

29th International Congress of the Society for Medical Innovation and Technology

SCIENTIFIC PROGRAM

(Update October 19th 2017)

Thursday, 9th November 2017

8.30 - 8.45 Welcome and registration

	ROOM A	ROOM B	ROOM C
8.45	<p>Opening ceremony: Introduction Authorities, Mario Morino (Italy)</p>		
9.15	<p>S1- John Wickham Lecture: Biorobotics and Bionics - science, technology and social challenges Paolo Dario (Italy) Chair: Mario Morino (Italy)</p>		
9.45	<p>S2- <u>Artificial Intelligence technology & Surgery</u></p> <p>Chairs: Andreas Melzer (Germany) Brynjulf Ystgaard (Norway)</p> <p>AI technology for improved safety in the OR - Joris Jaspers (The Netherlands)</p> <p>AI to improve the workflow in the OR - fully integrated OR - the German OR network - Thomas Neumuth (Germany)</p> <p>Advanced concepts for medical robot systems: information into action - Gernot Kronreif (Austria)</p> <p>Emerging Technologies in Surgery - Richard Satava (USA)</p> <p>The death of surgery as we know it - Amir Szold (Israel)</p>	<p>S12- <u>DENTAL@SMIT2017: Technological and biotechnological innovations in dentistry</u></p> <p>Chairs: Stefano Carossa (Italy) Nicola Scotti (Italy)</p> <p>Keynote: Virtual surgical planning and navigation assisted by piezosurgery in oro-maxillofacial field - Massimo Robiony (Italy)</p> <p>Keynote: Novel technologies and relevant know-how for customizing grafts and biomaterials in bone tissue engineering - Federico Mussano (Italy)</p>	<p>S22 - <u>Bioinspired medical devices for innovative medicine</u></p> <p>Chairs: Harald Fischer (Germany) Kaspar Althoefer (UK)</p> <p>Keynote: Building on Bioinspiration: a basis for novel medical devices - Donald Martin (France)</p> <ul style="list-style-type: none"> • TBD • TBD • TBD
11.00	<p>Coffee break</p>		

	ROOM A	ROOM B	ROOM C
11.30	<p>S3 - <u>Actuators and Mechanisms for novel medical tools</u></p> <p>Chairs: Jenny Danklemann (NL) Pietro Valdastri (UK)</p> <p>Keynote: Needles and image Guidance for percutaneous interventions - John van den Dobbelsesteen (NL)</p> <p>OC 48: A lockable steerable needle for the TIPS procedure - Tonke L de Jong (NL)</p> <p>OC 117: Ultra-thin steerable needle: an experimental prototype - Marta Scali, Paulien Veldhoven, Paul Henselmans, Dimitra Dodou, Paul Breedveld (NL)</p> <p>OC 46: Minimally invasive prenatal closure of spina bifida - Lisette Tas, John Van Den Dobbelsesteen, Dick Oepkes, Alex Edgink, (NL)</p> <p>OC 150: Low Melting Point Alloy Based Stiffening of a Soft Robot - Haider Abidi, Alice Tonazzini, Matteo Cianchetti, Dario Floreano, Arianna Menciassi (Italy)</p>	<p>S13 - <u>DENTAL@SMIT2017: Technological and biotechnological innovations in dentistry</u></p> <p>Chairs: Elio Berutti (Italy) Massimo Robiony (Italy)</p> <p>Keynote: Design and virtual validation of the most updated technologies in endodontics - Giorgio Chiandussi (Italy)</p> <p>Keynote: Adhesive materials and digital technologies – Nicola Scotti (Italy)</p>	<p>S23 - <u>New tools for operative endoscopy</u></p> <p>Chairs: Marc O Schurr (Germany) Harald Fischer (Germany)</p> <p>Over-the-scope-clip for bleeding, leak & fistula of the digestive tract – Raffaele Manta (Italy)</p> <p>Over-the-scope-clip for proctology indications – Riccardo Naspetti (Italy)</p> <p>Full-Thickness-Resection-Device for lesions in the colon-rectum: data from 500 registry cases – Marc O. Schurr (Germany)</p>
12.30	Lunch		
13.30	<p>S4- John Abele Lecture: Design and testing of innovative MR Molecular Imaging reporters</p> <p>Silvio Aime (Italy)</p> <p>Chair: Gianluca Ciardelli (Italy)</p>		

