico, August 9, 2011— Nancy ("Nan") Sauer is the new associate director for Chemistry, Life, and Earth Sciences (ADCLES) at Los Alamos National Laboratory (LANL).

In her 25-year career at LANL, Sauer has held several positions of increasing responsibility. After working as a director's postdoctoral fellow, she advanced to a principal investigator and team leader in the Chemistry Division to leader of several projects. Most recently she has been the director of the LANL Institutes Office from its inception, responsible for oversight and strategic engagement of six institutes and three innovation centers.

Her responsibilities included a broad exposure to areas important to the Laboratory including engineering, computer science, materials science, biosecurity, energy security, and geo and planetary science. This experience in outreach and engagement of the Laboratory Institutes is vital to the long-term strategic reputation of outstanding science at the Laboratory. "I'm excited to have in this critical role at the Laboratory someone as dedicated, experienced, and versatile as Nan," said Lab Director Charlie McMillan. "She's a well respected scientist and leader, and she has deep experience in everything from programmatic chemistry and facilities operations, to university outreach and beryllium mitigation and control."

"Nan was highly accomplished and well rounded to start, and she gained additional experience as acting head of the directorate," said Terry Wallace, principal associate director for Science, Technology, and Engineering. "In that role, she led the research and development portfolio in the three major Laboratory program areas: global security, science, and nuclear deterrence."

Sauer has a distinguished track record as a research scientist with more than 60 publications and technical reports in archival journals. She has delivered invited lectures at more than 25 meetings, and holds 5 patents. She earned a bachelor of science degree in chemistry from the University of Idaho and a PhD in inorganic chemistry from Iowa State University.

KEYNOTE SPEAKER #6:
Michael W. Weiner, MD

DAY 2 - Keynote 6: Michael W. Weiner
8:30-9:00 am; Room 403 A &B
Molecular Phenotyping of Alzheimer's Disease and Traumatic Brain Injury: Lessons from Alzheimer's Disease Neuroimaging Initiative (ADNI)

Michael Weiner, MD, is a Professor in Residence in Radiology and Biomedical Imaging, Medicine, Psychiatry, and Neurology at the University of California, San Francisco. He is Principle Investigator of the Alzheimer's Disease Neuroimaging Initiative, which is the largest observational study in the world concerning Alzheimer's Disease. He is the former Director of the Center for Imaging of Neurodegenerative Diseases (CIND) at the San Francisco Veterans Affairs Medical Center. After graduating from the Johns Hopkins University in 1961, He obtained his M.D, from SUNY Upstate Medical Center in Syracuse, New York in 1965, and he completed his internship and residency in Medicine from Mt. Sinai Hospital in 1967. From 1967-1968, Dr. Weiner completed a residency and clinical fellowship in Metabolism from Yale-New Haven Medical Center. In 1970, he completed a research fellowship in Nephrology from Yale University School of Medicine and a research fellowship in Biochemistry from the University of Wisconsin Institute for Enzyme Research in 1972, followed by a joint appointment in the Department of Medicine, Renal Section from the University of Wisconsin Institute in 1972. In 1974 he became an Assistant Professor of Medicine (Nephrology) at Stanford University, and in 1980 he became an Associate Professor of Medicine (Nephrology) at UCSF. In 1983, he established the Magnetic Resonance Unit at the San Francisco VA Medical Center, which became the Center for Imaging of Neurodegenerative Diseases in 2000. In 1990, he became a Professor of Radiology, Medicine, Psychiatry and Neurology at UCSF.

Dr. Weiner's research activities involve the development and utilization of MRI and PET for investigating and diagnosing neurodegenerative diseases. In 1980, Dr. Weiner was one of the first to perform MRS on an intact animal, and subsequently pursued his goal to develop MRI/S as a clinical tool. During the past 25 years he has worked to develop and optimized the use of MRI, PET, and blood based biomarker methods to diagnose Alzheimer's disease and other neurodegenerative disorders. Also, Dr. Weiner's research focuses on monitoring effects of treatment to slow progressions in Alzheimer's disease, and detecting Alzheimer's disease early in patients who are not demented, but risk subsequent development of dementia. He is the Principle Investigator of the Alzheimer's Disease Neuroimaging Initiative which has enrolled over 1500 subjects (including controls, MCI, and AD) at 68 sites across the USA and Canada for cognitive testing, MRI, PET, and lumbar puncture. He has also launched The Brain Initiative, which is a web-based registry for recruiting, screening, and longitudinally monitoring subjects for neuroscience studies of all types. Dr. Weiner has 649 published articles and he has written 70 book chapters.

KEYNOTE SPEAKER #7:
Rear Admiral Raquel C. Bono

DAY 2 - Lunch Time Keynote 7:
Rear Admiral Raquel C. Bono
12:00-12:30 pm;
Director, National Capital Region Medical
Wounded Warrior Care and Research

Commissioned in June 1979, Rear Adm. Raquel Bono obtained her baccalaureate degree from the University of Texas at Austin and attended medical school at Texas Tech University. She completed a surgical internship and a General Surgery residency at Naval Medical Center Portsmouth, and a Trauma and Critical Care fellowship at the Eastern Virginia Graduate School of Medicine in Norfolk.

Shortly after training, Bono saw duty in Operations Desert Shield and Desert Storm as head, Casualty Receiving, Fleet Hospital Five in Saudi Arabia from August 1990 to March 1991. Upon returning, she was stationed at Naval Medical Center Portsmouth as a surgeon in the General Surgery department; surgical intensivist in the Medical/Surgical Intensive Care Unit, and attending surgeon at the Burn Trauma Unit at Sentara Norfolk General Hospital. Her various appointed duties included division head of Trauma; head of the Ambulatory Procedures Department (APD); chair of the Laboratory Animal Care and Use Committee; assistant head of the Clinical Investigations and Research department; chair of the Medical Records Committee, and command intern coordinator. She has also served as the specialty leader for Intern Matters to the Surgeon General of the Navy.

From August 2004 through August 2005, she served as the executive assistant to the 35th Navy Surgeon General and Chief, Bureau of Medicine and Surgery. Following that, she reported to Naval Hospital Jacksonville, Florida, as the commanding officer from August 2005 to August 2008. She then served as the chief of staff, deputy director Tricare Management Activity (TMA) of the Office of the assistant secretary of Defense, Health Affairs (OASD(HA)) from September 2008 to June 2010. She later served as deputy director, Medical Resources, Plans and Policy (N093), chief of Naval Operations. From November 2011 to June 2013, she served as the command surgeon, U.S. Pacific Command, Camp H.M. Smith, Hawaii. From July 2013 to September 2013 she served as acting commander Joint Task Force National Capital Region Medical. She currently serves as director, National Capital Region Medical Directorate of the Defense Health Agency, and as the 11th Chief, Navy Medical Corps.

In addition to being a diplomat of the American Board of Surgery, Bono is a Fellow of the American College of Surgeons and a member of the Eastern Association for the Surgery of Trauma. Her personal decorations include Defense Superior Service Medal (two), Legion of Merit Medal (four), Meritorious Service Medal (two), and the Navy and Marine Corps Commendation medal (two).

Saturday, March 7th, 2015,
12th Annual Congress

8:30 am- 9:00 am - Keynote 5: Nan Sauer ; Room 403 A&B
Los Alamos National Overview of Technology and Their Application in Brain Mapping and Therapeutics
9:00 am- 9:30 am - Keynote 6: Michael W. Weiner ; Room 403 A &B
Molecular Phenotyping of Alzheimer's Disease and Traumatic Brain Injury: Lessons from Alzheimer's Disease Neuroimaging Initiative (ADNI)

Ocular Measurements as Novel Therapeutic Tools for Brain Function – Saturday 7, 10:00-11:30 am 402A-B34
Session Chair- Deborah Zelinsky
1. Cognitive Rehabilitation After TBI via Retinal Stimulation: A Twelve Year Case Study
Clark Elliott, Associate Professor of Computer Science, DePaul University College of Computing and Digital Media, DePaul Center, Chicago, IL, USA
2. Repeated Retinal Stimulation Improves Attention, Reading & Memory
Teri Lawton, CEO, Founder, Director of Research, Perception Dynamics Institute, Del Mar, CA, USA
3. MEG Documents Visual Cortex Changes as Brain Function is Modified
Mingxiong Huang, Director, University of California, San Diego, Radiology Imaging Laboratory
4. Virtual Reality Stimulation: Its Effects on Brain Mapping & Human Behavior
Kelly Amos, Miami University, Oxford, Ohio, USA
5. Implantable Devices for Retinal Stimulation
Bruce McKee, Research Systems Consultant, Cornell University, NanoFabrication Laboratory, Ithica, NY, USA

Genomics in Neurological Disorders – Saturday 7, 10:00-11:30 am 402A-B35
Session Co-Chairs- Kenneth S. Kosik, Dean Sherzai
1. The Genomics of Early Onset Alzheimer's Disease in the Colombian Kindred
Kenneth S. Kosik, Harriman Professor of Neuroscience, Co-Director, Neuroscience Research Institute, University of California, Santa Barbara
2. Identifying Genetic Influences on Human Brain Structure Through Large-Scale Collaboration
Jason Stein, Postdoctoral Fellow, University of California, Los Angeles
3. Genetics of Brain Disorders: What We Can Learn from Studies of Metabolic Risk Traits
Nelson Freimer, Professor, University of California, Los Angeles
4. Optogenetic Neuronal Stimulation Promotes Functional Recovery Post-Stroke.
Michelle Y. Cheng, Research Associate, Stanford University School of Medicine
5. Role of Chromobox 6 (CBX6) Suppression in the Epigenetic Development of Glioblastoma Multiforme.
Mike Chen, Associate Professor of Department of Neurosurgery, City of Hope Cancer Center

Peripheral Nerve - Saturday 7, 10:00-11:30 am 404A-B36
Session Co-Chairs- Mark Stecker, Aaron Filler

1. Magnetic Resonance Neurography
Pablo J. Villablanca, Professor of Radiology, Chief of Diagnostic Neuroradiology, Medical Director of MRI, Director of Interventional Spine Service, Ronald Reagan UCLA Medical Center, UCLA Medical Center, Santa Monica

2. DTI for Peripheral NerveAvneesh Chhabra, Associate Professor, Radiology, Orthopaedic Surgery, UT Southwestern Medical Center

3. Open MRI Guided Percutaneous Nerve Treatments
Aaron G. Filler, Neurosurgeon,NeuroImaging specialist, Institute for Nerve Medicine; NeuroGrafix

4. Computational Modeling to Investigate the Mechanisms of High Frequency (>1000Hz)
Jay Shils, Director, Intraoperative Monitoring, Dept. of Neurosurgery, International Society of Intraoperative Neurophysiology

5. Neuroelectronic Prostheses
Lakshminarayan Srinivasan, Research Fellow, Neural Signal Processing Laboratory, Functional Neurosurgery, Massachusetts General Hospital

Cancer Stem Cell - Saturday 7, 10:00-11:30 am 404B-B39
Session Co-Chairs- Vicky Yamamoto, Yanhong Shi

1. TLR9 is Critical for Glioma Stem Cell Maintenance and Targeting
Hua Yu, Professor, Cancer Immunotherapeutics & Tumor Immunology. City of Hope

2. Rapid Production of Neural Crest Precursors From Human Embryonic Stem Cells
Barbara Murdoch, Assistant Professor, Eastern Connecticut State University

3. Cellular Heterogeneity in Glioblastoma
Michael Barish, Chair and Professor, Neurosciences, City of Hope

4. Neural restricted, FAC-sorted, Human Neural Stem Cells to Treat Traumatic Brain Injury (TBI)
Brain Cummings, Associate Professor & Vice-Chair for Research, Physical Medicine & Rehabilitation/Neurological Surgery, University of California, Irvine

5. An in vitro Model of Traumatic Brain Injury Using Human Embryonic Stem Cell Derived 3D "Borganoids" and Laser Generated Cavitation Bubbles
Rocky-Greer, Post Doctoral Fellow, Neonatal Perinatal Medicine, University of California, Irvine

Pediatric Neurosurgery & Neurosciences - Saturday 7, 10:00-11:30 am 405-B38
Session Co-Chairs- P. David Adelson, Moise Danielpour, Jessica Rose

1. Impact of Disease and Disorders in the Pediatric Brain
P. David Adelson Barrow Neurological Institute at Phoenix Children's Hospital, Phoenix, AZ

2. Physiological impact of Injury in the Developing Brain: Pediatric Neurotrauma
David Hovda, University of California, Los Angeles

3. Technological Advances in Pediatric Neuro-Critical Care
John Condie, Barrow Neurological Institute at Phoenix Children's Hospital, Phoenix, AZ

