

Workshop dual PhD France-USA
« Computational Surgery & Medicine »
PROGRAM

Opening Remarks

Tuesday, 8:45 – 9:00

- **Sujiro Seam**, *French General Consul.*
- **Barbara L. Bass**, *Executive Director, MITIE.*
- **Rathindra N. Bose**, *Vice President Research, UH.*

Session : Diagnostic and Delivering Therapy
Chair **Christophe Collet**

Tuesday, 9:00 – 11:30

- **Christophe Collet**, *« A survey of brain segmentation and lesion detection in MR images ».*
- **Baudoin Denis de Senneville**, *« Real-time image guidance of non-invasive local therapies ».*
- **Karolos Grigoriadis**, *« Medicine and Automatic Control : From Robotic Surgery to Autonomous Drug Delivery ».*
- **Ahmet Omurtag**, *« Concept to Clinic : Example of wireless EEG ».*
- **Dimitris Visvikis**, *« Multimodality image quantification for guiding therapy and associated response assessment ».*

Session : Model and Simulation to Control Disease
Chair **Thierry Colin**

Tuesday, 1:00 – 3:30

- **Thierry Colin**, *« Mathematical models for tumor growth : construction, validation and clinical applications ».*

- François Cornelis, « *From imaging data to mathematical models of tumor growth : rational and new tools* ».
- Abdallah Elhamidi, « *Regularity of eigenlements to compact operators and application to proper orthogonal decomposition sensitivity* ».
- Hassan Fathallah-Saykh, « *Mathematical Model of Low-Oxygen Induced Accelerated Brain Invasion by GBM* ».
- Milos Kojic, « *Computational models for convective and diffusive transport in capillaries and tissue* ».

Session : Understanding Brain Processing and Disease Mechanism

Chair William W. Lytton

Tuesday, 4:00 – 6:00

- Lyle J. Graham, *Title TBA.*
- Angelo Iollo, « *System identification in hippocampal depolarization* ».
- Gwendal Le Masson, « *A computational model of motor neuron degeneration* ».
- William W. Lytton, « *Multiscale modeling for neurology and psychiatry* ».

Surgery Ground Round

Wenesday, 8:00 – 9:00

- Barbara Bass and Marc Garbey, « *Computational Science Meets Surgery : Designing a Predictive Model of Breast Conservative Therapy* ».

Session : Neurology and Cardiology Dynamic

Chair Nabil Chafké

Wednesday, 9:105– 12:00

- Jean Bismuth, *Title TBA.*
- Gavin Britz, *Title TBA.*

- Nabil Chafké and Frédéric Heim, « *Multidisciplinarity in Device Developments : The GEPROVAS approach* ».
- Mark Davies, *Title TBA*.
- Christof Karmonik, « *Advanced Imaging of Type B Aortic Dissections* ».
- Roger Tran Son Tay, « *Modeling of Vascular Adaptation* ».

Session : OR Management and Training

Chair Nguyen Tran

Wednesday, 2:00 – 3:30 & 3:45 – 5:15

- Brian Dunkin, « *Multimodal Minimally Invasive Surgery* ».
- Ioannis Pavlidis, « *Beware of Sympathetic Looping in Surgery and Beyond* ».
- Shishir Shah, « *Human Behavior and Activity Recognition* ».
- Vadim Sherman, *Title TBA*.
- Nabil Tariq, *Title TBA*.
- Nguyen Tran, « *Evaluation of surgical simulators on surgical learning curves : Experiences of the School of Surgery of Nancy-Lorraine* ».