	ROOM A	ROOM B	ROOM C
14.00	<p><u>S5 - Image Guided Surgery</u></p> <p>Chairs: Joachim Kettenbach (Austria) Andreas Melzer (Germany)</p> <p>Keynote: Ultrasound methods and guidance systems for surgery - Thomas Lango (Norway)</p> <p>Integrate multimodality hybrid operating rooms to advance outcomes in image guided surgery - Amilcar Alzaga, (Germany)</p> <p>OC 7: 3D tongue model construction and the motion regeneration - Mukai Nobuhiko (Japan)</p> <p>OC 35: Additive manufacturing for gynaecological brachytherapy: custom-fit applicators based on MRI data - Nick J. van de Berg, Rianne C. Laan, Remi A. Nout (The Netherlands)</p> <p>OC 96: An interactive approach for the semi-automatic segmentation of liver and lesions - Pravda Jith Ray, Sergio Salvatore Caccamo, Louise Oram, Ole Jacob Elle, Rahul Prasanna Kumar (Norway)</p> <p>OC 103: Mechanical catheter navigation with electromagnetic tracking to peripheral airway targets - Fabian Trauzettel, Hermann Alexander Jaeger, Marcus Kennedy, Padraig Cantillon-Murphy (Ireland) Erlend Fagertun Ofstad, Hakon Olav Leira, Thomas Lango, (Norway)</p> <p>OC 125: Rectal Cancer Segmentation with Fully Convolutional Neural Network - Joohyung Lee, Ji Eun Oh, Min Ju Kim, Bo Yun Hur, Dae Kyung Sohn (Korea)</p>	<p><u>S14 - Capsule endoscopy</u></p> <p>Chairs: Pietro Valdastri (UK) Marco Pennazio (Italy)</p> <p>OC 116: Wireless Endoscopic Capsule for Early Screening of Colorectal Cancer Contributions by the WiBEC Project - Salman Mahmood (Germany)</p> <p>OC 106: Detection of acute upper gastrointestinal bleeding with the HemoPill acute - a prospective study - Melanie Zimmermann, Sebastian Schostek, Mario Fode, Jan Keller, Michael Melbert, Romi Hartmann, Artur Schmidt, Karel Caca, Marc O. Schurr, Thomas Gottwald (Germany)</p> <p>OC 38: Comparison of white light colonoscopy and a novel robotic colonoscope in the assessment of ulcerative colitis - Stefano Pallotta, Emanuele Tumino, Francesca Iannuzzi, Rodolfo Sacco, Sandro Ardizzone, Gianpaolo Bresci, Roberto De Franchis (Italy)</p> <p>OC 118: Wireless HD Imaging for Minimal Invasive Surgery - Yoav Mintz, Nikolai Kunicher, Noam Livneh, Ronit Brodie, Vered B. Bracha (Israel)</p> <p>OC 61: Post-lymphangiographic multidetector CT for preclinical lymphatic interventions in rabbits -Tomohiro Matsumoto, Kosuke Tomita, Shunto Maegawa, Takako Nakamura, Tetsuya Suzuki, Terumitsu Hasebe (Japan)</p> <p>OC 27: An intuitive disposable endoscope with intrinsic pneumatic actuation - Nicolo Garbin, Long Wang, Dennis Sohn, Keith L. Obstein, Nabil Simaan (USA), Pietro Valdastri (UK)</p> <p>OC 131: Sensorized capsule endoscope for closed-loop magnetic navigation and safe tissue interaction - Renato Calì, Domenico Camboni, Joan Ortega Alcaide, Calogero Maria Oddo, Mariachiara Carrozza, Arianna Menciassi, Gastone Ciuti, Paolo Dario (Italy)</p>	<p><u>S24 - New tech for advanced therapies</u></p> <p>Chairs: Michele Diana (Italy) Joris Jaspers (NL)</p> <p>OC 97: Pre-clinical validation of open-source airway navigation using Anser EMT and CUSTUSx - Herman Alexander Jaeger, Fabian Trauzettel, Hermann Alexander Jaeger, Marcus Kennedy, Padraig Cantillon-Murphy (Ireland) Erlend Fagertun Ofstad, Hakon Olav Leira, Thomas Lango, (Norway)</p> <p>OC 87: Experimental Chitosan membranes applied on the periprostatic neurovascular bundles after nerve-sparing robot-assisted radical prostatectomy: preliminary results of a phase II study - Riccardo Bertolo, Francesco Porpiglia, Cristian Fiore, L. Muratori, Federica Fregnan, Stefano Geuna (Italy)</p> <p>OC 65: Video-assisted arteriovenous fistula in dialysis patients: our preliminary experience with VITOM® HD System - Salvatore Fazzotta, Vincenzo Davide Palumbo (Italy)</p> <p>OC 111: Less is more: new approach to the open abdomen - Federico Lora, Luca Petruzzelli, Mariachiara Benedetto, Eloisa Franchi, Lisa Rapetti (Italy)</p> <p>OC 84: Design of an Innovative Implant for Rib Fracture Stabilisation - Keith Mallia, Philip Farrugia, Aaron Casha (Malta)</p> <p>OC 5: Enriched Leukocyte and Plaster Fibrin (L-PRF) in the Treatment of Skin Lesions – Giorgio Rosa, Enrico Rescigno, Giulia San Romè (Italy)</p>