4. Neuromodulation for Pediatric Movement Disorders
Chima Oluigbo, Children's National Medical Center, Washington DC
5. Genomics of Neural Tube Defects: Spinal Dysraphism
Timothy George, Dell Children's Medical Center, Austin, TX

Advances in Epilepsy - Saturday 7, 10:00-11:30 am, 406A-B41
Session Chair: Pantaleo Romanelli
1. Genomics and Epilepsy
Pasquale Striano, Clinical expert, Orphanet
2. Magnetoencephalography (MEG)
Stefano Seri, Professor of Clinical Neurophysiology and Developmental Neuropsychiatry, Aston University
3. Invasive Monitoring: The State of the Art
David Anschel, Comprehensive Epilepsy Center of Long Island at St. Charles Hospital
4. Invasive monitoring: The future
Pantaleo Romanelli, Scientific Director, Cyberknife Center,CDI,Milano,Italy
5. Laser Ablation of Seizure Foci
Alexandre Carpentier, Assistant professor, Universite de Rennes, Professor of Neurosurgery, University of Paris, France

Imaging Dementia: Early Detection of Dementia Related Changes - Saturday 7, 10:00-11:30 am, 406B- B40
Session Chair: J. Wesson Ashford
1. Alzheimer Screening, Early Cognitive Changes and Possible Relationships to Hippocampal Alterations
Peter Bayley, Senior Research Scientist, War Related Illness and Injury Study Center, U. S. Department of Veterans Affairs
2. Utilizing Semantic Memory BOLD fMRI Activation in the Prediction of Cognitive Decline in Older Adults
Nathan Hantke, Postdoctoral Fellow, VA Palo Alto Health Care System, U. S. Department of Veterans Affairs
3. Brain Health Registry
Mike Weiner, Director, San Francisco VA Medical Center's Center for Imaging of Neurodegenerative Diseases, Professor, Radiology, University of California, San Francisco
4. MemTrax: On-line Computerized Memory Assessment
J. Wesson Ashford, Director, War Related Illness and Injury Study Center, U. S. Department of Veterans Affairs

Biologic & Engineering Platforms for Minimally Invasive Oncologic Biomarkers - Saturday 7, 10:00-11:30 am, 407-B37
Session Chair: Clark C. Chen
1. Extracellular Vesicles as a Biomarker Platform
Clark C. Chen, Vice-Chairman, Research and Academic Affairs, University of California San Diego
2. Bio-engineering & Personalized Oncologic Care: Current State & Future Directions
Andrew Kummel, Professor Chemistry and Biochemistry; Assistant Director of the UCSD Moores Cancer Center for Physical Science and Engineering, University of California, San Diego

3. Rapid Isolation and Detection of Circulating Cell Free DNA and RNA for Brain Tumor and Other Brain
Michael Heller, Professor, University of California San Diego, Departments for Bioengineering and Nanoengineering
4. Lab on a Chip Solution for MicroRNA Diagnostics
Yuhwa Lo, University of California San Diego, Department of Electrical and Computer Engineering
5. Novel Chemistry for MicroRNA Based Biomarker
Neal Devaraj, Assistant Professor of Chemistry and Biochemistry, Biomimetic Chemistry, Molecular Imaging, Electrochemistry, University of California, San Diego

Imaging and Electro-physiology of Brain Relays for Psychiatric Interventions - Saturday 7, 10:00-11:30 am, 409A-B42
Session Chair- Antonio De Salles
1. Electrophyisological Mapping of the Hypothalamus
Alessandra Gorgulho, Assistant Professor, Department Neurosurgery, University of California, Los Angeles
2. Mapping for the Treatment of Obsessive Compulsive Disorder
Antonio de Salles, Professor, University of California, Los Angeles, Department of Neurosurgery and Radiation Oncology; Head of Stereotactic Surgery Section; Chief, HCor Neuroscience, Brazil
3. The Role of the Sub-thalamic Nucleus in Reward
Ausaf Bari, Clinical Fellow, Functional and Stereotactic Neurosurgery, Toronto Western Hospital, University of Toronto
4. Mapping the Amygdala
Jean-Philippe Langevin, Assistant Professor-in-Residence, UCLA Dept. of Neurosurgery
5. Central Mechanisms of Vagus Nerve Stimulation
Scott Krahl, Professor of Neurosurgery at UCLA and the Deputy Associate Chief of Staff for Research at the VA Greater Los Angeles Healthcare System

New Horizons 2 - Saturday 7, 10:00-11:30 am, 409B-B43
Session Chair- Shouleh Nikzad
1. Development of 3D Endoscope for Brain Surgery
Youngsam Bae, PhD, Jet Propulsion Laboratory, California Institute of Technology
2. A Non-invasive Intracranial Pressure Monitor
James Lambert, PhD, Jet Propulsion Laboratory, California Institute of Technology
3. Polymer Coatings for Hydrocephelus Shunts
Malancha Gupta, PhD, USC, Associate Professor, Chemical Engineering
4. Big Data and Healthcare
Daniel Crichton, PhD, Jet Propulsion Laboratory, California Institute of Technology
5. Robotics Surgery
Hari Nayar, PhD, Jet Propulsion Laboratory, California Institute of Technology

NanoNeurosurgery & NanoNeuroscience - Saturday 7, 10:00-11:30 am, 403 A&B-B44
Session Co-Chairs- John Yu, Babak Kateb
1. Multifaceted Applications of poly(beta-L-malic acid) in Pharmacology and Medicine
Eggehard Holler, Research Scientist, Maxine Dunitz Neurosurgical Institute, Cedars-Sinai Health Sciences
2. New Biomolecular Assay Technology
Chi On Chui, Associate Professor, Electrical Engineering University of California, Los Angeles
3. Noninvasive Nanomagnetic Approach for Prefrontal Cortical Microcircuit Mapping
Ioan Opris, Senior Research Scientist, Wake Forest University School of Medicine
4. Nanorobotic agents for targeting the brain with a high therapeutic index
Sylvain Martel, Director of the NanoRobotics Laboratory
5. A Versatile Peptidic Nanoplatform Network for Efficient Targeting of the Blood-Brain-Barrier
Seyed Moien Moghimi, Researcher, University of Copenhagen

11:30 am - Lunch Time

12:00- 12:30 pm: Lunch Time Keynote 7: Rear Admiral Raquel C. Bono
Director, National Capital Region Medical
Wounded Warrior Care and Research

Los Alamos National Lab: Emerging Technologies for Neural Imaging and Therapeutics - Saturday 7, 1:00-2:30 pm, 402A-B48
Chair: John George
1. Imaging of Dynamic Neural Activity; Intrinsic Optical Signals, & Capacitive Sensor Arrays
John George, Technical Staff Member (Research Scientist), Physics Division, Biological and Quantum Physics Group, (P-21). Los Alamos National Lab
2. Advanced Optical Coherence Tomography & Super Resolution Ophthalmoscopy
Xincheng Yao, Professor, Institute of Physics, University of Illinois, Chicago
3. Acoustic Focusing Based on Time-Reversal Techniques
Carene Larmat, Computational Geophysicist, Los Alamos National Lab
4. Acoustic Technologies Relevant for Intracranial Monitoring
Dipen Sinha, Fellow, Los Alamos National Lab
5. Protons for Brain Imaging & Therapeutics

Frank Merrill, Scientist, Los Alamos National Lab TBI in Sports and Military - Saturday 7, 1:00-2:30 pm, 402B-B91
Co-Chairs: Michael Roy, Michael E. Wolf
1. Competitive Athletics and TBI
Mitchell Berger, Professor and Chairman, Department of Neurological Surgery
2. TBI in Athletes and Soldiers
James Ecklund, Chairman of the Inova Neuroscience Institute, Inova Medical Group

3. (Through Live Video)
Louis French, TBI director, Walter Reed Army Medical Center
4. Transcranial Magnetic Stimulation in Combat-related TBI & PTSD
Geoff Grammer

Panel Discussion: Long Term Effects of Blast in Military Personnel, Results from the 15-year Study, TMS NeuroHealth Centers Epilepsy - Saturday 7, 1:00-2:30 pm, 404A-B47
Chair: Jeff Chung, Evgeny Tsimerinov
1. Brain Neuromodulation in CNS Disorders
Evgeny I. Tsimerinov, Associate Director, Neurophysiology, Assistant Professor of Neurology, Cedars-Sinai Medical Center Professorial Series
2. VNS Treatment of Seizures in Adults
Lilit Mnatsakayan, Specialist in Epilepsy, Clinical Neurophysiology and Neurology, University of California, Irvine
3. New Advances: RNS Treatment of Seizures
Jeffrey M. Chung, Director, Epilepsy Program Director, Neurophysiology Program Department of Neurology, Cedars-Sinai
4. Innovations & Future Directions of Neuromodulations: TNS & More
Christopher M. DeGiorgio, Ronald Reagan University of California, Los Angeles David Geffen Medical Center

Translational Stroke Research, Saturday 7, 1:00-2:30 pm, 404B-B45
Chair: Paul Lapchak
1. Pre-hospital Stroke Care: Future or Fiction?
Thilo Hoelscher, Co-Founder and President at BURL Concepts INC . La Jolla, CA
2. Imaging Selection of Patients for Reperfusion in Acute Ischemic Stroke
Jeffrey L. Saver, Professor of Neurology, David Geffen School of Medicine at UCLA, Director, UCLA Comprehensive Stroke Center, Los Angeles, CA.
3. Future stroke research: emphasis on recirculation
John Zhang, Professor Neurosurgery, Anesthesiology, and Physiology & Pharmacology Director of Research of Neurosurgery and Anesthesiology Loma Linda University School of Medicine, Loma Linda, CA
4. Hypothermia to Treat Stroke
Gene Sung, Assistant Professor of Neurology, Chief, Division of Neurocritical Care and Stroke, Keck School of Medicine USC

Neurophotonics 2, Saturday 7, 1:00-2:30 pm, 405-B49
Co-chairs: Vassily Tsytsarev, Babak Kateb
1. All-optical, Label-free, Quantitative Imaging of Oxygen Metabolism in the Mouse Brain
Vivek Srinivasan, Associate Professor, University of California, Davis Department of Biomedical Engineering
2. Functional Brain Imaging with Laser Speckle and Photoacoustics
Nitish V. Thakor, Director, SINAPSE, National University of Singapore, and Professor, Biomedical Engineering, Johns Hopkins University, USA

3. Rapid Volumetric Whole-Brain Neuroimaging with Five-Dimensional Optoacoustic Tomography
Sven Gottschalk, Institute for Biological and Medical Imaging, Helmholtz, Zentrum Munchen, Germany
4. How Childhood Cerebral Hemodynamics Changes with Age? A Functional Near Infrared Study
Amir Gandjbakhche, National Institute of Health, Bethesda, Maryland, USA; University of California Davis, Davis, California, USA
5. In vivo Optical Techniques for Functional Brain Mapping
(Charles) Lun-De Liao, Lead Research Scientist, SINAPSE

Oral Poster, Saturday 7, 1:00-2:30 pm, 406A- B50
Co-Chairs: Jessica Rose, John Adler
1. Glatiramer Acetate Immunotherapy Rescues Synapses in a Murine Model of AD
Songlin Li, Researcher, Cedars-Sinai Medical Center
2. Blast Injury to the Central Nervous System of Miniature Yucatan Swine
Richard Bauman, Research and Development, ADVANCE (Advanced Analysis of the Neurological Consequences of Explosions), LLC
3. Environmental Exposure Confounding Decompression Injury in Aviators: A Case Series
Joel Fulkerson, Aviation Medicine, U.S. Navy
4. ACE-overexpressing Macrophages Exhibit a Pro-healing Phenotype in Murine AD Models
Songlin Li, Researcher, Cedars-Sinai Medical Center
5. Optimising the analysis of language fMRI studies for surgical planning in neuro-oncology
David Coope, Clinical Lecturer / Honorary Registrar in Neurosurgery, University of Manchester, Wolfson Molecular Imaging Centre

Imaging Dementia: Structural Changes in Alzheimer's Disease, Saturday 7, 1:00-2:30 pm, 406B-B51
Chair: J. Wesson Ashford
1. Impact of Brain Injury and PTSD on Brain Structure (DTI) in Veterans, Implications for Development of Dementia
Maheen Adamson, Clinical Associate Professor, Psychiatry & Behavioral Sciences, Stanford University School of Medicine, Stanford, CA
2. Impact of APOE e4 on Medial Temporal Lobe Structures, Implications for Prevention of Alzheimer's Disease
Joy Taylor, Clinical Associate Professor, Psychiatry & Behavioral Sciences, Stanford University School of Medicine, Stanford, CA
3. DTI in Alzheimer's Disease
John Ringman, Clinical Professor of Neurology, David Geffen School of Medicine, University of California, Los Angeles
4. High-Resolution Neuroimaging Biomarkers for Alzheimer's Disease
Mike Yassa, Assistant Professor, Department of Neurobiology and Behavior, Francisco J. Ayala School of Biological Sciences, University of California, Irvine

