

Program Schedule

Building Bridges to Develop New Medical Technologies (Harvard-MIT & Universities CEI Mondcloa)

| TIME | Session | SPAIN | USA |
|-------------|---------------------------------|---|--|
| 08:30-08:45 | Welcome | Prof. Páez (UPM) & Martínez (RCC) | Prof. Bonato (Harvard) |
| 08:45-09:15 | Keynote Speech | | Prof. Ingber (Harvard) |
| 09:15-09:30 | CEI Mondcloa. Cluster in Health | Prof. Lizasoain (UCM) & Prof. Prieto (UPM) | |
| 09:30-10:30 | S1. Biomedical Informatics | Prof. Maojo (UPM) & Prof. Muñoz (UCV) | Prof. McCray (Harvard) & Prof. Szolovits (MIT) |
| 10:30-10:45 | Coffee Break | | Break |
| 10:45-11:45 | S2. Medical Robotics | Prof. Ferre (UPM) & Prof. Anula (UCM) | Prof. Walsh (Harvard) & Parretti (MIT) |
| 11:45-12:45 | S3. Disease Management | Prof. Arredondo (UPM) & Prof. Mayol (UCV) | Prof. Bonato (Harvard) & Prof. Picard (MIT) |
| 12:45-13:45 | Lunch | | Break |
| 13:45-15:45 | S4. Med. Imaging & Biosensors | Prof. Holgado (UPM) & Prof. Pingarrón (UCM) | Prof. Wald (MIT) & Prof. Capasso (Harvard) |
| 15:45-16:00 | Coffee Break | Prof. Santos (UPM) & Prof. Moro (UCM) | Prof. Boas & Lo (Harvard) |
| 16:00-17:00 | S5. Cognitive Neuroscience | Prof. del Pozo (UPM) & Prof. Maestu (UCM) | Break |
| 17:00-17:45 | Round Table. Final Conclusions | Prof. Páez (UPM) | Prof. Hamalainen (Harvard) & Adalsteinsson (MIT) |
| | Spanish wine | | Prof. Bonato (Harvard) |

Coffee & Tea will be available during the sessions

| Format | 1 - 2 hours sessions | Presentations (Spain + USA) (10 '-12' each) + Discussion |
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| Venue: | RCC at Harvard, 26 Trowbridge St, 02138 Cambridge, MA | Harvard Univ & MIT |
| Date: | Jan-25-2016 | UPM & UCM |

Building Bridges to Develop New Medical Technologies

Workshop for Researchers at Harvard-MIT & Universities of the CEI MONCLOA

Real Colegio Complutense
www.rcc.harvard.edu

Jan 25th, 2016



Organizers

Prof. José M. Páez (UPM) & Paolo Bonato (Harvard)

Co-Sponsored by

Real Colegio Complutense at Harvard
Campus of International Excellence MONCLOA
Universidad Politécnica de Madrid
Universidad Complutense de Madrid



Description

The objective of this workshop is to build bridges between Harvard-MIT researchers in Boston MA and researchers in Spain who are affiliated with the Universities that are part of the CEI Moncloa, Madrid, Spain. At the same time, the workshop aims to building bridges between researchers in the engineering and medical fields. Over the past decades, collaborations between engineers and clinical researchers have transformed the practice of medicine. Advances in biomedical informatics have resulted in personalized treatment modalities that have laid the foundation of the field of precision medicine. Robotic systems have allowed patients with a complete spinal cord injury to walk again. The development of eHealth technology has enabled continuous monitoring of patients outside of the clinic and hence improved the ability of clinicians to manage patients with chronic conditions. Discoveries in the field of optics, chemical engineering, and materials science have allowed engineers to build new sensing technologies and enabled clinical interventions based on novel point-of-care devices. Progress in medical imaging has allowed clinical researchers to gain a better understanding of brain function and hence develop new treatment modalities for stroke and traumatic brain injury survivors. Advances in neuroscience have enabled progress in research areas like the neuromodulation of brain function that have resulted in new intervention modalities for the clinical management of chronic pain. In all these cases, international multidisciplinary teams have played an essential role in moving the field forward. It is the intention of this workshop to provide researchers with an opportunity to develop new international multidisciplinary collaborations that we wish will contribute to transform the field at the intersection of engineering and medical research.

The workshop will consist of a keynote speech and five sessions:

Keynote Speech

1. Biomedical Informatics
2. eHealth & Disease Management
3. Cognitive Neuroscience
4. Medical Imaging & Biosensors
5. Medical Robotics

A panel discussion will conclude the day with the aim of exploring new collaboration opportunities among researchers affiliated with the Universities represented at the workshop with the support of the RCC-Harvard.

List of participants

| Univ. | Professor | Topic |
|---------|----------------------------|-----------------------------------|
| MIT | <i>Elfar Adalsteinsson</i> | Medical Imaging |
| UCM | <i>Rocío Anula</i> | Intraoperative Imaging |
| UPM | <i>M Teresa Arredondo</i> | Personal Health systems |
| Harvard | <i>David Boas</i> | Biomedical Imaging |
| Harvard | <i>Paolo Bonato</i> | Welcome & eHealth |
| Harvard | <i>Federico Capasso</i> | Biosensors |
| UPM | <i>Francisco del Pozo</i> | Cognitive Neuroscience |
| UPM | <i>Manuel Ferré</i> | Medical Robotics |
| Harvard | <i>Matti Hamalainen</i> | Magnetoencephalography |
| UPM | <i>Miguel Holgado</i> | Biophotonics |
| Harvard | <i>Donal E Ingber</i> | Biologically Inspired Engineering |
| UCM | <i>Ignacio Lizasoain</i> | CEI Moncloa. Cluster in Health |
| Harvard | <i>Eng Lo</i> | Neurology & Radiology |
| UCM | <i>Fernando Maestu</i> | Cognitive Neuroscience |
| UPM | <i>Victor Maojo</i> | Biomedical Informatics |
| UCM | <i>José M. Martínez</i> | Welcome message |
| UCM | <i>Julio Mayol</i> | Gastrointestinal Surgery |
| Harvard | <i>Alexa McGray</i> | Biomedical Informatics |
| UCM | <i>Maria Angeles Moro</i> | Medical Imaging |
| UCM | <i>Alberto Muñoz</i> | Biomedical Informatics |
| UPM | <i>José M Páez</i> | Welcome message |
| MIT | <i>Federico Parietti</i> | Medical Robotics |
| UCM | <i>José M Pingarrón</i> | Biosensors |
| UPM | <i>Roberto Prieto</i> | CEI Moncloa. Cluster in Health |
| UPM | <i>Andrés Santos</i> | Medical Imaging |
| MIT | <i>Pete Szolovits</i> | Clinical Decision Making |
| MIT | <i>Lawrence Wald</i> | Brain High Field Imaging |
| Harvard | <i>Conor J Walsh</i> | Wearable robotic devices |