	ROOM A	ROOM B	ROOM C
15.15	<p>S6 - <u>Novel design of medical devices: from IP to Market Analysis</u></p> <p>Chairs: Mar O Schurr (Germany) Enrico Ghia (Italy)</p> <p>Keynote: Innovative hernia reconstruction through better new materials - El Fray (Szczecin)</p> <p>Keynote: Polypropylene: a unique material with different morphologies and behaviours in hernia repair - Cristina Buemi, Alessandro Ganora (Italy)</p> <p>OC 100: Tissuegraft: from the idea up to the market - Francesca Boccafoschi, Marta Calvo Catoira, Luca Fusaro, Martina Ramella (Italy)</p> <p>OC 63: An active device for high fidelity simulation in newborn intubation – Arianna Menciassi, Selene Tognarelli, Alessia Longo, Rosa Teresa Scaramuzzo, Massimiliano Ciantelli, Armando Cuttano (Italy)</p> <p>OC 70: A novel bactericidal surface to reduce nosocomial infections improving an Italian Patent - Alessandra Piccitto, Ivan Parkin (UK), Mario Morino (Italy)</p>	<p>S15 - <u>CARDIO@SMIT2017: What's new in cardiac surgery</u></p> <p>Chairs: Davide Ricci (Italy) Daniel Wendt (Germany)</p> <p>OC 6: The Development of the Hydraulic Pressure Wave Catheter - Aimée Sakes, Paul Breedveld, Joe Spronck (The Netherlands)</p> <p>OC 16: Polylysine-enriched decellularized matrices: a promising approach for vascular substitutions – Francesca Boccafoschi, Luca Fusaro, Marta Calvo Catoira, Martina Ramella (Italy)</p> <p>OC 51: Development of a modular suturing catheter for minimally invasive surgery: the potential for in vivo - assembly – Helge Wurdemann, Shervanthi Homer-Vanniasinkam, Jian S. Dai (UK), Estevan Hideki Murai, , P. G. Silveira, Daniel Martins (Brasil)</p> <p>OC 67: Development of a robotic platform for minimally invasive aortic heart valve surgery – Izadyvar Tamadon, Selene Toniarelli, Claudio Quaglia, Giorgio Soldani, Vincenzo Ferrari; Paolo Dario, Arianna Menciassi (Italy)</p> <p>OC 104: Evaluation of a Multi-Steerable Catheter for Cardiac Interventions in a 3D-Printed Heart Model – Awaz Ali, Joost De Winter, Dimitra Dodou, Paul Breedveld (The Netherlands)</p> <p>OC 114: A Beating Heart Simulator for Open and Thoracoscopic Surgery – Chengli Song, Shichao Liang, Xuesong Zhau, Chang Ma, Dick Lee, Sha Liu (China)</p>	<p>S25 - <u>Image Guided Surgery 2</u></p> <p>Chairs: Padraig Cantillon-Murphy (Ireland) Filippo Molinari (Italy)</p> <p>OC 8: Electromagnetic tracking can be used to accurately measure left ventricular diameter in real time: a validation study – Magnus Reinsfelt, Øyvind Senstad Andersen, John Aalen, Ole Jacob Elle, Hans Henrik Odland, Espen Wattenberg Remme (Norway)</p> <p>OC 18: Prediction of guidewire trajectory inside the vascular system: 3D computer based model - Hoda Sharei, John J van den Dobbelsteen, Jenny Dankelman (The Netherlands)</p> <p>OC 47: The Simulation of Catheter Interventional Surgery Based on Virtual Reality - Junlei Hu, Xiaojun Chen, Pengjie Sun (China)</p> <p>OC 19: Generatively manufactured flexible instrument guidance device and holding arm for MRI-guided interventions – Robert Odenbach, Juan Sebastián Sánchez López, Michael Friebe (Germany)</p> <p>OC 62: A robotic approach for FUS in moving organs – Arianna Menciassi, Andrea Cafarelli, Alessandro Diodato, Andrea Schiappacasse, Selene Tognarelli, Gastone Ciuti, (Italy), Andreas Melzer (Germany)</p> <p>OC 99: Cybersecurity: IT risk perception in the healthcare. Marche Region Case Study - Barbara Kulaga, Verardino Cristino (Italy)</p>
16.15	Coffee break		