5. High-Resolution Neuroimaging of Genetic Risk for Alzheimer's Disease
Nanthia Suthana, Assistant Professor, Department of Neurosurgery, David Geffen School of Medicine, University of California at Los Angeles
6. Biomarkers and treatment targets in Alzheimer's disease: Neuropsychiatric symptoms and cholinergic receptors
David Sultzer, Professor, Department of Psychiatry and Bio-behavioral Sciences, David Geffen School of Medicine, University of California at Los Angeles

Current Therapeutics of Vascular Disorders of the Brain Saturday 7, 1:00-2:30 pm, 407-B52
Co-chairs: Martin Mortazavi, Michael Alexander
1. Current Concepts in Stroke Treatment
Andrei V. Alexandrov, Professor and Chairman, Dept of Neurology, University of Tennessee, Memphis
2. Sonothrombolysis as Stroke Therapy Andrei V. Alexandrov, Professor and Chairman, Dept of Neurology, University of Tennessee, Memphis
3. Revascularization in Acute Embolic Stroke
Michael Alexander, Vice Chairman, Neurovascular and Education, Neurosurgery, Director, Neurovascular Center and Endovascular Neurosurgery, Neurosurgery, Cedars-Sinai Medical Center
4. Stereotactic Endoscopic Intracerebral Clot Evacuation
Robert Ryan, Assistant Clinical Professor, Neurosurgery, UCSF Fresno
5. Evolution in Treatment of Vein of Galen Malformation, with Proposal of A New Classification System
Martin M. Mortazavi, California Brain Institute, Los Angeles, California

SPECT & PET: Functional Neuroimaging in Predicting Treatment Response, Saturday 7, 1:00-2:30 pm, 409A-B53
Co-chairs: Daniel G. Amen, Theodore Henderson
1. SPECT & Predicting Treatment Response in ADHD
Theodore Henderson, Child, Adolescent and Adult Psychiatry Clinic
2. SPECT in Chronic Pain
John Thornton
3. SPECT in Addictions
Robert Johnson, Medical Director, Amen Clinic
4. Identifying SPECT changes in resting state networks areas: clinical & prognostic significance
Dan Pavel, Former Director of Nuclear Medicine and Professor of Radiology / Nuclear Medicine at the University of Illinois Medical Center, Chicago
5. SPECT & Lyme Disease
Joe Annibali, Chief Psychiatrist, Amen Clinics

Image-Guided Robotic Radiosurgery, Saturday 7, 1:00-2:30 pm, 409B-B54
Co-chairs: Pantaleo Romanelli, Steve Chang

1. A Technological Overview
Calvin Maurer, Accuray Inc, Sunnyvale,California

2. Intracranial Tumors
Steve Chang, Professor of Neurosurgery,Stanford University, California

3. Trigeminal Neuralgia & Epilepsy
Pantaleo Romanelli, Scientific Director, Cyberknife Center,CDI,Milano,Italy

4. Optic Pathways Lesions
Alfredo Conti, Assistant Professor of Neurosurgery,University of Messina,Messina,Italy

Neurological Consideration for Long-Duration Human Space Flight, Saturday 7, 1:00-2:30 pm, 403 A&B-B55
Co-chairs: Eric Bershad, Jeffrey Sutton

1. Overview of the Visual Impairment Intracranial Pressure Syndrome: An Astronaut's Perspective
Jonathan Clark, National Space Biomedical Research Institute and Associate Professor, Center for Space Medicine Department of Neurology and Space Medicine, Baylor College of Medicine

2. Validation of the Vittamed Transcranial Doppler Device for Measuring Astronaut ICP
Eric Bershad, Assistant Professor of Neurology and Space Medicine and Associate Director of Biomedical Innovations Lab, Center for Space Medicine, Section of Neurocritical Care and Vascular Neurology, Department of Neurology, Baylor College of Medicine

3. Real-time Monitoring of Intracranial Fluid Shifts with Volume Integral Phase Shift Spectroscopy
Chethan Venkatasubba Ro, Baylor College of Medicine, Assistant Professor of Neurology and Program Director, Neurocritical Care Fellowship, Associate Director, Neurology Residency Program, Section of Neurocritical Care and Vascular Neurology, Department of Neurology, Baylor College of Medicine

4. The Ear as a Window to the Brain: Validation of Cerebrocochlear Fluid Analyzer and Distortion Product Otoacoustic Emissions for ICP analysis
Jose Ignacio Suarez, Baylor College of Medicine, Professor of Neurology and Director of Neurocritical Care Section, Department of Neurology, Baylor College of Medicine

5. Insights into the Importance of International Collaboration for Advancing Long-Term Space Missions
Jeffrey Sutton, Director National Space Biomedical Research Institute and Director, Center for Space Medicine, Baylor College of Medicine

Neuro-Opthalmology: Vision & Brain Mapping, Saturday 7, 3:00-4:30 pm, 402A-B63
Co-chairs: Alfredo Sadun

1. Imaging Technology Overview
Sawaraj Bose, Attending Physician, Cedars Sinai Medical Center, Los Angeles

2. Imaging of the Visual Pathways: Connecting Structure and Function
Vivek Patel, Associate Professor, Ophthalmology, USC Eye Institute, Los Angeles, CA

3. Image-Guided Surgical Intervention in the Treatment of Anterior Visual Pathway Disease
Howard Krauss, Clinical Professor of Ophthalmology & Neurosurgery, University of California, Los Angeles; Chief of Neurosurgical Ophthalmology, St. John's - Providence Brain Tumor Center, Santa Monica, Ca.
4. The Future of Imaging
Michelle Wang, Kaiser Permanente

Oral Posters, Saturday 7, 3:00-4:30 pm, 402B-109
Co-chairs: Babak Kateb, Ramin Rak
1. Use of Non-invasive Thermal Transcutaneous Diffusion Technology to Assess Shunt Patency and Function in Patients with Normal Pressure Hydrocephalus (NPH)
Jefferson Chen, Neurological Surgery, Neuro-oncology, Neurocritical Care, University of California, Irvine Health
2. Uncovering a Network of Brain Activity Supporting Content-Rich Memories
Maya Fernandes, Associate Professor, Psychology, University of Waterloo
3. Automated Tract Labelling for Neurosurgical Planning Using a Hybrid Clustering and Atlas-based Approach
Ali Khan, Assistant Professor, Robarts Imaging
4. Quantitative MRI Correlates of Hippocampal Pathology in Refractory Mesial Temporal Lobe Epilepsy
Maged Goubran, Postdoctoral research fellow, radiological sciences laboratory, Stanford School of Medicine
5. A Multi-Modal Imaging (PET, MRI-DTI, Quantitative Volumetrics) Assessment of 4 Individual Case Studies of Carbon Monoxide Poisoning
Joseph Wu, Associate Professor in Residence, Psychiatry & Human Behavior, University of California, Irvine, School of Medicine, Acting Director, Brain Imaging Center

Rehabilitation, Saturday 7, 3:00-4:30 pm, 404A-B59
Co-chairs: Michael E. Wolf , Ken Green
1. Development and Implementation of DVBIC Clinical Recommendations
Therese West, Subject Matter Expert at Defense and Veterans Brain Injury Center
2. Traumatic Brain Injury: Addressing Cognitive & Neuro-Behavioral Issues in the Acute/Subacute Rehabilitation Period
Michael Yochelson, Vice President of Medical Affairs & Chief Medical Officer, MedStar National Rehabilitation Network Professor & Vice Chair of Clinical Affairs, Rehabilitation Medicine Professor, Clinical Neurology Georgetown University Medical Center
3. Development and Implementation of DVBIC Clinical Recommendations: Across the Military Health System-Part 2- Process Improvement Pilot Project
Therese West, Subject Matter Expert at Defense and Veterans Brain Injury Center
4. Neuro-rehabilitation: One Patient's Successful Journey Through the Maze of Therapee
Ken Green, Faculty Practice Assistant Department Head & Special Projects Officer at the Naval Postgraduate Dental School, and the Human Research Protection Program Officer for the Navy Medicine Professional Development Center (NMPDC), Walter Reed National Military Medical Center

Translational Stroke Research, Saturday 7, 3:00-4:30 pm, 404B-B45
Chair: Paul Lapchak

1. Thrombin-Activatable Fibrinolysis Inhibitor: a Potential Target for Safer Thrombolysis
Kengo Noguchi, Daiichi Sankyo Co., Ltd., Biological Research Laboratories, R&D Division, Tokyo Japan

2. The Future of Laser Therapy to Treat Stroke
Justin Zivin, Professor Emeritus, UC San Diego

3. Experimental Model of ICH
Jiping Tang, Professor Basic Sciences Division of Physiology School of Medicine, Loma Linda University

Imaging Dementia: Functional and Neuropathology Imaging in Alzheimer's Disease (Metabolism, Abeta, Tau)
Saturday 7, 3:00-4:30 pm, 406B-B62
Co-chairs: J. Wesson Ashford, Ansgar Furst

1. Alzheimer-like Changes During Mid-life in Precuneus Glucose Metabolism Following Traumatic Brain Injury in Veterans
Ansgar Furst, Clinical Assistant Professor of Psychiatry and Neurology, Department of Psychiatry and Behavioral Sciences, Stanford University, Palo Alto, CA, United States

2. Integrating Modalities to Understand the Pathophysiology of Alzheimer's Disease, its Course, and its Prevention
Daniel Nation, Assistant Professor of Psychology, Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California

3. Aiming at the Diagnosis of Chronic Traumatic Encephalopathy in Retired Professional Athletes and War Veterans: Visualizing Regional Brain Pathology with FDDNP PET
Vladimir Kepe, Department of Molecular and Medical Pharmacology, University of California, Los Angeles

4. Development of PET Imaging Biomarkers for PHF-Tau: [18F]-T807 and [18F]-T808
Hartmuth Kolb, Head of Neuroscience Biomarkers at Johnson & Johnson

5. Brain Amyloidosis Ascertainment From Cognitive, Imaging, and Peripheral Blood Protein Measures
Liana Apostolova, Director, University of California, Los Angeles/Easton
Metadata & Military Medicine, Saturday 7, 3:00-4:30 pm, 407-B56Co-chairs: James Ecklund, Babak Kateb

1. Database Solution for Investigating TBI in the Military
Josh Duckworth, Assistant Professor in Neurology at the F. Edward Hebert School of Medicine at the Uniform Services University

2. Year Defense and Veterans Brain Injury Center's TBI Study
Lou French, TBI director, Walter Reed Army Medical Center

3. Building Bridges Between Genomic Big Data and Clinical Decision Making
Iosif Vaisman, Professor, Laboratory for Structural Bioinformatics. Department of Bioinformatics and Computational Biology, George Mason University

4. The Integration of Social Media in Big Data Collection
Rajiv Shahi, Chairman

5. NICoE Research Informatics Model For Data Collection and Analysis
Geoffrey Grammer, Department Chief of Research, National Intrepid Center of Excellence, Walter Reed National Military Medical Center

Spinal Core Therapeutics, Saturday 7, 3:00-4:30 pm, 409A- B64
Chair: John Liu
1. Spinal Cord Mapping and Basic Biology
Frank L. Acosta, Associate Professor, Neurosurgery, University of Southern California
2. Use of Spinal Modulation Therapy for Spinal Cord Injury
Daniel Lu, Associate Professor of Neurosurgery and Orthopedic Surgery, University of California, Los Angeles
3. Utilizing Stem Cell Treatment for Spinal Cord Injury
Patrick Hsieh, Associate Professor of Neurological Surgery, Director of Neurosurgery Spine Program, University of Southern California
4. Current Updates in Minimally Invasive Surgical Applications
John Liu, Professor of Neurosurgery, Co-Director, USC Spine Center
5. Lateral Approach for Spine Disease
Stephen Ryu, Consulting Professor, Electrical Engineering, Deputy Chief of Neurosurgery, Stanford Hospital and Clinics

