



# FRENCH-AMERICAN INNOVATION DAY

<http://faid-houston.france-science.org/>

## Procedural Medicine in the Digital Age

March 7<sup>th</sup>, 2019

Texas Medical Center – Innovation Institute, Suite X  
2450 Holcombe Blvd, Houston, Texas



## ABOUT THE EVENT

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**French-American Innovation Days** are events organized by the Office for Science and Technology of the Embassy of France in the United States. They are high-level events where actors of innovation (researchers, companies) have the opportunity to exchange views on a specific technological issue, start co-operative activities and develop business transactions with a transatlantic perspective. The goal of the program is to facilitate the development of innovation ties between France and America by bringing together scientists, companies and other interested stakeholders from both countries.

This second FAID to be held in Houston is dedicated to *“Procedural Medicine in the Digital Age”*.

Since the advent of minimally invasive surgery and the commercialization of the Da Vinci robotic surgical system in the early 2000s, surgical procedures have been undergoing a profound revolution. Today, surgical procedures integrate more and more computer based devices, whether for robotic purposes or assistance to the surgeon for decision making. Associated with reduced incisions, shorter recovery times, improved precision, and offering the possibility of remote surgery, robotic and computer assisted surgery have proved as a major benefit to the patient. These innovations often derive from decades of research and development in robotic and digital sciences, requiring large investments that only a few corporates could afford.

Today, actors of innovation in robotic and computer assisted surgery, and to a larger extent digital health, are diversifying. Startups designing highly specified products across a growing spectrum of healthcare, requiring less massive investments with appropriate business models emerge. This trend received strong impetus with the emergence of artificial intelligence and deep learning techniques. Whether used to improve medical diagnosis, like tumor detection at very early stages of development, or to harness the exponentially growing medical and patient data, deep tech startups developing AI based medical technologies and health data management applications have boomed on both sides of the Atlantic. With the creation of a national Health Data Hub, integrated within a \$1.5 billion [“AI for humanity”](#) plan, France has set AI empowered health as a national priority.

As the largest medical center in the world, featuring world class institutions using top notch technologies, the Texas Medical Center of Houston fosters the best resources of medical innovation. The purpose of the French American Innovation Day is to bring together actors of research and innovation from both the TMC innovation ecosystem and France in order to discuss emerging trends of digital innovation in procedural medicine.

## ORGANIZERS

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The **Office for Science and Technology** of the French Embassy is a team of 24 staff members including professors, senior researchers and engineers dedicated to facilitating bilateral FR-US collaborations in Science and Technology. Main priorities are to monitor and report advances in Science and Technology in the US through newsletters and diplomatic channels, promote bilateral partnerships in science, technology and innovation, foster exchanges and increase mobility of researchers, doctoral students and entrepreneurs, serve as a liaison between French and American academic and scientific organizations as well as between the two countries' central governments and the European Delegation

## PARTNERS

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The **TMC Institute of Innovation** is a unique learning environment aimed at impacting the health care industry through the collaboration of medicine and cutting-edge technology from around the world. By supporting entrepreneurs as they broaden their vision and network, TMC accelerator helps companies take their products from bench to bed. The TMC Innovation Institute is shaping the future of health care by uniting promising innovators with the best minds in academia, science and medicine. Programs help startups streamline the development of therapeutic, diagnostic, medical device and digital health breakthroughs in world's largest medical complex.



The **French American Chamber of Commerce** is a non-profit, non-governmental, 100% independent, member-driven organization, made by companies for companies. The mission: foster the French-American business community, support businesses in their settlement and development in Houston and build bridges for US companies with France. The FACC Houston is a place to exchange, learn and network. Ideally located in the heart of startup incubator Station Houston and with a board member with top executives from different fields, the FACC is a principal HUB for startups who want to settle in Texas.



**Station Houston** aims to transform Houston into a world-leading hub for technology innovation and entrepreneurship. This vision unfolds as a vibrant community where people live, work and play, with Station serving as the connective tissue fostering a culture of innovation. Launched in March of 2016, Station Houston membership now includes over 180 startups, 350 members, 130 mentors, and dozens of high-impact strategic partnerships with corporations that represent the key industries driving Houston's economy. Station Houston has begun investing in some of its most promising startups.

