

NEW TECHNOLOGIES IN SURGERY SURGICAL EDUCATION THROUGH SIMULATION

Polo Universitario Le Benedettine
September 29-30, 2018

Presidents: Mauro Ferrari, Luca Morelli

Honorary President: Franco Mosca

Coordinator of Scientific Program: Andrea Moglia

Scientific Secretariat:

M. Bianchini	N. Furbetta
G. Caprili	D. Gianardi
G. Di Franco	S. Guadagni
C. D'Isidoro	M. Palmeri

Saturday, September 29, 2018

The CME Program is provided only for this day

h. 08.30 Registration

h. 08.45 Welcome and introduction
Franco Mosca, Mario Petrini, Mauro Ferrari, Luca Morelli

Session I – New technologies: Research

Chairman: Antonio Di Cataldo, *Catania*

Moderators: Fabio Sbrana, *Chicago (IL, USA)*
Emanuele Cigna, *Pisa*

- h. 09.00 **Lecture**
Directed Energy for Diagnosis and Therapy (DEDAT): The 5th Generation Surgery is Non-Invasive
Richard Satava, *Seattle (WA, USA)*
- h. 09.30 New robots for surgery: the future today
Arianna Menciassi, *Pisa (IT)*
- h. 09.50 A new robotic technology for Microsurgery
Giuseppe Prisco, *Pisa (IT)*
- h. 10.10 Perspectives of robotic microsurgery in transplantation
Cristiano Quintini, *Cleveland (OH, USA)*

- h. 10.30 3D printers for patient-specific surgical planning for kidney transplantation
Andrea Pietrabissa, *Pavia (IT)*
- h. 10.50 Discussion
- h. 11.00 Tactile feedback in laparoscopic and robotic surgery
Calogero Oddo, *Pisa (IT)*
- h. 11.20 A virtual model-based communication platform between radiologists, surgeons and pathologists: application to pancreatic ductal adenocarcinoma
Stefania Marconi, *Pavia (IT)*
- h. 11.40 The use of the Augmented Reality
Vincenzo Ferrari, *Pisa (IT)*
- h. 12.00 Research and new devices for endoscopy
Emanuele Tumino, *Pisa (IT)*

Session II – Surgical simulation for training

- Chairman: Mauro Ferrari, *Pisa (IT)*
- Moderators: Massimo Chiarugi, *Pisa (IT)*
Andrea Moglia, *Pisa (IT)*
- h. 12.30 **Lecture**
Establishments of a leading simulation center in robot-assisted surgery
Anthony Nicholson, *Celebration (FL, USA)*
- h. 13.00 Light lunch
- h. 14.00 Lecture
The Fundamentals of Robotic Surgery (FRS): Evidence Based Medicine requires Evidence-based Education
Richard Satava, *Seattle (WA, USA)*
- h. 14.30 Minimally Invasive and Robotic Surgery Training. The UIC model and experience
Antonio Gangemi, *Chicago (IL, USA)*
- h. 14.50 14 years analysis of Educating Robotic Surgeons
David Crawford, *Chicago (IL, USA)*
- h. 15.10 Simulation based strategies for the training of technical procedures
Giancarlo Torre, *Genova (IT)*
- h. 15.30 Objective assessment of technical skills through a virtual simulator as aptitude test for surgery
Andrea Moglia, *Pisa (IT)*
- h. 15.50 Discussion
- h. 16.00 ACS and simulation
Girma Tefera, *Madison (WI, USA)*

- h. 16.20 Cost-analysis impact of surgical education through simulation
Giuseppe Turchetti, *Pisa (IT)*
- h. 16.40 New technologies, new risks, a challenge for patient
Gaetano Privitera, *Pisa (IT)*
- h. 17.00 Advances of Simulation in Surgical Education (Videoconference)
Fabrizio Michelassi e Mayur Narayan, *New York (USA)*
- h. 17.20 Discussion and filling CME form in (end of CME program)
- h. 17.40 Enabling Factors for Simulation in Robot-assisted surgery (Videoconference)
Ran Bronstein and Nati Elgavi, *Simbionix*
- h. 18.00 Current status and future challenges on surgical simulation for robot-assisted surgery (Videoconference)
Jeff Berkley, *MIMIC*
- Standards for simulation of American Association of Gynecologic Laparoscopists
John Lenihan, *MIMIC*
- h. 18.30 Conclusions

Sunday, September 30, 2018

Arsenali Repubblicani
-Exposition of surgical simulators-

Session III - Use and practice of Simulators
No CME Program

Chairmen: L. Morelli, Pisa
T. Simoncini, Pisa
A. Moglia, Pisa

Tutors: Andrea Moglia
Raffella Berchiolli
Luca Morelli
Vincenzo Ferrari
Marco Innocenti
Luigi Pugliese
Emanuele Cigna
Tommaso Simoncini
Francesco Mannella
Andrea Giannini
Eleonora Russo
Francesca Papini

h. 09.00-18.00

During the second day of the event a practical session will be held where Surgeons, Residents and Students will have the opportunity to try the main and most important virtual and physical laparoscopic, robotic, endovascular and microsurgery simulators. The practical session will be organized under the guidance of expert tutors.