Deep Brain Therapeutics, Saturday 7, 3:00-4:30 pm, 409B-B65
Co-chairs: Adam Mamelak, Michele Tagliati
1. DBS for Parkinson's Disease
Echo Tan, Clinical Movement Disorder Fellow, Cedars-Sinai Medical Center
2. DBS for Other Movement Disorders
Michele Tagliati, Director, Movement Disorders Program, Cedars-Sinai Medical Center
3. DBS for Secondary Dystonia - Defining the Problem, Managing the Expectation
Mark Liker, Assistant Professor, Department of Neurosurgery; Director, USC DBS Program, Keck Medical Center of University of Southern California
4. Human Neurphysiology Research: What's Practical, What's Ethical, and What's Important
Adam Mamelak, Director, Functional Neurosurgery Program, Neurosurgery,Co-Director, Pituitary Center, Cedars-Sinai Medical Center
5. Deep Brain Stimulation for Vocal Tremor
Casey Halpern, Assistant Professor of Neurosurgery and, by courtesy, of Neurology and Neurological Sciences and Psychiatry and Behavioral Sciences Stanford University Medical Center

Radiation Physics Technology, Saturday 7, 3:00-4:30 pm, 403 A&B-B66
Co-chairs: Anatoly Rozenfield, Shouleh Nikzad
1. New Development in Semiconductor Dosimetry on Small Radiation Beams for SRS
Anatoly Rozenfeld, Director, Centre for Medical Radiation Physics, University of Wollongong, Australia

2. Proton CT imaging for Improved Dose Accuracy in Stereotactic Particle Radiation Therapy
George Coutrakon, Professor Northern Illinois Proton Treatment and Research Center, Northern Illinois University, USA (Joint Talk with LLUMC)

3. Status of Proton Radiography Technology in Reducing Patient Specific Range Uncertainties
Joao Seco, Assistant Professor of Radiation Oncology, MGH, Harvard Medical School, Boston, US

4. Radiation Detectors for QA in Synchrotron Microbeam Radiosurgery
Michael Lerch, Associate Professor, Centre for Medical Radiation Physics, University of Wollongong, Australia

5. Silicon Detectors For Low Energy Ionizing Radiation Detection
Timothy Goodsall, Astrophysicist and Advanced Detectors and Systems Engineer, Jet Propulsion Laboratory, California Institute of Technology

DAY 3:
Sunday, March 8th, 2015,
12th Annual Congress

KEYNOTE SPEAKER #8:
Douglas L. Davis

DAY 3 - Keynote 8: Douglas L. Davis
8:30-9:00 am;Room 403 A&B
Vice President of Intel
Benefits of Research in the Assistive Space

Doug Davis is senior vice president and general manager of the Internet of Things (IoT) Group at Intel Corporation. In this role, Davis leads a worldwide organization responsible for Intel Architecture computing solutions consisting of hardware, software and services across market segments including industrial automation, retail, aerospace, automotive and other intelligent systems applications.

Davis started his career at Intel as a product engineer in the Military Division and subsequently went on to manage product engineering, manufacturing and operations for the group. Following that, he became the operations manager and later general manager for the Embedded Microcomputer Division, and general manager of the Network Processor Division. He became a business unit vice president in 2003. In 2004, he assumed the general manager role of the Infrastructure Processor Division, which formed from the consolidation of all of Intel's embedded processor efforts. In 2005, Davis became the general manager of the Embedded and Communications Group where he was instrumental in establishing Intel's position in embedded market segments such as communications, automotive, retail and industrial control. In 2010, Davis became the general manager for the Netbook and Tablet Group responsible for the platform planning, architecture, enabling and marketing of Intel's solutions for the netbook and tablet market segments. He became the general manager of Arizona Fab/Sort Manufacturing in 2012 where he was responsible for all aspects of the Arizona wafer factory operations.

Davis graduated from New Mexico State University in 1983 with a bachelor's degree in Electrical Engineering. He earned his master's degree in business administration from Arizona State University in 1992.

KEYNOTE SPEAKER #9:
Jaimie Henderson

DAY 3 - Keynote Keynote 9:
Jaimie Henderson
9:00 am- 9:30 am;Room 403 A&B
Brain-Computer Interfaces for Restoration of Motor Function

Jaime Henderson is currently the John and Jene Blume-Robert and Ruth Halperin Professor and Professor, by courtesy, of Neurology at the Stanford University Medical Center. Dr. Henderson is also the Director of Stereotactic and Functional Neurosurgery. He received his Bachelors of Arts from Washington University in St. Louis, and continued to receive his medical degree at Rush Medical College, where he also later completed his internship.

His research interests encompass several areas of stereotactic and functional neurosurgery, including frameless stereotactic approaches for therapy delivery to deep brain nuclei; deformable patient-specific atlases for targeting brain structures; cortical physiology and its relationship to normal and pathological movement; neural prostheses; and the development of novel neuromodulatory techniques for the treatment of movement disorders, pain, and other neurological diseases.

Besides his remarkable research interests, he has taught 5 independent studies course and has a host of impressive publications.

KEYNOTE SPEAKER #10: *Albert "Skip" Rizzo*

DAY 3 - Lunch Time Keynote 10: Albert "Skip" Rizzo
12:00-12:30 pm;
Medical Virtual Reality Lab- Institute for Creative Technologies
Research Professor- Dept. of Psychiatry and School of Gerentology University of Southern California

Psychologist Skip Rizzo conducts research on the design, development and evaluation of virtual reality (VR) systems targeting the areas of clinical assessment, treatment rehabilitation and resilience. His work spans the domains of psychological, cognitive and motor functioning in both healthy and clinical populations.

Rizzo, whose work using virtual reality-based exposure therapy to treat PTSD received the American Psychological Association's 2010 Award for Outstanding Contributions to the Treatment of Trauma, is the associate director for medical virtual reality at the USC Institute for Creative Technologies. He also holds research professor appointments with the USC Department of Psychiatry and Behavioral Sciences and at the USC Davis School of Gerontology. Rizzo is working with a team that is creating artificially intelligent virtual patients that clinicians can use to practice skills required for challenging clinical interviews and diagnostic assessments. His cognitive work has addressed the use of VR applications to test and train attention, memory, visuospatial abilities and executive function. In the motor domain, he has developed VR game systems to address physical rehabilitation post stroke and traumatic brain injury and for prosthetic use training. He is currently designing VR scenarios to address social and vocational interaction in persons with autistic spectrum disorder. Rizzo is currently examining the use of VR applications for training emotional coping skills with the aim of preparing service members for the stresses of combat. He is senior editor of the MIT Press journal, Presence: Teleoperators and Virtual Environments. He also sits on a number of editorial boards for journals in the areas of cognition and computer technology (Cognitive Technology; Journal of Computer Animation and Virtual Worlds; Media Psychology) and is the creator of the Virtual Reality Mental Health Email Listserve (VRPSYCH).

Sunday, March 8th, 2015,
12th Annual Congress

8:30 am-9:00 am- Keynote 8: Douglas L. Davis; Room 403 A&B
Vice President of Intel
Benefits of Research in the Assistive Space

9:00 am- 9:30 am- Keynote 9: Jaimie Henderson; Room 403 A&B
Brain-Computer Interfaces for Restoration of Motor Function
John and Jene Blume—Robert and Ruth Halperin Professor, Department of Neurosurgery, Professor of Neurology and Neurological Sciences, by Courtesy Director, Stereotactic and Functional Neurosurgery, Co-Director, Neural Prosthetics Translational Laboratory, Stanford University School of Medicine

SBMT Committee Meeting – Sunday 8, 10:00-11:30 am 402A-B70

Image Guided Therapy of the Spine - Sunday 8, 10:00-11:30 am 402B-B104
Co-Chairs: Doniel Drazin, J. Patrick Johnson
1. Neuronavigation for Spine Surgery
Atman Desai, Neuronavigation in Spinal Surgery, Clinical Assistant Professor, Stanford University
2. Pearls and Pitfalls of Image Guided Spine Surgery
J. Patrick Johnson, Department of Neurosurgery,Cedars Sinai Spine Center Los Angeles, CA; Professor of Neurosurgery, UC Davis Medical Center, Sacramento Patrick.
3. TBA
Joe Hsieh
4. Spinal Navigation in Scoliosis and Cervical Surgery
Terrence Kim, Orthopaedic Spine Surgeon, Cedars-Sinai Medical Center
5. Dynamic MRI for Spinal Pathology
Jeffrey Wang, Chief, Orthopaedic Spine Service, Co-director, USC Spine Center, Professor of Orthopaedic Surgery and Neurosurgery

SBMT Committee Meeting - Sunday 8, 10:00-11:30 am 404A-B67

DARPA - Sunday 8, 10:00-11:30 am 404B-B73
Chair: Geoffrey Ling
1. DARPA Neuroscience
Geoffrey Ling, Office Director, Biological Technology Office
2. A Cognitive Prosthesis
Theodore W. Berger, Professor, Biomedical Engineering, Viterbi School of Engineering

3. Next Generation of Neural Interfaces
Satinderpall S. Pannu, Director of Center for Bioengineering, Lawrence Livermore National Laboratory
4. UCLA Program in Restoring Active Memory
Dejan Markovic, Professor, University of California, Los Angeles

NeuroPhotonics 3 - Sunday 8, 10:00-11:30 am 405-B71
Co-chairs: Babak Kateb, Vassilly Tsytsarev
1. Gradient-index (GRIN) Optics in Combination with Voltage-Sensitive Dye Imaging for In Vivo Monitoring of the Neural Activity in the Brain
Vassiliy Tsytsarev, Department of Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD
2. In Search of the Fast Optical Signal Detection by Means of Optical Gating
Carlos Trevino-Palacios, Investigator, Instituto Nacional de Astrofisica, Optica y Electronica (INAOE), Mexico
3. Transcranial Optical Vascular Imaging and functional blood vessels mapping
Vyacheslav Kalchenko, Head of In Vivo Optical Imaging Unit, Staff Scientist at Weizmann Institute of Science
4. Visualizing the Activity and Anatomy of Brain Circuits: Optogenetic Sensors and Tissue Clearing Approaches
Viviana Gradinaru, Assistant Professor of Biology, California Institute of Technology
5. Applying Functional & Blood Flow Imaging to Reveal Mechanisms Underlying Complete Protection from Impending Ischemic Stroke by Sensory Stimulation
Ron Frostig, Professor, Neurobiology and Behavior, School of Biological Sciences, University of California, Irvine

Existing and Future Consortia in Brain Tumor Research and Treatment - Sunday 8, 10:00-11:30 am 406A-B72
Co-Chairs: Reinhard Schulte, Steve Goetsch
1. Comparative Effectiveness Research for Adult & Pediatric Brain Tumors: The PCORI Perspective
Steven Clauser, PCORI Staff, Program Director, Improving Healthcare Systems
2. New Therapeutic Approaches to Adult Brain Tumors: The ECOG-ACRIN Perspective
Lawrence R. Kleinberg, Associate Professor of Radiation Oncology and Molecular Radiation Sciences, Associate Professor of Neurological Surgery, Associate Professor of Oncology, Johns Hopkins Medicine
3. Clinical Trials for Adult Brain Tumors: The Imaging Perspective
Whitney B. Pope, Assistant Professor, Radiology, Diagnostic Neuroradiology, JCCC Cancer Molecular Imaging, David Geffen School of Medicine, University of California, Los Angeles
4. The Future of Charged Particle Trials for Adult & Pediatric Brain Tumors: The NCI Perspective
Bhadrasain Vikram, Branch Chief, Radiation Research Program, National Cancer Institute
5. NAPTA: Optimizing Clinical Trial Design & Delivery of Particle Therapy for Cancer
Reinhard Schulte, Professor, Basic Sciences at Loma Linda

Round Panel Discussion: Innovative Trial Concepts for Brain Tumors

Imaging Dementia: Ocular Changes in Alzheimer's Disease - Sunday 8, 10:00-11:30 am 406B- B74
Co-Chairs: Maya Koronyo-Hamaoui, Alfredo Sadun

1. Circadian Rhythm Dysfunction and Alzheimer's: The Anatomical Substrate
Alfredo A. Sadun, Flora L. Thornton Endowed Chair, Professor of Ophthalmology and Neurological Surgery, Neuro-ophthalmology, Vision & Optic Neuropathies Expert, Doheny Eye Center, University of California, Los Angeles, Pasadena

2. Retinal Cell Loss in Patients with Alzheimer's Disease
David R. Hinton, Gavin S. Herbert Professor of Retinal Research Professor of Pathology, Neurological Surgery and Ophthalmology, Department of Pathology, Keck School of Medicine of USC

3. The Importance of a Mind-Eye Connection in Alzheimer's Disease
Deborah Zelinsky, Behavioral Optometrist, The Mind-Eye Connection, Northbrook, IL, USA

4. Retinal Examination with OCT and FAF in AD
Umur Kayabasi, Neuro-ophthalmologist, World Eye Hospital, Istanbul, Turkey

5. Alzheimer's Disease: Selective Vulnerability and Neuronal Connectivity
Carol A. Miller, Professor, Departments of Pathology and Neurology, Co-Director of Alzheimer's Disease Research Center, Director of Neuropathology Core, Chief, Neuropathology, Los Angeles County, University of Southern California Medical Center