## SPONSORS

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**INRIA**, the French National Institute for Research in Computer Science and Control, promotes scientific excellence and technology transfer to maximize its impact. Its 200 agile project teams involve more than 3,000 scientists in meeting the challenges of computer science and mathematics, often at the interface of other disciplines. INRIA works with many companies and has assisted in the creation of over 160 startups.



**INSERM** is a public scientific and technological institute which operates under the joint authority of the French Ministries of Health and Research. The institute is dedicated to biomedical research and human health, and is involved in the entire range of activities from the laboratory to the patient's bedside. It also partners with the most prestigious research institutions in the world that are committed to scientific challenges and progress in these fields. Since 2009, INSERM is also the coordinator of AVIESAN, the French National Alliance for Life and Health Sciences, gathering national institutions, universities and hospitals active in the field of the life sciences and health. INSERM partners with the most prestigious research institutions over the world which are committed to address the scientific challenges related to the science for human health.



**The University of Grenoble-Alpes** is the third largest university in France with about 45,000 students and over 3,000 researchers. It is engaged in hundreds of research and teaching partnerships, including close collaboration with the French National Centre for Scientific Research and the French Alternative Energies and Atomic Energy Commission. UGA has been cited among the best and most innovative universities in Europe.



**The University of Lyon** is a world-class academic site of excellence. Awarded with the *Initiative d'Excellence* national label in 2017, it is the second cluster for education and research in France. It accounts for 140,000 students, 17 doctoral schools welcoming 5,400 PhD students, 6,800 researchers accounting for 6.4% of all French scientific publications. It gathers 168 laboratories, 28 international joint research units with over 170 collaborative programs. The University of Lyon registers the highest number of patent applications and is the French leader in student's entrepreneurship (+80 startups/year).



**The French Foreign Trade Advisor** is a network of 4000 business leaders and international experts. Present in all Regions in France and in more than 140 countries, the French Foreign Trade Advisors carry out daily concrete actions in partnership with public and private actors having a role in promoting and supporting the internationalization of French companies. Appointed on the proposal of the French Secretary of State for Foreign Trade, French Foreign Trade Advisors are invested by the public authorities of four missions: advising the public authorities, supporting companies, training young people and promoting France's attractiveness internationally.

## AGENDA

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08:00 – Coffee & Croissants

### *Welcome Introductions*

*Alexis Andres, Consul general of France in Houston*

08:30 - Barbara L. Bass, Chair of the Department of Surgery, Houston Methodist

08:35 - Yves Frenot, Counselor for Science & Technology of the French Embassy in the United States

### *Keynote addresses*

08:40 - **Managing Medical Care on Space Exploration Missions: Decision Support Systems, Artificial Intelligence, and Beyond**

Jennifer Fogarty, Human Research Program Chief Scientist, NASA, USA

09:05 - **INRIA research at the forefront of digital sciences for medicine**

Hugues Berry, Deputy Scientific Director of INRIA for Digital Health, Biology and Earth, France

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### *SESSION 1: “Computer-Assisted Surgery & 3D Visualization Tools”*

*Chairman: Ioannis Pavlidis, Professor in Computational Physiology, University of Houston*

09:30 - **From Computer Assisted Interventions to Symbiotic Robots**

Philippe Cinquin, MD and Professor in Medical Informatics, University Grenoble Alps, France

10:00 - **Guiding with touch: Objective assessment and haptic cueing to improve surgical performance on virtual and robotic platforms**

Marcia K. O'Malley, Professor in Computer Science and Mechanical Engineering, Rice University, USA

10:15 - *Coffee Break and Networking around Posters*

10:45 - **Current and future multidisciplinary perspectives on robotic oncologic surgery**

Surena F. Matin, Distinguished Professor, Department of Urology, MD Anderson Cancer Center

10:55 - **Leveraging Technology to Improve TransOral Robotic Surgery (TORS)**

Neil D. Gross, Director of Clinical Research, Department of Head and Neck Surgery, MD Anderson Cancer Center