Robotic surgery simulators:	dV-Trainer and Flex VR by MIMIC, da Vinci Skills Simulator by Intuitive Surgical
Laparoscopic surgery simulators:	LapSim by Surgical Science, Storz Simulators by Karl Storz, SIMSEI Laparoscopic Training System by Applied Medical
Microsurgery robotic simulator:	MMI
Endovascular surgery simulator:	Angio Mentor by Symbionix

FACULTY

Raffella Berchiolli

Vascular Surgeon, Assistant Professor of Vascular Surgery, University of Pisa (Italy)

Jeff Berkley

Chief Executive Officer, President and Founder, MIMIC Corporation, Seattle (WA, USA)

Ran Bronstein

Vice President, Chief Research and Operating Officer, Symbionix 3D Systems, Cleveland (OH, USA)

Massimo Chiarugi

Full Professor of General Surgery, University of Pisa (Italy)

Emanuele Cigna

Associate Professor of Plastic Surgery, University of Pisa (Italy)

David Crowford

Associate Professor of Clinical Surgery, College of Medicine Peoria, University of Illinois (IL, USA)

Antonio Di Cataldo

Full Professor of General Surgery, University of Catania (Italy)

Nati Elgavi

RobotiX Team Leader, Symbionix 3D Systems, Cleveland (USA)

Mauro Ferrari

Full Professor of Vascular Surgery, University of Pisa (Italy)

Vincenzo Ferrari

Assistant Professor of Biomedical Engineering and Coordinator of EndoCAS Center, University of Pisa (Italy)

Marco Innocenti

Associate Professor of Plastic Surgery, University of Florence (Italy)

Antonio Gangemi

Assistant Professor of Surgery, University of Illinois Chicago, Chicago (IL, USA)

Andrea Giannini

Assistant Professor of Obstetrics and Gynecology, University of Pisa (Italy)

John Lenihan

Chief Medical Officer, MIMIC Corporation, Seattle (WA, USA)

Paolo Mannella

Associate Professor of Obstetrics and Gynecology, University of Pisa (Italy)

Stefania Marconi

Biomedical Engineer, Postdoctoral Research Fellow, University of Pavia (Italy)

Arianna Menciassi

Full Professor of Biomedical Robotics, Scuola Superiore Sant'Anna di Pisa (Italy)

Fabrizio Michelassi

Lewis Atterbury Stimson Professor & Chairman, Surgeon-in-Chief, Dept. of Surgery, Weill Cornell Medicine, New York (NY, USA)

Andrea Moglia

Engineer. EndoCAS Center, University of Pisa (Italy)

Marco Montorsi

Full Professor of General Surgery, Humanitas University, Milano (Italy)

Luca Morelli

Associate Professor of General Surgery, University of Pisa (Italy)

Franco Mosca

Professor Emeritus of General Surgery, University of Pisa (Italy)

Mayur Narayan

Assistant Professor of Surgery (Interim), Weill Cornell Medical College, New York (NY, USA)

Anthony Nicholson

Owner of Nicholson Investments, and Chairman of the Board at Nicholson Center of Surgical Advancement, Celebration (FL, USA)

Calogero Oddo

Assistant Professor of BioEngineering, Scuola Superiore Sant'Anna, Pisa

Francesca Papini

Obstetrician-gynecologist, Azienda Ospedaliero-Universitaria Pisana (Italy)

Andrea Pietrabissa

Full Professor of General Surgery, University of Pavia (Italy)

Giuseppe M. Prisco

Engineer and Chief Executive Officer at MMI srl, Pisa (Italy)

Gaetano Privitera

Full Professor of Public Health, University of Pisa (Italy)

Luigi Pugliese

General Surgeon, Policlinico San Matteo di Pavia (Italy)

Cristiano Quintini

Associate Professor of Surgery, Director of Liver Transplantation at Cleveland Clinic (OH, USA)

Eleonora Russo

Obstetrician-gynecologist, Azienda Ospedaliero-Universitaria Pisana (Italy)

Richard Satava

Professor Emeritus of Surgery, University of Washington Medical Center (WA, USA)

Fabio Sbrana

Professor of Surgery, Chicago (CH, USA)

Tommaso Simoncini

Full Professor of Obstetrics and Gynecology, University of Pisa (Italy)

Girma Tefera

Associate Professor of Surgery, University of Wisconsin School of Medicine and Public Health (WI, USA)

Emanuele Tumino

Gastroenterologist, Azienda Ospedaliero-Universitaria Pisana (Italy)

Giuseppe Turchetti

Full Professor of Economy and Management, Scuola Superiore Sant'Anna di Pisa (Italy)

Giancarlo Torre

Full Professor of General Surgery, University of Genova (Italy)