Oral Poster - Sunday 8, 10:00-11:30 am 407-B13
Co-Chairs: Jessica Rose, John Adler

SPECT & PET: Diagnostic Dilemmas & Innovative Topics - Sunday 8, 10:00-11:30 am 407-B75
Co-Chairs: Daniel G. Amen, Theodore Henderson

1. SPECT in the Diagnosis of Dementia
Theodore Henderson, Child, Adolescent and Adult Psychiatry Clinic

2. Neuroimaging in a Legal Setting
Joseph Wu, Associate Professor in Residence, Psychiatry & Human Behavior, University of California, Irvine, School of Medicine, Acting Director, Brain Imaging Center

3. Molecular Neuroimaging & Spirituality
Andrew Newberg, Professor and Director of Research Myrna Brind Center of Integrative Medicine, Thomas Jefferson University and Hospital

4. How PET Can Predict Treatment Response in Dementia
Daniel H. Silverman, Professor, Molecular & Medical Pharmacology; Member, Brain Research Institute, JCCC Cancer Molecular Imaging, Molecular Pharmacology GPB Home Area, Neuroscience GPB Home Area, Physics & Biology in Medicine GPB Home Area, Santa Monica Nuclear Medicine Services

5. A Research Path to Clinical Practice for Molecular Neuroimaging
Daniel Amen, CEO: Amen Clinics, Inc

Multimodality Diagnostics & Therapeutics for Brain Cancer - Sunday 8, 10:00-11:30 am 409A-B76
Co-Chairs: Gordon Li , Ray Chu

1. Immunotherapy for Brain Tumors
Michael Lim, Associate Professor Department of Neurosurgery, Johns Hopkins

2. The Use of Nottins for the Visualization and Treatment of Brain Tumors
Melanie Hayden Gephart, Assistant Professor Department of Neurosurgery, Stanford University School of Medicine

3. The Use of Focused Ultrasound in the Treatment of Brain Tumors
Kim Butts Pauly, Professor, Department of Radiology, Stanford University School of Medicine

4. CK2 and Medulloblastoma
Teresa S. Puzner, Post Doctoral Fellow, Stanford School of Medicine

5. Targeting CD47 for the Treatment of Brain Tumors
Sam Cheshier, Assistant Professor Department of Neurosurgery, Stanford University School of Medicine

Microgravity - Sunday 8, 10:00-11:30 am 409B-B77
Chair: Ioana Cozmuta

1. Microgravity- a Novel Environment for Innovation in Medical Sciences
Ioana Cozmuta, Microgravity Lead, Space Portal, NASA Ames Research Center

2. Roles of Anti-Gravitational Activity-Related Afferent Input in the Regulation of Central Nervous System
Yoshinobu Ohira, Distinguished Visiting Professor, Faculty & Graduate School of Health & Sports Science, Doshisha University

3. Space Flight and Concordia Station as Extreme Environments to Study Stress and Plasticity in Mammalian Brain
Daniela Santucci, Section of Behavioural Neurosciences, Department of Cell Biology and Neurosciences, Instituto Superiore di Sanita, Rome, Italy

4. Novel 3D MicroTumor Biology Models for Microgravity/Space Research
Raj Singh, CEO, Vivo Biosciences, Birmingham

5. Attempts to Crystallize Huntingtin Protein in Microgravity
Gwen Owens, Howard Hughes Medical Institute, California Institute of Technology

11:30 am- Lunch Time

12:00- 12:30 pm: Lunch Time Keynote: Keynote 10: Albert "Skip" Rizzo Director, Medical Virtual Reality Lab- Institute for Creative TechnologiesResearch Professor- Dept. of Psychiatry and School of GerentologyUniversity of Southern California
The Ultimate Skinner Box: Virtual Reality as a Tool for Understanding and Treating Brain and Behavior

Neuro-Ophthalmology: What the Eye Can Teach Us About the Brain - Sunday 8, 1:00-2:30 pm 402A-B85
Co-Chairs: Rustum Karanjia, Alfredo Sadun
1. Retina and Trauma
Guy Jirawuthiworavong, American Society of Retina Specialists
2. The Orbit and Trauma
Madhu Agarwal, California Orbital Consultants
3. The Future of Football
Anne Kao, Ophthalmologist, Doheny Eye Center, University of California, Los Angeles
4. Children and Trauma
Chantal Boisvert, Ophthalmologist, Rady Children's Hospital San Diego
5. Aging, the Eye and the Brain
Maya Koronyo, Research Scientist, Maxine Dunitz Neurosurgical Institute, Principal Investigator and Assistant Professor, Department of Neurosurgery, Cedars-Sinai Medical Center

Oral Poster - Sunday 8, 1:00-2:30 pm 402B-B46
Co-Chairs: Jessica Rose, John Adler
1. CO and CO2 Analysis in the Diving Gas of the Fishermen of the Yucatán Peninsula
Walter Chin, BSN, ADMT, CHT, Program Director, Hyperbaric Medicine, University of California, Los Angeles
2. Morphological Analysis of T2 Hyperintensity Lesions in Patients with Mild Traumatic Brain Injury
Savanna Green, Student Researcher, Franklin & Marshall College
3. Efficacy of the U.S. Navy Treatment Tables in Treating DCS in 103 Cases
Walter Chin, BSN, ADMT, CHT, Program Director, Hyperbaric Medicine, University of California, Los Angeles
4. Imaging of Fast Biological Phenomena by Sub-millisecond Fluorescence Microscopy
Najva Akbari, Researcher, Electrical Engineering, University of California, Los Angeles
5. The Use of Pulsed Electromagnetic Fields (PEMF) to Enhance the Uptake of Anti-Neoplastic Agents
Yujun Wang, Researcher, Neurosciences, City of Hope Medical Center, Beckman Research Institute *No PowerPoint presentation

Peripheral Nerve - Sunday 8, 1:00-2:30 pm 404A-B80
Co-Chairs: Mark Stecker, Aaron Filler
1. Peripheral Nerve Metabolic Substrates
Mark Stecker, Neurology, Winthrop Neuroscience Medical
2. Identifying Pain Generator Sites in Diabetes
Nigel Calcutt, Professor, UC San Diego, School of Medicine
3. Visualizing Diabetic Peripheral Neuropathy: The Eyes as the Window to the Soul
Nigel Calcutt, Professor, UC San Diego, School of Medicine
4. Effects of Hyperglycemia on the Peripheral Nerve
Mark Stecker, Neurology, Winthrop Neuroscience Medical

Stem Cell - Sunday 8, 1:00-2:30 pm 404B-B103
Co-Chairs: Kuldip Sidhu, Rasul Chaudhry

1. Therapeutic Potential of Stem Cells for Treatment of Neural Diseases
Christina McKee, Graduate Student, Oakland University

2. Characterization of Mesenchymal Stem Cells from Human Umbilical Cord
Naimisha Beeravolu, Oakland University

3. TBA
Tiffany Bellaomo, Oakland University

4. A Microcapsule 3D Platform for Efficient Propagation and Differentiation of Human Embryonic Stem Cells to Dopaminergic (DA) Neurons
Kuldip Sidhu, 11th President, SBMT; Associate Professor, Stem Cell Research, University of New South Wales

Personalized Brain Therapeutics - Sunday 8, 1:00-2:30 pm 405-B17
Co-Chairs: Uttam Sinha, Frank Boehm

1. Rethinking of Head and Neck Cancer in the Era of Quantum Biology
Uttam Sinha, Medical Director of Head and Neck Surgery, Associate Dean of Surgical Simulation, Watt Family Chair in Head and Neck Cancer Research

2. The Patient as the CEO of the Healthcare Team
Robin Farmanfarmian, Co-Founder and Chief Business Development Officer for MorFitt, Senior Vice President of Business Development for Arc, Executive Director for the Organ Preservation Alliance

3. Next Generation Neuro-Technologies
Richard Satava, Professor, Surgery, University of Washington Medical Center

4. Cognitive Enhancement: Philosophical Implications of Contemporary Neural Nanoscience Advances
Melanie Swan, Founder of Institute for Blockchain Studies, Kingston University London

5. Life Style Modification and Epigenetics
Uttam Sinha, Medical Director of Head and Neck Surgery, Associate Dean of Surgical Simulation, Watt Family Chair in Head and Neck Cancer Research

Deep Brain Stimulation Connectomics - Sunday 8, 1:00-2:30 pm 406A-B83
Co-Chairs: Casey Halpern, Ejaz Shamim

1. DTI for Area 25 Localization
Nolan Williams, Chief Resident, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina

2. DBS for Vocal & Essential Tremor, Mapping the Thalamus
Casey Halpern, Assistant Professor of Neurosurgery & Neurology, Neurological Sciences and Psychiatry and Behavioral Sciences Stanford University Medical Center

3. The Ubiquity of Cortical Spreading Depolarization in Neurologic Injury
Dan Kramer, Resident, Keck School of Medicine of University of Southern California

4. Focused Ultrasonography
Pejman Ghanouni, Assistant Professor of Radiology at the Stanford University School of Medicine

5. What TMS and MER Can Tell Us About Motor Control
Robert Chen, Senior Scientist, Toronto Western Research Institute, University Health Network

Imaging Dementia: Alzheimer's Disease Therapeutics - Sunday 8, 1:00-2:30 pm 406B-B82
Chair: J. Wesson Ashford
1. The Next Directions for Alzheimer Treatment and Prevention
J. Wesson Ashford, Clinical Professor, Psychiatry and Behavioral Sciences, Stanford University
2. Effects of Possible Alzheimer Therapeutic Agents on the Brain
Ahmad Salehi, Clinical Professor, Stanford Medical School, Psychiatry Department/ Veterans affairs Palo Alto
3. Methylene Blue Inhibits Tau Phosphorylation: Implication for Alzheimer's Disease Treatment
Jayakumar Rajadas, Director, BIOADD and Assistant Director of CV Pharmacology, Service Center
4. Latest Evidence of Micronutrients and Dementia
Dean Sherzai, Director of Alzheimer's Prevention Program, Cedars Sinai Health System

New Horizons 3 - Sunday 8, 1:00-2:30 pm 407-B110
Chair: Shouleh Nikzad
1. Portable Microfluidic "Sample-In-Answer-Out" Instruments for Point of Care Diagnostics
Peter Willis, Senior Member of Engineering Staff, Jet Propulsion Laboratory, California Institute of Technology
2. Wide-field through-microscope hyperspectral imaging of a brain tumor during neurosurgery
Yoann Gosselin, Applications Engineer, Nüvü Caméras Inc
3. Surgery Without a Knife
Reza Shirazi, Board of Directors at Genesis Healthcare Partners, Chair American Cancer Society
4. Emerging Applications of Synchrotron Radiation in Neuroscience
Pantaleo Rommanelli, Professor of Biomedical Technology, Scientific Director, AB Medica, Milano, Italy; Consultant and Scientific Director, Brain Radiosurgery, Cyberknife
5. Long-term Effects of Microbeam Irradiation on Hippocampal Neurogenesis
Giuseppe Battaglia, Laboratory of Neuropharmacology, Department of Neuroscience, I.R.C.C.S. Neuromed

Oral Poster- Sunday 8, 1:00-2:30 pm 409A-B24

NeuroOncology - Sunday 8, 1:00-2:30 pm 409B- B87
Co-Chairs: Mike Chen
1. GABA-ergic Properties of Breast-to-Brain Metastases
Cecilia Choy, Pre-Doctoral candidate, City of Hope National Medical Center
2. Intracerebral Microdialysis: A Valuable Tool for Early Development of Chemotherapy to Treat Brain Tumors
Jana Portnow, Associate professor, City of Hope National Medical Center
3. Neuroendoscopy to Facilitate Ommaya Reservoir Placement and Intraoperative Intrathecal Delivery
Ray Chu, Neurosurgeon, Brain Tumor Center, Cedars-Sinai Medical Center

4. Changing Role of Imaging in Neuro-oncology
Susan Chang, Professor in Residence and Vice Chair of Neurological Surgery, Lai Wan Kan Endowed Chair, Director, Division of Neuro-Oncology, University of California, San Francisco
5. Crowdsourcing Brain Tumor Treatment: Is There a Needle in the Haystack?
Jethro Hu, Faculty, Departments of Neurology and Neurosurgery, Cedars-Sinai Medical Center