11:05 - **Robotics in Onco-Plastic Surgery**

Jesse C. Selber, Director of Clinical Research, Department of Plastic Surgery, MD Anderson Cancer Center

11:15 - **Towards the design of simulators of medico-surgical gestures – An instrumental childbirth delivery simulator**

Florence Zara, Associate Professor in computer graphics and virtual reality, LIRIS lab, University of Lyon

11:30 - **Computational Science + Surgery = What for?**

Marc Garbey, Scientific Director, Center for Computational Surgery, Houston Methodist, USA

**11:45 - Computer-Aided Surgical Simulation for Craniomaxillofacial Surgery**

James J. Xia, Director of the Surgical Planning Laboratory, Houston Methodist Hospital, USA

**12:00 - Concluding remarks****12:15 - Buffet lunch and Networking around Posters****SESSION 2: "AI & Machine-Learning based Medical Applications"**

*Chairman: Clifton D. Fuller, Associate Director, MR Programmatic Development, MD Anderson Cancer Center*

**02:00 - Potential of artificial intelligence in medical image reconstruction and analysis for oncology applications**

Dimitris Visvikis, Director of Research INSERM, Laboratory of Medical Information Processing, France

**02:30 - AI in Imaging**

John D. Hazle, Professor, Chairman, Department of Imaging Physics, MD Anderson Cancer Center

**03:00 - Sharing Data and Image Processing Pipelines: The Information Analysis & Management initiative**

Michel Dojat, Director of Research INSERM, Grenoble Institute of Neurosciences, France

**03:30 - Applied Artificial Intelligence for Digital Transformation in Healthcare**

Stephen T. Wong, Sr. Presidential Distinguished Chair in Biomedical Engineering, Houston Methodist

**04:00 - Coffee Break and Networking around Posters****04:30 - Digitizing Brain Health: from Daily Behaviors to Neurogenesis**

Amina A. Qutub, Associate Professor, Biomedical Engineering, UT San Antonio, USA

**04:45 - AI for closed-loop enhancement of brain activity**

Matthew J. McGinley, Assistant Professor, Neurosciences, Duncan Neurological Research Institute, USA

**05:00 - Startup presentations – Chairman: Lance Black, Associate Director, TMC Innovation Institute**

Laurence Chabanas (France)	<b>Surgivisio</b>	Jean-Marc Peyrat (France)	<b>InHeart</b>
Jacques Zaneveld (USA)	<b>Lazarus 3D</b>	Michel Dojat (France)	<b>Pixyl</b>
Pauline Choné (France)	<b>Therapixel</b>	Florian Bernard (France)	<b>Nurea</b>
Sarma Velamuri (USA)	<b>Luminare</b>	Ghjuvan Grimaud (France)	<b>Biomathematica</b>
Jennifer Del Giudice (France)	<b>Enancio</b>	Chris DuPont (USA)	<b>Galen Data</b>
Philippe Cinquin (France)	<b>SentinHealth</b>	Jean-Noel Albertini (France)	<b>Predisurge</b>
Yacine Remini (France)	<b>Medeo</b>	Vaclav Potesil (USA & UK)	<b>Optellum</b>
Pierre-Antoine Ganaye (Fr)	<b>Radiostic</b>	Donald J. Lyons (USA)	<b>Radiant HEALTH.TODAY</b>

**06:00 - Concluding remarks by Marc Garbey, Sc. Director, Center for Computational Surgery, Houston Methodist****06:10 - Networking Apéritif**

## PARTICIPATING STARTUPS



**Surgivisio** invents and develops innovative technologies dedicated to 2D/3D imaging and computer assisted minimally-invasive surgery, with many applications in orthopedics and traumatology. The Surgivisio system is primarily specialized in spinal surgery procedures.

Contact: [laurence.chabanas@surgivisio.com](mailto:laurence.chabanas@surgivisio.com)



**Inheart** provides a tool-based service for cardiologists to plan and guide their catheter ablation procedure by visualizing their instruments in real time within a personalized virtual heart, reconstructed from the patient's images. This service can accommodate a wide range of image quality and underlying diseases.