	ROOM A	ROOM B	ROOM C
16.45	<p>S7- <u>I have an idea! From the concept to the clinical validation</u></p> <p>Chairs: Yoav Mintz (Israel) Amir Szold (Israel)</p> <p>From the concept to the clinical validation in a start up company - Enrico Ghia (Italy)</p> <p>OC 145: Novel design of medical devices: from IP to market analysis. How patents can foster innovation in the medical device field - Marco Camolese (Italy)</p> <p>OC 140: Asymmetric - a novel vessel sealing technology, using low energy and a flexible Laser fiber - Amir Szold (Israel)</p> <p>OC 36: Design requirements for surgical equipment for low-and-middle income countries - Roos Marieke Oosting, Linda Wauben, Jenny Dankelmann (The Netherlands), Reinou Groen (USA)</p> <p>OC 142: Extending Human Xtensions from device to system: remote controlled articulating tool for MIS surgery - Amir Szold, Mordechai Sholeb (Israel)</p> <p>OC 53: Design of a fully implantable closed loop artificial pancreas - Veronica Iacovacci, Leonardo Ricotti, Izadyar Tamaddon, Giuseppe Tortora, Carmine Perri, Paolo Dario, Arianna Menciassi (Italy)</p> <p>OC 56: A novel microwaves tool for robotic resection of the liver - Francesco Frosini, Fabio Staderini, Margherita Brancadoro, Mattia Dimitri, Jacopo Regolini, Roberto Minniati, Mohamed Nassim Boushaki, Linda Paternò, Francesco Guerra, Andrea Coratti, Fabio Cianchi, Andrea Corvi, Arianna Menciassi, Guido Biffi Gentili (Italy)</p> <p>OC 74: From concept to design: A new flexible robotic uterine elevator - Chakravarthini Saaj, Seri Mustaza, Kavitha Madhuri (UK)</p>	<p>S16 - <u>CARDIO@SMIT2017: New technologies in heart valve surgery</u></p> <p>Chairs: Massimo Boffini (Italy) Gino Gerosa (Italy)</p> <p>Keynote: Technological advances in TAVI - Daniel Wendt (Germany)</p> <p>Transapical mitral valve repair: further technical developments - Giovanni Speziali (Italy)</p> <p>Percutaneous approaches to the mitral valve: what's next? - Francesco Maisano (Italy)</p> <p>S17 - <u>CARDIO@SMIT2017: Organ engineering: from repair to regeneration</u></p> <p>Chairs: Mauro Rinaldi (Italy) Francesco Maisano (Italy)</p> <p>Keynote: Ex Vivo Lung Perfusion (EVLV) from evaluation to organ repair - Frank D'Ovidio (USA)</p> <p>Purification strategies in organ transplantation - Mauro Atti (Italy)</p> <p>New technologies in heart valve surgery - Gino Gerosa (Italy)</p>	<p>S26 - <u>New tools for laparoscopy & interventional radiology</u></p> <p>Chairs: Andreas Melzer (Germany) Chengli Song (China)</p> <p>OC 139: A Randomized Controlled Trial of the Fundamentals of Robotic Surgery: Validation of a proficiency-based progression robotic skills course in a multi-specialty, multi-institutional trial. - Richard Satava, USA</p> <p>OC 136: Safety of single incision robotic cholecystectomy for benign gallbladder disease: a systematic review – Simone Arolfo, Marco Migliore, ALebrto Arezzo, Roberto Passera, Mario Morino (Italy)</p> <p>OC 64: OneShot®: a new device for close laparoscopy pneumoperitoneum - Vincenzo Davide Palumbo, Giovanni Cassata, Luca Cicero, Antonino De Luca, Attilio Ignazio Lo Monte (Italy)</p> <p>OC 94: Improving fundamental laparoscopic skills by pre-course tactile exploration - Sem F Hardon, Roelf R. Postema, Tim Horeman, Jeroem B. J. Smeets, H. Jaap Bonjer (The Netherlands)</p> <p>OC 81: Sentinel node navigation surgery and ICG fluorescence-guided surgery for gastric cancer – Teruya Minami, Noriyuki Inaki, Toshikatsu Tsuji (Japan)</p> <p>OC 85: Indocyanine green guided sentinel lymph node identification - a prospective study evaluating the distribution of lymph nodes respectively lymph node metastasis in rectal cancer patients - S. Shah, J. Salber, I. Stricker, A. Tannapfel, R. Viebahen (Germany)</p> <p>OC 59: Instruments and situation awareness: main risk-factors for surgery, Linda Wauben, Connie Dekker-van Doorn, Johan Lange, Jan Klein (The Netherlands)</p> <p>OC 147: Morphological and hemodynamic characterization of post endovascular AAA repair: comparison between two different commercial devices - Paola Tasso, Maurizio Lodi Rizzini, Diego Gallo, Umberto Morbiducci (Italy), Anastasios Raptis, Michalis Xenos, Miltiadis Matsagkas (Greece)</p> <p>Keynote: High Performance soft-tissue Navigation, an Introduction to the EU-project HiPerNav– Ole Jakob Elle (Norway)</p>