Biomechanics and Bioactive Nanostructured Materials for Brain Research - Sunday 8, 1:00-2:30 pm 403A&B- B88
Chair: Jean Paul Allain
1. Biomaterials for Regenerative Therapies in the Brain
Elisabeth Engel, Junior Group Leader, Institute for Bioengineering of Catalonia
2. Advanced Resorbable Materials for Neuroendovascular Therapeutics
Lia Stanciu, Associate Professor of Materials Engineering, Purdue University
3. Advanced Surface Modification for Tissue Engineering in the Brain
Juan Jose Pavon, Professor, Coordinator of Biomaterials and Biomechanics, Universidad De Antioquia
4. Nanobiomechanics in Advanced Nanocellulose Materials for Brain Therapeutics
Akshath Shetty, Postdoctoral Research Associate, Radiation Surface Sciences and Engineering Lab at the University of Illinois at Urbana–Champaign
5. Biomechanics and Imaging in TBI
Eric Nauman, Director, Professor, School of Mechanical Engineering, Weldon School of Biomedical Engineering, Department of Basic Medical Sciences, Purdue University

Neuro-Ophthalmology: Trauma and Neuro-Ophthalmology - Sunday 8, 3:00-4:30 pm 402A-B96
Chair: Alfredo Sadun
1. The Eye as a Window to the Brain
Lynn Gordon, Associate Dean, Academic Diversity, David Geffen School of Medicine, University of California, Los Angeles
2. Neuro-Ophthalmology TraumaAnthony
Arnold, Ophthalmology, Neuro-ophthalmology, University of California, Los Angeles
3. Challenges of Testing on the Sidelines
Gene Yu, Jules Stein Eye Institute
4. Sport and the Visual System: Innovations in Diagnosis, Monitoring and Training
Syed Khizer Khaderi, Assistant Professor of Clinical Ophthalmology, University of California, Davis
5. Testing the Eye in TBIBrian Robinson

Neuro-vascular Imaging in Stroke and Dementia - Sunday 8, 3:00-4:30 pm- 402B-B81
Co-Chairs: Danny J.J. Wang, Debiao Li
1. Intracranial Vessel Wall MR Registry
Qi Yang, PhD, Biomedical Imaging Research Institute at Cedars Sinai Medical Center
2. Intracranial Vascular Compliance and Perfusion Intracranial Vascular Compliance and Perfusion
Danny J.J. Wang, Associate Professor, Department of Neurology, University of California, Los Angeles

3. Stroke Neuroimaging
David Lieberskind, Professor of Neurology, Director, Neurovascular Imaging Research Core, Director, Outpatient Stroke and Neurovascular Programs, Director, UCLA Cerebral Blood Flow Laboratory, Director, UCLA Vascular Neurology Residency Program, Associate Neurology Director, UCLA Stroke Center
4. Quantification of Revascularization in Acute Ischemic Stroke
Fabien Scalzo, Assistant Professor, Neurovascular Imaging Research Core, Department of Neurology at UCLA
5. Assessment of Cerebrovascular and Molecular Changes in Cognitive Dysfunction using PET
Dan Silverman, Assistant Professor, Neurovascular Imaging Research Core, Department of Neurology at UCLA, Head, Neuronuclear Imaging Section, Ahmanson Translational Imaging Division, Professor, Department of Molecular and Medical Pharmacology, Executive Committee, UCLA Alzheimer's Disease Research Center, David Geffen School of Medicine, University of California, Los Angeles

Focused Ultrasound - Sunday 8, 3:00-4:30 pm 404A-B32
Co-Chairs: Pantaleo Romanelli, Alessandro Napoli
1. MRGFUS : A Technological Overview
Eyal Zadicario, VP Research and Developmenst and Neuroprograms,Insightec, Mount Carmel,Israel
2. Clinical Applications of MRGFUS
Alessandro Napoli, Assistant Professor,Department of Radiology, University Sapienza of Rome,Rome,Italy
3. Introducing 1,5 T MRGFUS
Cesare Gagliardo, Assistant Professor,Department of Radiology,University of Palermo,Palermo,Italy

Cancer Stem Cell - Sunday 8, 3:00-4:30 pm 404B-B92
Chair: Vicky Yamamoto, Yanhong Shi
1. Targeting Glioblastoma Stem Cells Through TLX Signaling
Yanhong Shi, Professor, Neurosciences, City of Hope
2. Targeting Cancers with Small Molecule Inhibitors
Vicky Yamamoto, Cancer Scientist, Department of Otolaryngology/ Head and Neck Surgery, Keck School of Medicine of USC
3. Glioma Stemness as a Moving Therapeutic Target
Ichiro Nakano, Associate Professor, The Ohio State University
4. Semaphorin 3C Mediates Glioma Stem Cell Tumorgenicity
Jennifer Yu, Associate Staff Dept. of Radiation Oncology Dept. of Stem Cell Biology Cleveland Clinic
5. Transcription Factor Deletions in Glioblastomas
Lincoln Edwards, Project Scientist, Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA

Oral Poster - Sunday 8, 3:00-4:30 pm 405-B15
Co-Chairs: Frank Boehm, John Yu
1. Neuregulin-Targeted Nanobiologic Exhibits Tumor-homing and Potential for Targeting Brain Metastases
Lali Medina-Kauwe, Research Scientist, Biomedical Sciences, Cedars-Sinai Health Sciences

2. Rapid and Label-Free Detection of DNA and Signaling Proteins.
Andrea Armani, Associate Professor of Chemical Engineering and Materials Science, Electrical Engineering-Electrophysics, Biomedical Engineering, Chemistry, USC
3. Does Skull Thickening Have Any Effect on the Association Between Cognition and Brain Atrophy in Community Dwelling Older Adults?
Benjamin Aribisala, Professor of Computer Science, Computer Science Department, Faculty of Science, Lagos State University, Lagos, Nigeria; Honorary Fellow Centre for Clinical Brain Sciences (CCBS), Neuroimaging Sciences, The University of Edinburgh, Young Investigator Award Nominee

Aerospace Neurosciences - Sunday 8, 3:00-4:30 pm 406A-B94
Chair: Michael E. Wolf
1. Higher Landing Accuracy in Expert Pilots is Associated with Lower Activity in the Caudate Nucleus
Maheen Adamson, Clinical Associate Professor, Psychiatry & Behavioral Sciences, Stanford University School of Medicine, Stanford, CA; Director Research & PhD Fellowships, War Related Illness and Injury Study Center (WRIISC), Veteran's Affairs Palo Alto, CA
2. HBOT Treatment and Risk Assessment for Altitude-Induced Decompression Sickness
Walter Chin, BSN, ADMT, CHT, Program Director, Hyperbaric Medicine, University of California, Los Angeles
3. Neurologic Decompression Injuries in Aerospace: Science Update
Michael E. Wolf, President, NeuroCite, LLC
4. Non-Invasive Measurement of Oxidative Stress Due to HBO Exposure Through the Lens
Rafat Ansari, NASA Glenn Research Center

Panel Discussion

Oral Poster - Sunday 8, 3:00-4:30 pm 406B-B93

Brain Bionics - Sunday 8, 3:00-4:30 pm 407-B95
Co-Chairs: Shouleh Nikzad, Geoffrey Ling
1. Intraocular Camera for Retinal Prostheses (Monocular Depth Perception is Possible Even in the Low Resolution Limit)
Armand Tanguay, Jr., Professor Electrical Engineering, BioMedical Engineering, USC
2. Curved Imaging Arrays Inspired by Human Eye
Sam Cheng, Advance Imaging Arrays Engineer, Jet Propulsion Laboratory, California Institute of Technology
3. Future Directions for Adaptive Intraocular Epiretinal Prostheses
Azita Emami, Professor, Electrical Engineering, Medical Engineering, California Institute of Technology
4. UCLA Program in Restoring Active Memory
Dejan Markovic, Professor, University of California, Los Angeles, Electrical Engineering Department
5. Neuroprostheses: Cognitive Neural Prosthesis for Restoring & Enhancing Memory Function
Ted Berger, David Packard Chair of Engineering, Director, Center for Neural Engineering

Nutrition, Metabolites & Mental Health - Sunday 8, 3:00-4:30 pm 409A-B97
Co-Chairs: Babek Kateb, Pia Winberg

1. Baseline omega-3 Index Correlates with Aggressive and Attention Deficit Disorder Behaviours in Adult Prisoner
Pia Winberg, School of Medicine and 2Illawarra Heath and Medical Research Institute, University of Wollongong, Wollongong, NSW, Australia

2. Reduction in Delinquency and Aggression Among Children, an RCT of omega-3 Fatty Acids
Joseph Hibbeln, LMBB, NIAAA, NIH

3. Maternal Docosahexaenoic Acid, Which is Vital for Neurodevelopment, is Mobilised prior to 28 days of Gestation: a Prospective, Observational Study of Human Pregnancy
BJ Meyer, School of Medicine and 2Illawarra Heath and Medical Research Institute, University of Wollongong, Wollongong, NSW, Australia

4. Current Evidence and Future Directions for Research with Omega-3 fatty Acids and Attention Deficit Hyperactivity Disorder
Rachel Gow, Senior Research Fellow, University of South Australia

5. Latest Evidence of Micronutrients and Dementia
Dean Sherzai, Director, Alzheimer's Disease Prevention Program, Cedars-Sinai Medical Center

Minimally Invasive Therapy - Sunday 8, 3:00-4:30 pm 409B-B98
Chair: Gabrial Zada

1. Technological Advancements in Endoscopic Surgery
Bjorn Lobo, Fellow, Neurosurgery, St. John's Health Center

2. Complications Related to Minimally Invasive Surgery
Garni Barkhoudarian, Assistant Professor of Neurosurgery and Neuroscience at the John Wayne Cancer Institute, Saint John's Health Center

3. ETV and Simulation Models for Neuro-endoscopy
Eisha Christian, Resident, Keck School of Medicine of USC

4. Minimally Invasive Endoscopic Neurosurgery: An Overview of Applications
Gabriel Zada, Assistant Clinical Professor of Neurosurgery; Co-Director, Keck USC Pituitary Center; Director of the Keck USC Endoscopic Skull Base Surgery Program

Materials Science and Engineering in Brain Mapping and Therapeutics - Sunday 8, 3:00-4:30 403 A&B-B99
Chair: Jean Paul Allain

1. New Advances in Functional MR Imaging of the Lungs and Brain Using Inert Gases
Mitch Albert, Research Chair and Professor, Department of Chemistry, Adjunct Professor, Department of Physics, Adjunct Professor, Biotechnology Program, Lakehead University, Thunder Bay, ON, Director of MRI Research Program

2. X-ray Fluorescence Emission Tomography (XFET) for Potential Brain Imaging and Therapeutic Applications
Ling Jian Meng, Associate Professor, Department of Bioengineering, Illinois

3. Designing of a Composite Based on Magnetic Bacterial Nanocellulose Hydrogel for a Fast and Localized Aneurysmal Sac Occlusion

Sandra Arias, PhD Student, Radiation Surface Science and Engineering Lab, Illinois

4. Advanced Nanomaterials for Brain Research

Julia Greer, Professor of Materials Science and Mechanics, California Institute of Technology

Round Table

AWARDS

Beacon of Courage and Dedication Award

The Beacon of Courage and Dedication Award is presented to individuals who have demonstrated extraordinary courage and dedication for increasing awareness about neurological diseases, and for patients and their families who have exceeded expectations in fighting a neurological disorder with unprecedented courage. The Beacon Award identifies remarkable individuals who set the highest standards for increasing awareness of, and fighting, neurological diseases.

2015 Award Recipient: Professor Stephen Hawking

Past Award Recipients:

2014 - Sharn McNeill

2013 - Beth Nielsen Chapman, Brain Tumor Survivor, Singer/Songwriter

2011 - Drs. Minoru Freund, Gabrielle Giffords

2010 - The Honorable Tammy Duckworth

2009 - SGM Colin R. Rich and ABC News Anchor Bob Woodruff

2008 - Dustin Hoffman (Two time Oscar Winner)

2007 - Dr. Behnam Badie

2005 - Dr. Soraya Khalilian

2004 - Dr. Jennifer Neale

Pioneer in Medicine Award

The Pioneer in Medicine Award is presented to individuals who have significantly contributed to the scientific advancement in the fields of medicine and image guided therapy through a multidisciplinary approach. Their groundbreaking contributions have made development of state-of-the-art technology and scientific discovery a reality.