Contact: [jean-marc.peyrat@inheart.fr](mailto:jean-marc.peyrat@inheart.fr)



**Lazarus 3D** uses cutting edge 3D printing technologies to provide realistic organ models. Their objective is to provide the best medical training models for medical professionals to improve surgery planning, minimize medical errors, and revolutionize best practices in medicine.

Contact: [zaneveld@Laz3D.com](mailto:zaneveld@Laz3D.com)



**Pixyl** is a web platform that places powerful AI tools for neuroimage analysis in the hands of clinicians. Pixyl.Neuro.MS platform automatically detects multiple sclerosis brain lesions and quantifies their dissemination in space and time.

Contact: [michel.dojat@pixyl.io](mailto:michel.dojat@pixyl.io)



**Therapixel** is a startup specialized in medical imaging, aiming to transform diagnostic radiology with the tools of Artificial Intelligence. Therapixel won the first place of the Digital Mammography Challenge in 2017 for its Artificial Intelligence algorithm for breast cancer diagnosis.

Contact: [pchone@therapixel.com](mailto:pchone@therapixel.com)



**Nurea** develops decision support and implant personalization software for cardiovascular and thoracic surgery (e.g. aortic stents, tracheal implants, etc.) The possibility of simulating the impact of an implant placed on the patient make it possible to propose a personalized implant, manufactured by 3D printing.

Contact: [florian.bernard@nurea-soft.com](mailto:florian.bernard@nurea-soft.com)



**Luminare** develops a sepsis process improvement software for hospitals that analyzes vital signs and laboratory work-ups of patients for evidence of sepsis in a matter of minutes. Luminare's digital application processes some 30 different variables simultaneously and helps nurses do the critical thinking.

Contact: [sarma.velamuri@luminaremed.com](mailto:sarma.velamuri@luminaremed.com)



**BioMathematica** is specialized in microbiome-related genomic data analysis and mechanistic, mathematical modeling and simulation of the microbiome to provide quantitative and predictive guidance to biotechnology and pharmaceutical companies.

Contact: [gm.grimaud@biomathematica.com](mailto:gm.grimaud@biomathematica.com)



**Enancio**, the equivalent of MP3 for genomic data. Structures involved in sequencing and analyzing genomes are looking at solutions to transfer, store and analyze voluminous files. With its genomic compressor, Enancio brings a solution to these problems.

Contact: [jennifer.delgiudice@enancio.fr](mailto:jennifer.delgiudice@enancio.fr)





**Galen Data** is a medical device cloud connectivity platform that allows medical device manufacturers to leverage cloud technologies easily and affordably. Galen Data allows innovators to focus on their discoveries instead of software infrastructure and is fully EU MDD, GDPR, FDA and HIPAA compliant.

Contact: [chris@galendata.com](mailto:chris@galendata.com)



**SentinHealth** is a French MedTech company specialized in innovative integrated care solutions for monitoring and preventing exacerbations of major chronic. Implanted in the stomach, the "Digital Implanted Stethoscope" monitors cardiorespiratory biomarkers evolution which allows to get excellent rough signals before any processing. Listen early to act effectively.

Contact: [Philippe.Cinquin@univ-grenoble-alpes.fr](mailto:Philippe.Cinquin@univ-grenoble-alpes.fr)



**Predisurge** develops software solutions designed to assist physicians during preoperative planning and intervention of endovascular repair of aortic aneurysms. This digital surgery brings tremendous information to the physician, as soon as the preoperative planning phase, to support and secure his choices.

Contact: [jean-noel.albertini@predisurge.com](mailto:jean-noel.albertini@predisurge.com)



**Medeo** has designed applications for physicians to work with connected devices during clinical examinations. It allows healthcare system integrators to ensure connectivity to EMR especially for ambulatory medicine.

Contact: [yacine@medeo-health.com](mailto:yacine@medeo-health.com)



**Optellum** develops the first AI Clinical Decision Support software for lung cancer diagnosis & treatment, based on Artificial Intelligence & Machine Learning technologies applied to the world's largest clinical dataset.