	<p>OC 98: Autonomous Balloon Management for Endovascular Occlusion - Padraig Cantillon-Murphy, Herman Alexander Jaeger, Cormac McCarthy, Fabian Trauzzettel (Ireland), Ian Kanterman, Alice-Anne Goetz (France), Benjamin Colvard (USA)</p> <p>OC 33: Touchless control of a prototype light system - Louise Oram, Jonathan Brian Alcoriza, Rafael Palomar, Ole Jacob Elle (Norway)</p> <p>OC 21: Clear orthodontic aligners biomechanics optimization through finite element analysis - Gabriele Rossini, Tommaso Castroflorio, Andrea Deregibus, Elio Berutti (Italy)</p> <p>Keynote: China's new policies for international collaboration in medical technology field – Chengli Song (China)</p>		
19.00	GET TOGETHER PARTY AT LINGOTTO DENTAL SCHOOL		

Friday, 10th November 2017

	ROOM A	ROOM B	ROOM C
8.30	<p align="center">S8 - <u>New Technologies for Surgery & Endoscopy</u></p> <p>Chairs: Paul Wetter (USA) Nicola Di Lorenzo (Italy)</p> <p>Current developments in Endoscopy and Minimal Access Platforms - Silvana Perretta (France)</p> <p>The role of multitasking platforms - Andreas Melzer (Germany)</p> <p>Magnetic fields for enabling surgical applications at different scales - Arianna Menciassi (Italy)</p> <p>Reduced port laparoscopic surgery - Yoav Mintz (Israel)</p> <p>5th Generation of Surgery - Richard Satava (USA)</p> <p>Health Technology Assessment: 3D Technology for laparoscopy. Is it worth? - Nereo Vettoretto (Italy)</p>	<p align="center">S18 - <u>Innovation in colorectal endoscopy & surgery</u></p> <p>Chairs: Marco Maria Lirici (Italy) Andrea Pietrabissa (Italy)</p> <p>OC 122: The ReCIVA breath sampler for colorectal cancer screening. Preliminary evaluation and results - Donato Francesco Altomare (Italy)</p> <p>OC 14: RED – Robot for Endoscopic Dissection: preliminary study - Margherita Brancadoro, Claudio Quaglia, Haider Abidi, Marco Augusto Bonino, Arianna Menciassi, Alberto Arezzo (Italy)</p> <p>OC 112: Endoscopic Full thickness resection: preliminary indications and results - Franco Coppola (Italy)</p> <p>OC 90: Quality of mesorectal excision after open, laparoscopic, robotic and transanal TME – Simone Maria Tierno, Gabriele Campana, Gianfrancesco Intini; Marco Giordano, Carlo Eugenio Vitelli, Marco Maria Lirici (Italy)</p> <p>OC 123: Pre-clinical in vivo validation of the CYCLOPS surgical system for ESD - TJC Oude Vrielink, A. Darzi, G. Mylonas (UK)</p> <p>OC 95: Hands-on colorectal laparoscopic skills courses: lessons learned after 10 editions - Francisco Miguel Sanchez-Margallo, Miguel Angel Sanchez Hurtado, José Antonio Fatas, Idoia Diaz-Guemes, Francisco Alba Mesa; José Fernando Trebolle, Rocho Ferrer Sotelo (Spain)</p> <p>OC 10: A novel method for intraoperative tactile examination in colorectal surgery - Rozaliia Solodova, Vladimir Galatenko, Eldari Nakashidze, Vladimir Staroverov, Mikhail Sokolov (Russia)</p> <p>OC 92: Trans-anal Total Mesorectal Excision: Pneumodissection of Retroperitoneal Structures Eases Laparoscopic Rectal Resection - Simone Maria Tierno, Gabriele Campana, Gianfrancesco Intini, Carlo Eugenio Vitelli, Marco Maria Lirici (Italy)</p> <p>Oc 119: Efficacy of the Over-The-Scope Clip (OTSC) for treatment of colorectal postsurgical leaks and fistulas - Mauro Verra, Giacomo Lo Secco, Giulio Di Benedetto, Lorenzo Bono, Mario Morino, Alberto Arezzo (Italy)</p>	<p align="center">S27 - <u>What's cool in navigation</u></p> <p>Chairs: Ole Jacob Elle (Norway) Pietro Valdastri (UK)</p> <p>OC 66: Evaluation of a 3D planning tool for irreversible electroporation treatment in pancreatic cancer - Benjamin Eigl, Mathias Peterhans, Stefan Weber, Beat Gloor, Mathias Worni (Switzerland)</p> <p>OC 4: In vivo identification of liver tumors during liver surgery using electromagnetic navigation: a pilot study - Oleksandra Ivashchenko, Bas Pouw, Jasper Nijkamp, Koert F. D. Kuhlmann, Niels F. M. Kok, Elisabeth G. Klompenhouwer, Theo J. M. Ruers (The Netherlands)</p> <p>OC 79: Mixed Reality 3D Visualization and Interaction for Surgery using HoloLens, Rahul Prasanna Kumar, Henrik Brun, Bjørn Edwin, Ole Jacob Elle (Norway)</p> <p>OC 86: Intra-operative estimation of surgical progress by tracking instrument use - Frédérique Meeuwssen, Fabian Van Luyn, John van Den Dobbelssteen (The Netherlands)</p> <p>OC 78: Magnetic resonance imaging compatible liver phantom with 3D printed vessels for pre-clinical assessment - Egidijus Pelanis, Louise Oram, Rahul P. Kumar, Ole Jacob Elle, Bjørn Edwin (Norway)</p> <p>OC 93: Implementation of natural user interface for medical image navigation and remote control during surgery: Efficiency and face validity - Francisco Miguel Sánchez-Margallo, Juan Alberto Sánchez-Margallo, José Luis Moyrano Cuevas (Spain)</p> <p>OC 28: Assessment of target registration error for hybrid instrument tracking for image guided surgery applications - Andrea Teatini, Ole Jacob Elle, Bjørn Edwin (Norway)</p> <p>OC 105: Assessing non-technical skills in the delivery room through multisensory-based simulation – Marcello Passarelli, Fabrizio Bracco, Michele Masini, Filippo Domaneschi, Carlo Chiorri (Italy), Donald Glowinski (Switzerland)</p> <p>OC 144: Using video-tracking algorithms of the MST robotic camera manipulator for teaching and testing surgical skills - Amir Szold (Israel)</p>
10:00	Coffee break		