2015 Nominees: Albert “Skip” Rizzo, Babak Kateb , Pantaleo Romanelli

Past Award Recipients:

2014 - Professor Kuldip, 11th President, SBMT; Associate Professor, Stem Cell Research, University of New South Wales

2013 - Drs. Maya Koronyo-Hamaoui, Yosef Koronyo, Robert H. Kraus Jr, Margie L. Homer, Shouleh Nikzad, Rafat Ansari, Wieslaw L. Nowinski

2012 - Drs. Andres Lozano, Antonio DeSalles, George Paxinos

2011 - Patrick Soon Shiong

2010 - Drs. Andrew Schwartz, Jonathan Wolpaw and and John Donoghue

2009 - Drs. Peter Black and Keith L. Black

2008 - Dr. Ron Kikinis

2007 - Drs. Richard Frakowiack, Arthur W. Toga and John Mazziotta

2006 - Drs. Alim Louis Benabid and Warren Grundfest

2005 - Drs. Ferenc Jolesz and Ken Curley

2004 - Dr. Peter Gruen

Golden Axon Award

The Golden Axon Award is presented to individuals outside of the medical community who inspire with good will and an enthusiastic interest in science, technology and medicine. Named for the neuron cell fiber that carries outgoing messages to other target cells, the founding principle of the Axon Award is to recognize a highly regarded individual in the public sector who helps raise awareness and funding of SBMT and its mission in the community via fundraising event (s) and activities.

2015 Award Recipient: Tim Kring

Past Award Recipients:

2012 - Drs. Michael Chen , Michael Fehlings, Cheryl Rogers

2010 - Joel Ross (CEO/Cofounder ORLive), Peter Gailey (President/Cofounder ORLive)

Humanitarian Award

Humanitarian Award is given to physicians and scientists who have contributed significantly to survival and quality of life of patients across the Globe.

2015 Award Recipient: William S. Wood and Lenore Stein-Wood

Past Award Recipients:

2014 - Professor Charlie Teo

2013 - Ming Hsieh, Founder of Cogent Inc.

2012 - Geoffrey Ling

2011 - Drs. Henry Marsh and Rocco Armonda

Pioneer in Healthcare Policy Award

The Pioneer in Healthcare Policy Award is presented to lawmakers who have demonstrated visionary and cross-disciplinary approaches to introducing laws that have contributed to the advancement of science, technology, education, and medicine. They have paved the way to better integration of such advancements in other fields, like medicine and neuroscience. These lawmakers champion better healthcare for all.

2015 Award Recipient: Congresswoman Maxine Waters

Past Award Recipients:

2014 - Tony Abbott, Congressman Chaka Fattah

2013 - US President Barak Obama, US Representatives Cathy McMorris Rodgers, Earl Blumenauer, James Moran

2012 - Member of Parliament Kirsty Duncan

2010 - Senator vv Reid 2009 - Senator John Kerry

2008 - Governor Arnold Schwarzenegger

2007 - Madam Speaker Nancy Pelosi and Senator Edward Kennedy

2005 - Senator Barbara Boxer

Pioneer in Technology Award

The Pioneer in Technology Award is presented to the trail blazing companies and their CEOs/presidents who have facilitated the development of pioneering technologies through interdisciplinary approaches that have impacted diagnostics, treatment, and healthcare delivery in unprecedented ways.

2015 Award Recipient: Brian M. Krzanich, CEO of Intel

Past Award Recipients:

2013 - Eric M. Bailey, President, CEO, Founder, Neurologica Reese S. Terry Jr., Co-founder and former CEO of Cyberonics

2012 - Kevin Lobo, Group President, Orthopaedics Stryker Corporation

2009 - William A Hawkins, Chairman and CEO of Medtronic

2008 - Mark L. Vachon, GE Healthcare

2007 - Steve Rusckowski, Philips Healthcare

2006 - Carl O'Connell, CEO of Carl Zeiss Inc.

Professor Stephen Hawking

Stephen Hawking is the former Lucasian Professor of Mathematics at the University of Cambridge and author of A Brief History of Time which was an international bestseller. Now the Dennis Stanton Avery and Sally Tsui Wong-Avery Director of Research at the Department of Applied Mathematics and Theoretical Physics and Founder of the Centre for Theoretical Cosmology at Cambridge, his other books for the general reader include A Briefer History of Time, the essay collection Black Holes and Baby Universe and The Universe in a Nutshell.

In 1963, Hawking contracted motor neurone disease and was given two years to live. Yet he went on to Cambridge to become a brilliant researcher and Professorial Fellow at Gonville and Caius College. From 1979 to 2009 he held the post of Lucasian Professor at Cambridge, the chair held by Isaac Newton in 1663. Professor Hawking has over a dozen honorary degrees and was awarded the CBE in 1982. He is a fellow of the Royal Society and a Member of the US National Academy of Science. Stephen Hawking is regarded as one of the most brilliant theoretical physicists since Einstein.

Albert "Skip" Rizzo

Psychologist Skip Rizzo conducts research on the design, development and evaluation of virtual reality (VR) systems targeting the areas of clinical assessment, treatment rehabilitation and resilience. His work spans the domains of psychological, cognitive and motor functioning in both healthy and clinical populations.

Rizzo, whose work using virtual reality-based exposure therapy to treat PTSD received the American Psychological Association's 2010 Award for Outstanding Contributions to the Treatment of Trauma, is the associate director for medical virtual reality at the USC Institute for Creative Technologies. He also holds research professor appointments with the USC Department of Psychiatry and Behavioral Sciences and at the USC Davis School of Gerontology. Rizzo is working with a team that is creating artificially intelligent virtual patients that clinicians can use to practice skills required for challenging clinical interviews and diagnostic assessments. His cognitive work has addressed the use of VR applications to test and train attention, memory, visuospatial abilities and executive function. In the motor domain, he has developed VR game systems to address physical rehabilitation post stroke and traumatic brain injury and for prosthetic use training. He is currently designing VR scenarios to address social and vocational interaction in persons with autistic spectrum disorder. Rizzo is currently examining the use of VR applications for training emotional coping skills with the aim of preparing service members for the stresses of combat. He is senior editor of the MIT Press journal, Presence: Teleoperators and Virtual Environments. He also sits on a number of editorial boards for journals in the areas of cognition and computer technology (Cognitive Technology; Journal of Computer Animation and Virtual Worlds; Media Psychology) and is the creator of the Virtual Reality Mental Health Email Listserve (VRPSYCH).

Pantaleo Romanelli

Pantaleo Romanelli was born in Novi Velia (Italy) on September 28 1969 . Novi Velia is an ancient fortess founded by the Foceans , a greek people escaping from the conquest of Ionia by the Persian Shah(VI century BC). A highly reknown medical school was developed here by Parmenides , a famous philosopher and physician who travelled to Athens and was praised by Plato. The medical school of Elea continued in roman times having as patients famous romans like Aemilius Paulus,Cicero and the Emperor Augustus . At this tim the original greek name of the city(Elea) was changed by the Romans in Velia. After 800 year in Velia, the Medical School moved to Salerno under the Lombard Dukes and lasted here for another millennium , becoming the first known medical School of Europe practicing advanced surgery, including stones and cataract removal. From the late fifteenth century many Pantaleo Romanelli graduated from this school until it was closed and replaced by the University of Naples in the early nineteenth century. Pantaleo Romanelli received his Magna Cum Laude Medical Degree by the University of Naples on July 27 1994, discussing an experimental thesis on the neural networks connecting hippocampus and neocortex . During his pediatric neurology residency in Naples ,he developed an intense interest for the surgical treatment of epilepsy and movement disorders and moved to the US to become a functional neurosurgeon. After an intensive neurosurgical training at the Department of Neurosurgery of the New York University, he moved to Stanford where he completed a fellowship in Functional Neurosurgery . At this time Dr Romanelli received a special prize from the Stanford's Dean for his pioneering work on the body maps of the basal ganglia. At this time, Cyberknife radiosurgery was introduced at Stanford by Prof. John Adler , who acted as Dr Romanelli mentor during his further fellowship in Stereotactic Radiosurgery . After a brief period on faculty at Stanford, Dr Romanelli elected to go back to Europe and became instrumental in the diffusion of Cyberknife here while starting a novel research line at the European Synchrotron(ESRF) of Grenoble focusing on the development novel microradiosurgical techniques based on synchrotron-generated microbeams . Following an intense clinical activity in the fields of deep brain stimulation and Cyberknife radiosurgery working as the Chief of Functional Neurosurgery at the IRCCS Neuromed, a teaching hospital of the University Sapienza of Rome , Dr Romanelli moved to Milan as the Scientific Director of AB Medica to develop a novel wireless externally rechargeable Brain Computer Interface (BCI),called Cyberbrain. This fully implantable device allows chronic real-time fine monitoring and stimulation of the sensorimotor cortex , even across long-distances.

Dr Romanelli just received the rank of Professor of Biomedical Technologies through a national selection process in Italy. He has published a book on Clinical Neuroimaging (Mc Graw-Hill NY), 15 chapters on international books and more than 60 peer-reviewed papers , while presenting his work at over 300 international meetings.

Babak Kateb

Dr. Babak Kateb, Neuroscientist, Chairman of the Board of SBMT and President of Brain Mapping Foundation and one of the main architects of President Obama's BRAIN initiative at the East room of the White House prior to the announcement of BRAIN initiative by President Obama (April 2ed, 2013; courtesy of BRAIN MAPPING FOUNDATION)

Babak Kateb, MD is a neuroscientist with more than 15 years of research experience. His research has been focused on introduction of advance diagnostics and therapeutics into clinical neuroscience in order to rapidly identify and introduce game changing technologies to treat neurological disorders such as brain cancer, Alzheimer's disease, Parkinson's disease, brain and spinal disorders.

Babak is the founding chairman of the board of directors & CEO Society for Brain Mapping and Therapeutics (SBMT), President and Scientific Director of the Brain Mapping Foundation and Director of National Center for Nano-Bio-Electronics.; the center is focused on integration of nanotechnology, cellular therapeutics/stem cell, medical device and imaging. He is a Research Scientist at Department of Neurosurgery at Cedars Sinai Medical center. He is recipient of NASA Tech Brief Award for his pioneering work on sniffing cancer cells using NASA's electronic nose. He has pioneered the technique for using NASA Multiwall carbon nanotubes to activate macrophages for brain cancer immunotherapy and recently has received an approval from the FDA to microwave brain, liver, head and neck, prostate and breast cancer using his patented device. His current collaboration with Los Alamos National Lab and NASA involves the use of Artificial Intelligence and Supercomputing for Brain Mapping and therapeutics.

He has established a new publication with PLoSOne, which is called PLoSOne_ NeuroMapping & Therapeutics, which he serves as editor in chief and was the force behind 3 successful NeuroImage-Brain Mapping and Therapeutics special issues. He is editor of The inaugural Textbook of Nanoneuroscience and Nanoneurosurgery, published by, Taylor & Francis Publisher in 2013..

He has been deeply involved in global neuroscience legislation through his close collaboration with the US Congressional Neuroscience Caucus as well as members of Canadian Parliaments. He has chaired 3 congressional briefing on Brain Mapping and given a talk to the Canadian Parliament. His initiatives have impacted the health care delivery to the wounded soldiers in the US. He has been one of the key players in President Obama's BRAIN initiative and co-author of the G20 World Brain Mapping and Therapeutics Initiative and African Brain Mapping Initiative.

William S. Wood

William S. Wood was born in 1944 in Montclair, New Jersey to a family of one of five brothers. His mother and father were both strong believers in education and in the Church. William was taught that with hard work, the world is at his reach. He received his B.A in Business from Central State University, Ohio and worked for IBM right out of college. Leaving IBM in 1970 William became a partner with Judi Berke in a company called "Manhattan Rainbow and Lollipop" producing Children's films, filmstrips and books for companies like Random House, Prentice Hall, and other educational media. Mr. Wood later found himself moving to California, where he met a talented business woman, Lenore Stein-Wood, who introduced him to the healthcare field that changed the course of his career.

Ms. Stein-Wood introduced Mr. Wood to the healthcare field in 1977. When learning about Ms. Stein-Wood's home health and homemaker agencies, Mr. Wood was quick to get involved, and he has been a marketing and business consultant in the health care field ever since. Together, they grew multimillion-dollar businesses, which brought services to thousands of elderly patients who needed in-house care. Mr. Wood developed a passion to make personal health care more accessible to those in need, and has dedicated much of his time to bettering the life of others.

Mr. Wood led the marketing division in Future Diagnostics Inc., providers of sophisticated diagnostic procedures that served as an intermediary between providers and insurance carriers. Future Diagnostics was the first broker of MRIs and CTs in the country. Mr. Wood was also a publisher, and owner of the trade publication, "Continuing Care" which was a national trade communication for Hospital Discharge Planners and Continuity of Care Professionals Supporting the transition into Post Hospital Care.