Contact: [vaclav.potesil@optellum.com](mailto:vaclav.potesil@optellum.com)



**Radiostic** is an imaging application that will be available in the cloud, directly connected to the PACS. It automatically detects and quantifies clinical markers of stroke on a single click, such as the volume of infarcted tissue and penumbra.

Contact: [ganaye@creatis.insa-lyon.fr](mailto:ganaye@creatis.insa-lyon.fr)



**Radiant HEALTH.TODAY** purpose is to address systemic weaknesses in the current healthcare system and leverage technology to address current consumer needs in the US market and beyond. This will be achieved through a multi-faceted systems and data integration approach focused upon consumer services, biometrics, analytics, and a blockchain trust platform.

Contact: [don@radianthealth.today](mailto:don@radianthealth.today)



**HOPI Medical**

Contact: [gacosta@hopimedical.com](mailto:gacosta@hopimedical.com)



**MS-Biotics**

M&S Biotics is a health care analytics company that leverages Radio-Frequency Identification (RFID) technology and artificial intelligence to improve resource utilization and efficiency within the operating room (OR).

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## SPEAKERS

Full biographies available on our website: <http://faid-houston.france-science.org/participants/>



### Barbara L. Bass, MD – Houston Methodist

Dr. Bass is Chair of the Department of Surgery at the Houston Methodist. Dr. Bass has enjoyed a 30-year career in academic surgery. She served as Chair of the American Board of Surgery, the organization that certifies surgeons for practice. Her most recent project is MITIE – the Methodist Institute for Technology Innovation and Education, an education and research institute focused on retraining surgeons in practice in new technologies.



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### Yves Frenot, PhD - Embassy of France in Washington DC

Dr. Frenot is the Counselor for Science and Technology at the Embassy of France in Washington DC. From 2003 to 2009, Yves Frenot was in charge of the scientific projects at the French Polar Institute Paul-Emile Victor (IPEV), the lead agency for supporting French scientific research in the Polar Regions.



Contact: [conseiller@ambascience-usa.org](mailto:conseiller@ambascience-usa.org)



### Jennifer Fogarty, PhD - NASA

Dr. Fogarty is the NASA Human Research Program Chief Scientist. This NASA Program focuses on preventing and mitigating the human health and performance risks that humans will face during deep space exploration. She is currently an editor of the Fundamentals of Aerospace Medicine and lectures regularly to aerospace medicine residents and medical students on space physiology and its medical implications.



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### Hugues Berry, PhD - INRIA

Dr. Berry is a Senior researcher at the French National Institute for Computer Science and Applied Mathematics (INRIA) in Lyon, France. Since 2018, he is Deputy Scientific Director of INRIA, in charge of the research field “Digital Health, Biology and Earth”.



Contact: [hugues.berry@inria.fr](mailto:hugues.berry@inria.fr)



### Ioannis T. Pavlidis, PhD – University of Houston

Dr. Pavlidis is the Eckhard-Pfeiffer Professor of Computer Science and Director of the Computational Physiology Laboratory at the University of Houston. He has published largely in the areas of affective computing, computational physiology, and the physiological basis of human behavior.



Contact: [ioannisk@uh.edu](mailto:ioannisk@uh.edu)



### Philippe Cinquin, PhD, MD – University of Grenoble-Alps

Dr. Cinquin is Professor of Public Health (Medical Informatics) and heads TIMC, a research Lab of CNRS and Univ. Grenoble-Alps at Grenoble, France. In 1984, he launched a research team on Computer-Assisted Medical Interventions, which led to innovative surgical practice, benefiting to more than 100 000 patients, thanks to the creation of 12 startup companies.



Contact: [Philippe.Cinquin@univ-grenoble-alpes.fr](mailto:Philippe.Cinquin@univ-grenoble-alpes.fr)


**Marcia K. O'Malley, PhD – Rice University**

Dr. O'Malley is the Stanley C. Moore Professor of Mechanical Engineering, of Computer Science, and of Electrical and Computer Engineering at Rice University. Her research addresses issues that arise when humans physically interact with robotic systems, with a focus on training and rehabilitation in virtual environments.