	ROOM A	ROOM B	ROOM C
10.30	S20 - Gerhard Buess Lecture: Flexible surgery: the new frontier of minimally invasive therapy Lee Swanstrom (USA / France) Chair: Alberto Arezzo (Italy)		
11.00	S9 - <u>Robotics for Surgery & Endoscopy</u> Chairs: Arianna Menciassi (Italy) Bruno Siciliano (Italy) State of the art of robotics and surgery - Young-Woo Kim (Korea) Is there a future in robot assisted minimally invasive surgery? - Paolo Fiorini (Italy) Surgical robots of the future: more dexterity through variable-stiffness instruments - Kaspar Althoefer (UK) Current developments in Operative Flexible Endoscopy: The ISI-scope - Silvana Perretta (France) Computer vision and robotics for augmenting the surgeon's capabilities during the intervention - Elena De Momi (Italy) Advances in Surgical Robotics - Bruno Siciliano (Italy)	S19 - <u>Materials for medical devices: biocompatibility, functional surfaces</u> Chairs: Ipsita Roy (UK) Alberto Audenino (Italy) Keynote: Innovative Medical Devices Based on Natural Materials - Ipsita Roy (UK) Keynote: Science for Industry – Advanced Materials for Biomedical Applications – Xiang Zhang (UK) OC 41: Low Melting Point Materials as controllable stiffness mechanism for endoscopic and catheter applications - Loïc Blanc (Belgium) OC 45: Towards a new patient-specific, modular aortic vascular phantom with clinically relevant mechanical properties - Helge Wurdemann, Shervanthi Homer-Vanniasinkam, Gaetano Buriesci, Andrea Palombi (UK), Antonio Gallarello, Elena De Momi (Italy) OC 32: Improving functional recovery after radical prostatectomy: in vitro evidences on a chitosan-based medical device – Stefano Geuna, Luisa Muratori, Federica Fregnan, Riccardo Bertolo, Francesco Porpiglia (Italy) Keynote: Clinical validation of medical devices in Europe: new regulatory challenges - Alice Ravizza (Italy)	S28 - <u>New tools for laparoscopy 2</u> Chairs: Calin Tiu (Romania) Yoav Mintz (Israel) OC 141: Artask: A mesh fixation tacking device with potential robotic interface - Amir Szold (Israel) OC 143: Performance assessment and training using MST core software: Instrument-tracking using video analysis software - Amir Szold (Israel) OC 2: Is Reduced port laparoscopic cholecystectomy any better than the gold standard? To assess surgeon stress and workload: a randomized controlled trial - Yasuhiro Ishiyama, Yoshiaki Hara, Yuta Enami, Syouji Shimada, Kenta Nakahara, Chiyo Maeda, Naruhiko Sawada, Fumio Ishida, Shin-ei Kudo (Japan) OC 52: Changes in Abdominal wall thickness during laparoscopy: Implications for the Use of magnetic assisted surgery - Yoav Mintz, Noam Shussman, Gad Marom, Lisandro Luques, Ram Elazary, Mahmoud Abu-Gazala, Alon Pikarsky, Liat Appelbaum, Ronit Brodie (Israel) OC 83-91: Analysis of localized muscle fatigue in single incision endoscopic surgery - Francisco Miguel Sánchez Margallo, Juan Alberto Sánchez Margallo, Kostantinos Gianikellis (Spain), Andreas Skiadopoulos (USA) OC 135: Single-Incision laparoscopic cholecystectomy is responsible for increased adverse events: results of a meta-analysis of randomized controlled trials – Edoardo Forcignagnò, Alberto Arezzo, Roberto Passera, Lisa Rapetti, Mario Morino OC 121: Calore Secure Port Closure - Yoav Mintz, Jonathan Yuvald, Giora Kornblau, David Neustadter, Ronit Brodie (Israel) OC 89: Laparoscopic cutting using Radius r2 DRIVE instruments: Surgeon's performance and muscular intervention - Francisco Miguel Sánchez Margallo, Juan Alberto Sánchez Margallo, Kostantinos Gianikellis (Spain), Andreas Skiadopoulos (USA) OC 39: Finite element analysis in colorectal surgery: preliminary results on the interaction between tissue and surgical tool - Robinson Guachi, Michele Bici, Fabiano Bini, Laura Lorenzon, Francesca Campana, Franco Marinozzi (Italy)