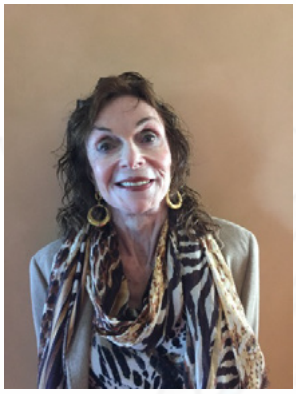
Since 1998, Mr. Wood has served on the board of several institutions for the benefit of the health care and medical industries. These boards include the board of Councilors at USC's School of Social Work and the School of Psychiatry, and Northwestern University's Asher Center for the Study and Treatment of Depressive Disorders. Mr. Wood was also a Board of Trustees member of the John Wayne Cancer Institute, and served on the executive board for the American Heart Association.

Furthermore, Mr. Wood has also served on boards that benefit minorities, such as the Black Business Association, a member of the Latin Business Association, Board member of the Urban Claims Association, and

an advisory board member of the National Forum for Black Public Administrators in Washington D.C. Mr. Wood is also a contributor to the Society for Brain Mapping and Therapeutics.

Mr. Wood has used his talent to better the quality of life of those in need. His endless compassion and generosity makes him co-recipient of the 12th Annual Society of Brain Mapping and Therapeutics Humanitarian Award.

Lenore Stein-Wood



Lenore Stein-Wood was born in 1937 to a working class family in Coney Island, New York, and was the oldest of three. She excelled academically, however due to financial restraints, she was unable to attend college. She moved to California with her parents and brothers in 1953. She went to work for a group of physiatrists and neurologists and was there for 5 years. At the age of 20 she married her first husband and they had two sons 13 months apart, David and Michael. After Mrs. Stein-wood separated from her first husband, she worked at a medical clinic as well as a collection agency. Two physicians who met her through the collection agency asked her to help them start a home health agency in 1968. She became very interested in home health care because it allowed elderly and disabled patients to stay at home and avoid being placed in a nursing home.

After a short while of being involved in home health care, she realized that the Medicare benefits for seniors at living at home was not sufficient. Several months after helping the physicians Mrs. Stein-Wood decided to open a home health agency of her own. Shortly after opening her own agency, she realized that the custodial services in many cases were much more important to keep people in their own home, rather then a skilled care. Those custodial services are not covered by Medicare unless there is a need for skilled care. She opened a home maker service which provided custodial care non medicare covered. While managing her businesses, Mrs. Stein-Wood met a marketing talent, William Wood, who later became her husband. By working together, they were able to strengthen and expand the agencies very quickly. By 1983, the agencies grew to be multimillion-dollar organizations with only one company, UpJohn, as a significant competitor. However, for Ms. Stein-Wood, money was never the motivation, and she constantly found ways of using her success to give back to others.

Shortly after she sold her companies, her son David, who was formerly depressed, committed suicide. Ms. Stein-Wood found a way to turn a mother's worst tragedy into something positive. She began to give her time, efforts and fortune to help bring a better quality of life to those suffering with physiological and psychological disorders. She wanted to make her son's life count, and thus began to help those who had similar problems as David did, and was able to find healing through helping others.

She was active in many organizations pertaining to her business. Her company was granted two demonstration projects- one by the federal government and one by the state. Her company helped the federal government decide weather or not to cover in-house custodial care to elderly and disabled patients who sought to

avoid being placed in long-term care facilities. Her company also successfully demonstrated to the Medi-Cal program that allowing quadriplegic patients to remain at their homes is ultimately cost effective and benefits the quality of life of the patient.

Furthermore, Mrs. Stein-Wood donated her time to supporting senior citizens at retirement homes. She has also extended herself to the Wounded Warrior Project, which provides aid to injured service members. Additionally, she has served on the board of councilors at USC's School of Social Work for over 20 years. She also served Northwestern University's Asher Center for the Study and Treatment of Depressive Disorders. Moreover, Mrs. Stein-Wood also gave charitable contributions to the American Heart Association, which established the David Lawrence Stein Award in honor of her son's memory. The award features the highest ranked pediatric research project in the Western States Affiliate.
Mrs. Stein-Wood's incredible efforts and her selfless acts of kindness have made her the co-recipient of the 12th AnnualSociety of Brain Mapping and Therapeutics Humanitarian Award.

Tim Kring

Richard Timothy "Tim" Kring (born July 9, 1957, in El Dorado County, California), is an American screenwriter and television producer, best known for his creation of the drama series Strange World, Crossing Jordan, Heroes, and Touch.
Kring is Jewish. He graduated from the University of Southern California, School of Cinematic Arts in 1983.

Kring's first job as a screenwriter was for the television show Knight Rider. Other early projects included co-writing an episode of Misfits of Science (which, like his later project Heroes, featured super-powered humans as a main theme) and Teen Wolf with Jeph Loeb.

After the cancellation of Heroes in 2010 Kring created the TV series Touch, a drama focusing on a father (Kiefer Sutherland) who discovers that his mute son can predict future events.

Congresswoman Maxine Waters

Congresswoman Maxine Waters is considered by many to be one of the most powerful women in American politics today. She has gained a reputation as a fearless and outspoken advocate for women, children, people of color and the poor.

Elected in November 2014 to her thirteenth term in the U.S. House of Representatives with more than 70 percent of the vote in the 43rd Congressional District of California, Congresswoman Waters represents a large part of South Central Los Angeles including the communities of Westchester, Playa Del Rey, and Watts and the unincorporated areas of Los Angeles County comprised of Lennox, West Athens, West Carson, Harbor Gateway and El Camino Village. The 43rd District also includes the diverse cities of Gardena, Hawthorne, Inglewood, Lawndale, Lomita and Torrance.

Congresswoman Waters serves as the Ranking Member of the House Committee on Financial Services. An integral member of Congressional Democratic Leadership, Congresswoman Waters serves as a member of the Steering & Policy Committee. She is also a member of the Congressional Progressive Caucus, and member and past chair of the Congressional Black Caucus.

Brian M. Krzanich, CEO of Intel

Brian M. Krzanich was appointed chief executive officer of Intel Corporation and elected a member of the board of directors on May 16, 2013. He is the sixth CEO in the company's history, succeeding Paul S. Otellini.

Krzanich has progressed through a series of technical and leadership roles at Intel, most recently serving as the chief operating officer (COO) since January 2012. As COO, his responsibilities included leading an organization of more than 50,000 employees spanning Intel's Technology and Manufacturing Group, Intel Custom Foundry, supply chain operations, the NAND Solutions group, human resources, information technology and Intel's China strategy.

His open-minded approach to problem solving and listening to customers' needs has extended the company's product and technology leadership and created billions of dollars in value for the company. In 2006, he drove a broad transformation of Intel's factories and supply chain, improving factory velocity by more than 60 percent and doubling customer responsiveness. Krzanich is also involved in advancing the industry's transition to lower cost 450mm wafer manufacturing through the Global 450 Consortium as well as leading Intel's strategic investment in lithography supplier ASML.

Prior to becoming COO, Krzanich held senior leadership positions within Intel's manufacturing organization. He was responsible for Fab/Sort Manufacturing from 2007-2011 and Assembly and Test from 2003 to 2007. From 2001 to 2003, he was responsible for the implementation of the 0.13-micron logic process technology across Intel's global factory network. From 1997 to 2001, Krzanich served as the Fab 17 plant manager, where he oversaw the integration of Digital Equipment Corporation's semiconductor manufacturing operations into Intel's manufacturing network. The assignment included building updated facilities as well as initiating and ramping 0.18-micron and 0.13-micron process technologies. Prior to this role, Krzanich held plant and manufacturing manager roles at multiple Intel factories.

Krzanich began his career at Intel in 1982 in New Mexico as a process engineer. He holds a bachelor's degree in Chemistry from San Jose State University and has one patent for semiconductor processing. Krzanich is also a member of the board of directors of the Semiconductor Industry Association.

SBMT-NSBRI YOUNG INVESTIGATOR AWARD

Society for Brain Mapping and Therapeutics (SBMT) and National Space Biomedical Research Institute (NSBRI) are proud to announce the Inaugural Call for The Young Investigator Award in Brain Mapping & Therapeutics.

Purpose:

The NSBRI/SBMT Young Investigator's Initiative is designed to recognize and assist promising young scientists performing work in the brain sciences relevant to the Society for Brain Mapping and Therapeutics (SBMT), whose research is also aligned with the mission of the National Space Biomedical Research Institute (NSBRI).

Overview:

Protection of the brain and other vulnerable organ systems during long-duration space missions is critical to the success of human space exploration. Microgravity, radiation and other hazards of the space are known to affect the nervous system. A better understanding of the mechanisms, and the development of countermeasures to combat neurobehavioral and associated space adaptation and disorders, are required. Moreover, advances from human and robotic space technologies, knowledge and spin-offs can contribute to life on Earth, including benefits to brain health and the treatment of brain disorders.

Benjamin Aribisala

Professor of Computer Science, Computer Science Department, Faculty of Science, Lagos State University, Lagos, Nigeria; Honorary Fellow Centre for Clinical Brain Sciences (CCBS), Neuroimaging Sciences, The University of Edinburgh, Young Investigator Award Nominee

Michael E Wolf

President, NeuroCite, LLC, Young Investigator Award Nominee

Reza Tadayon-Nejad

Psychiatry Resident (Neuroscience Research Track), Department of Psychiatry, University of Illinois at Chicago, Young Investigator Award Nominee

Past Recipients:

Vicky Yamamoto

Stem cell Research - USC Broad Stem Cell Center
2009 Award Recipient

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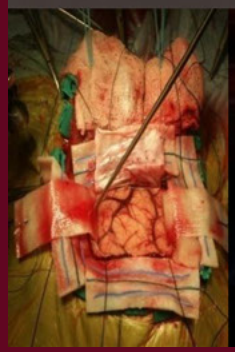



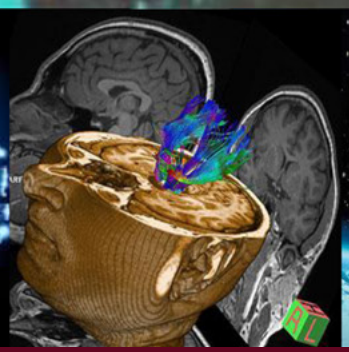

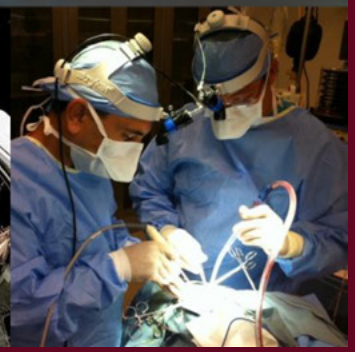

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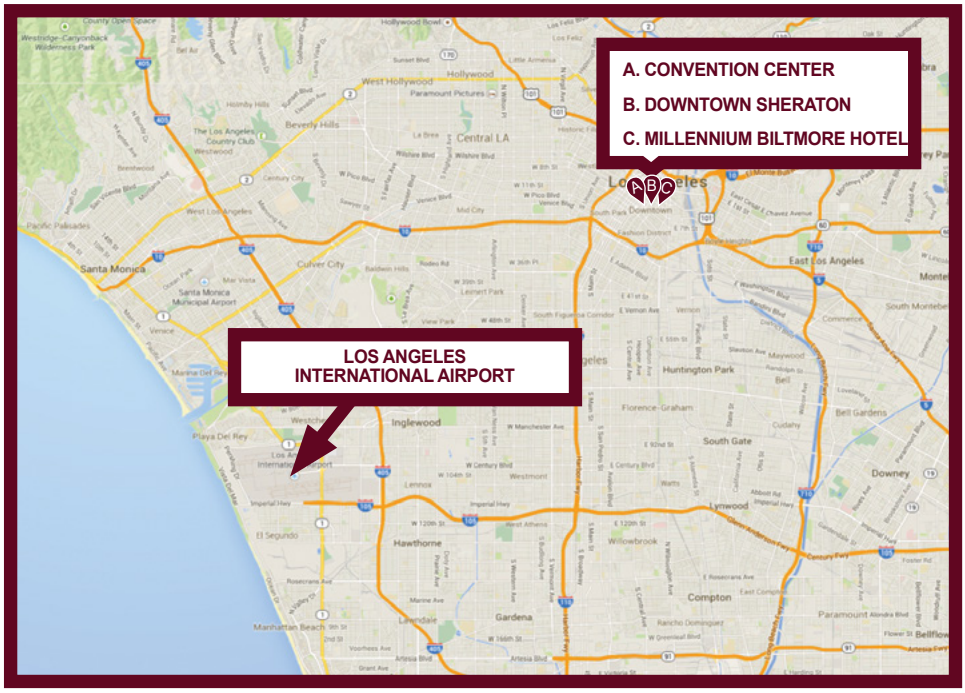

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