Contact: [omalleym@rice.edu](mailto:omalleym@rice.edu)


**Surena F. Matin, MD – University of Texas MD Anderson Cancer Center**

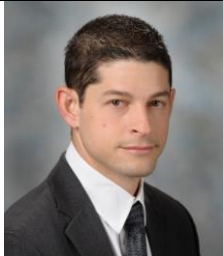
Dr. Matin is the Monteleone Family Foundation Distinguished Professor with Tenure in the Department of Urology at the University of Texas MD Anderson Cancer Center. He also serves as Medical Director of the MINTOS (Minimally Invasive New Technology in Oncologic Surgery) multidisciplinary collaborative program in the Division of Surgery at MD Anderson.

Contact: [surmatin@mdanderson.org](mailto:surmatin@mdanderson.org)


**Neil D. Gross, MD – University of Texas MD Anderson Cancer Center**

Dr. Gross is Director of Clinical Research in the Department of Head and Neck Surgery at the University of Texas MD Anderson Cancer Center. He has a strong clinical and research interest in squamous cell carcinoma of the head and neck (SCCHN) including oropharynx cancer.

Contact: [NGross@mdanderson.org](mailto:NGross@mdanderson.org)


**Jesse C. Selber, MD – University of Texas MD Anderson Cancer Center**

Dr. Selber is the Director of Clinical Research and an Associate Professor in the Department of Plastic Surgery at the University of Texas MD Anderson Cancer Center. Research involves head and neck reconstruction, breast reconstruction, microsurgery, abdominal wall reconstruction, microsurgical training, robotic-assisted reconstructive surgery, and other areas.

Contact: [JCSelber@mdanderson.org](mailto:JCSelber@mdanderson.org)


**Florence Zara, PhD – University of Lyon**

Dr. Zara is associate professor since 2005 for computer graphics, animation and virtual reality at the *Laboratoire d'InfoRmatique en Image et Systèmes d'information*, University of Lyon. Her research interest is focused on the realization of training simulators for medical gestures.

Contact: [florence.zara@liris.cnrs.fr](mailto:florence.zara@liris.cnrs.fr)


**Marc Garbey, PhD – Houston Methodist**

Dr. Garbey is Professor of Surgery and Scientific Director of the Center for Computational Surgery at the Houston Methodist. During his time at University of Houston, Dr. Garbey also served as the Director of Research Integration for the Houston Methodist Institute for Technology, Innovation & Education (MITIE).

Contact: [garbeymarc@gmail.com](mailto:garbeymarc@gmail.com)


**James J. Xia, PhD, MD – Houston Methodist**

Dr. Xia is Professor of Oral and Maxillofacial Surgery at the Houston Methodist. Dr. Xia is the Director of the Surgical Planning Laboratory with the Department of Oral and Maxillofacial Surgery at The Methodist Hospital. His work focuses on new methods to utilize advanced imaging, computer modeling, and surgical navigation to result in making major facial and skull surgeries safer

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**Clifton D. Fuller, PhD, MD – University of Texas MD Anderson Cancer Center**

Dr. Fuller is the Associate Director of the MR Programmatic Development at the Department of Radiation Oncology, MD Anderson Cancer Center. His research focuses on development of evidence-based "personalized radiotherapy" techniques by incorporation of novel imaging methodologies. To date, the bulk of his work has focused on improving multimodality (e.g. PET-CT, MRI, US) imaging for target delineation in the multi-institutional setting.

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**Dimitris Visvikis, PhD – INSERM**

Dr. Visvikis is Director of Research at the French National Institute of Health and Medical Research – INSERM and co-director of the Medical Image Processing Lab in Brest, France. His current research interests focus on improvement in PET/CT image quantitation for specific oncology applications

Contact: [visvikis@univ-brest.fr](mailto:visvikis@univ-brest.fr)


**John D. Hazle, PhD – University of Texas MD Anderson Cancer Center**

Dr. Hazle is Chairman and Professor at the Department of Imaging Physics, at the University of Texas MD Anderson Cancer Center. Dr. Hazle primary research interests are image-guided therapy, pre-clinical imaging and novel early detection technologies. He has been the Director of the NCI funded Experimental Cancer Imaging Research Program from 2008-2012.