	ROOM A	ROOM B	ROOM C
12.30		Lunch	
13.30	<p>S10 - <u>Present and future of colon cancer diagnosis</u></p> <p>Chairs: Eiji Kanehira (Japan) Roel Hompes (UK)</p> <p>New ways for colorectal cancer screening - Carlo Senore (Italy)</p> <p>Present and future of robotic capsule endoscopy - Pietro Valdastrì (UK)</p> <p>The ENDOVESPA project - Gastone Ciuti (Italy)</p> <p>EndoMASTER, Transported and other robotic systems for operative flexible endoscopy – Philip Wai-yan Chiu (Hong Kong)</p> <p>FTRD in full-thickness resection of colorectal lesions: a meta-analysis of current clinical data – Gianluca Angrisani (Italy)</p> <p>Status and future of sentinel node detection in early colorectal cancer: towards organ sparing surgery - Ronan Cahil (Ireland)</p> <p>Actual and future applications of fluorescence in colorectal cancer surgery - Luigi Boni (Italy)</p>	<p>S20 - <u>Nanomedicine tools supporting / replacing surgery</u></p> <p>Chairs: Paolo Netti (Italy) Enrica Verne' (Italy)</p> <p>Keynote: Materials and processes to engineering 3D viable human tissues in vitro – Netti (Italy)</p> <p>ERC Corner 1: Multifunctional hybrid nanovectors: a new tool to overcome highly invasive tumor resistance - Ciofani (Italy)</p> <p>ERC Corner 2: Smart stimuli-responsive nanoconstructs for cancer theranostics - Tania Limongi, Nadia Garino, Giancarlo Canavese, Marco Laurenti, Luisa Racca, Marta Canta, Bianca Dumontel, Andrea Ancona, Valentina Cauda (Italy)</p> <p>ERC Corner 3: MYKI: A Biodirectional MyoKinetic Implanted Interface for Neural Control of Artificial Limbs – Christian Cipriani (Italy)</p> <p>OC 20: Ion-doped mesoporous bioactive glass nanoparticles as antibacterial agents in tissue regeneration - Alessandra Bari, Carlotta Pontremoli, Sonia Fiorilli, Chiara Vitale Brovarone (Italy), Joanna Shepherd, Sheila MacNeil (UK)</p> <p>OC 23: Magneto-Plasmonic nanoparticles for photodynamic therapy - Cristina Multari, Marta Miola, Francesco Labiano, Roberto Gerbaldo, Doriana Debellis, Enrica Vernè (Italy), Giuseppe Pezzotti (Japan)</p> <p>OC 55: Antithrombogenic nano-coatings by doping into amorphous carbon films for blood contacting medical devices - Shunto Maegawa, Terumitsu Hasebe, Kenta Bito, Masamitsu Nakaiama, Tomohiro Matsumoto, Tetsuya Suzuki (Japan)</p>	<p>S29 - <u>Diagnostic systems</u></p> <p>Chairs: Helge Wuerdmann (UK) Marco Knäflitz (Italy)</p> <p>Keynote: Advancements in Transcatheter aortic valve replacement (TAVR) – Data mining using soft robotic balloon catheters - Helge Wuerdmann (UK)</p> <p>OC 107: Detection of acute upper gastrointestinal bleeding with the HemoPill acute – a set of volunteer experiments - Melanie Zimmermann, Sebastian Schostek, Mario Fode, Jan Keller, Michael Melbert, Thomas Gottwald, Marc O. Schurr (Germany)</p> <p>OC 128: Instrumentation of an external fixator for bone healing process monitoring: preliminary results - Stefano Mazzoleni, Elena Battini, Gastone Ciuti, Cesare Stefanini, Paolo Dario (Italy), Fatima Omar Ahmed Ba Fakih (UAE)</p> <p>OC 130: Colonoscopic Tactile Instrument to improve cancer detection sensitivity - Federico Bianchi, Enrico Trallori, Domenico Camboni, Calogero Maria Oddo, Arianna Menciassi, Gastone Ciuti, Paolo Dario (Italy)</p> <p>OC 146: Automation in quantitative medical imaging and its role as an enabling technology - Kristen Meiburger, Massimo Salvi, Cristina Caresio, Rosaria Santoro, Francesco Angelini, Francesco Amadeo, Isotta Chimenti, Maurizio Pesce, Umberto Morbiducci, Filippo Molinari (Italy)</p>
15.15	<p>S11 - <u>Advances in rectal cancer surgery</u></p> <p>Chairs: Andrea Pietrabissa (Italy) Gilberto Poggioli (Italy)</p> <p>Keynote: Transanal Flexible robotic surgery: here now? Report of the first endoluminal rectal excision on human - Vincent Obias (USA)</p> <p>Transanal Endoscopic Microsurgery: 35 years now - Eiji Kanehira (Japan)</p>	<p>S21 - <u>Organ repair & tissue engineering</u></p> <p>Chairs: Laura Montanaro (Italy) Valeria Chiono (Italy)</p> <p>Keynote: Redefining Identity of Disease, Tissue and Cells – A BioMaterials Paradigm – Abhay Pandit (Ireland)</p> <p>ERC Corner 4: Smart bone-like scaffolds for osteoporotic fractures - Chiara Vitale Brovarone (Italy)</p>	<p>S30 - <u>NEURO@SMIT2017: New techniques and devices in neurosurgery I</u></p> <p>Chairs: Alessandro Ducati (Italy) Franco Servadei (Italy)</p> <p>From microscopy to endoscopy in the sellar parasellar tumours - Lasio Giovanni (Italy)</p> <p>3D technology in sellar parasellar tumors - Francesco Zenga (Italy)</p>