Contact: [jhazle@mdanderson.org](mailto:jhazle@mdanderson.org)


**Michel Dojat, PhD – INSERM**

Dr. Dojat is Research Director at INSERM – Grenoble Institut des Neurosciences, France, and cofounder of Pixyl. Dr. Dojat main work aims to facilitate data and image processing sharing in neuroimaging. He also worked on AI-based systems for patient monitoring, temporal reasoning and models for medical reasoning.

Contact: [michel.dojat@univ-grenoble-alpes.fr](mailto:michel.dojat@univ-grenoble-alpes.fr)


**Stephen T. Wong, PhD – Houston Methodist**

Dr. Wong is John S. Dunn Sr Presidential Distinguished Chair of Biomedical Engineering and Professor and Chair of Department of Systems Medicine and Bioengineering, Houston Methodist (USA). Dr. Wong's research focuses on understanding health and disease from a systems perspective, combining both experimental and high throughput biology in order to generate cost-effective strategies and solutions for disease management.

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**Amina A. Qutub, PhD – University of Texas in San Antonio**

Dr. Qutub is Associate Professor at the Department of Biomedical Engineering of UT San Antonio. Dr Qutub research focuses on the development of new computational methods and experimental analyses in order to uncover design principles of human cells during growth and regeneration. Her research is currently supported by NSF, NIH and the Cancer Prevention Research Institute of Texas.

Contact: [amina.qutub@utsa.edu](mailto:amina.qutub@utsa.edu)


**Matthew J. McGinley, PhD – Duncan Neurological Research Institute**

Dr. McGinley is Assistant Professor in the Department of Neuroscience at Baylor College of Medicine, an Investigator in the Jan and Dan Duncan Neurological Research Institute (NRI), and an Adjunct Professor in the Department of Electrical and Computer Engineering at Rice University. The McGinley lab in the NRI seeks to understand how states of the brain affect cognition and to develop novel devices and computational approaches to measure and optimize brain states for enhanced cognition.

Contact: [Matthew.McGinley@bcm.edu](mailto:Matthew.McGinley@bcm.edu)



## POSTERS

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### **Computational Tools for Analyzing Breast Aesthetics from 3D Surface Images**

U. Sampathkumar, A. Cheong, G. Reece, S. Hanson, M. Markey and F. Merchant

University of Houston, University of Texas at Austin and University of Texas MD Anderson Cancer Center

### **Updating preoperative Imaging for lung and brain surgery with organ biomechanical modeling**

A.C. Lesage, G. Cazoulat, F. Lang, J.S Weinberg, A. Tam, D.C. Rice and K.K. Brock

University of Texas MD Anderson Cancer Center

### **Automated label-free imaging system for osteosclerosis grading in bone marrow biopsies**

R. Mankar, C.E. Bueso-Ramos, C. C. Yin, S. Berisha, M. Kansiz and D. Mayerich

University of Houston, University of Texas MD Anderson Cancer Center and Photothermal Spectroscopy Corp. in Santa Barbara

### **Radiologist-Friendly and Automatic Lung Cancer Screening Using Memory Recurrent Networks**

A. Mobiny, H. Nguyen, S.K. Moulik, N. Garg and C.C. Wu

University of Houston, Triradiate Industries in Sugar Land and University of Texas MD Anderson Cancer Center

### **BRAIN: An NSF Industry/University Cooperative Research Center On Neurotechnology**

C. Artur, J. Contreras-Vidal, M. Santello

University of Houston, Arizona State University and National Science Foundation

### **Semi-supervised learning for segmentation under semantic constraint**

P.A. Ganaye, M. Sdika and H. Benoit-Cattin

Univ Lyon, INSA - Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, Lyon, France

### **Strain Analysis for Mitral Valve EchoCardiographic Data**

P. Zhang, R. Azencott, J. He, K.C. El-Tallawi and W. A. Zoghbia

University of Houston and Houston Methodist DeBakey Heart and Vascular Center

### **Large-Scale Visualization and Analysis of Next-Generation Microvascular Images**

P.Govyadinov, J.Guo

University of Houston