	<p>Keynote: Ta-TME & non-restorative abdomino-endoscopic perineal excision of the anorectum – Roel Hompes (UK)</p> <p>Robot for rectal cancer surgery - Paolo Pietro Bianchi (Italy)</p> <p>OC 138: Transperineal minimally invasive approach in Abdomino-perineal resection - Simone Arolfo (Italy)</p>	<p>OC 3: Human Liver Stem Cells-derived Extracellular Vesicles reduce hepatic injury in a murine model of ex vivo hypoxic normothermic liver perfusion - Dorotea Roggio, Federica Rigo (Italy)</p> <p>OC 58: Design of a socket with variable stiffness for lower limb prosthesis – Michele Ibrahim, Linda Paternò, Leonardo Ricotti, Arianna Menciassi (Italy)</p> <p>OC 73: Nanotechnology-Based Strategies To Treat Chronic Wounds - Chiara Tonda Turo, Monica Boffitto, Francesca Ruini, Alessandro Torchio, Rossella Laurano, Chiara Ceresa, Letizia Fracchia, Gianluca Ciardelli (Italy), Miguel Gisbert Garzaran, Miguel Manzano Garcia (Spain), Piergiorgio Gentile, Ana Marina Ferreira Duarte (UK)</p> <p>OC 88: Injectable polyurethane-based hydrogels for smart drug release in the treatment of chronic skin wounds - Rossella Laurano, Alessandro Torchio, Monica Boffitto, Gianluca Ciardelli (Italy)</p> <p>OC 149: Collagen-based biomimetic smart scaffold for bone tissue engineering - Giorgia Montalbano (Italy)</p>	<p>S31 - NEURO@SMIT2017: New techniques and devices in neurosurgery II</p> <p>Chairs: Diego Garbossa (Italy), Uwe Spetzger (Germany)</p> <p>New intraoperative techniques for vascular neurosurgery – Fady T. Charbel (USA)</p> <p>Intraoperative real time navigation and new tracers technology for brain gliomas - Francesco Di Meco (Italy)</p> <p>Intraoperative CT in brain surgery - Giuseppe Barbagallo (Italy)</p> <p>Intraoperative O-arm in spine surgery - Maurizio Fornari (Italy)</p> <p>OC 151: Anatomic model for artery injury simulation in management of vascular complications in endoscopic endonasal surgery - Paolo Pacca (Italy)</p> <p>OC 102: Clinical Use of Intraoperative Decision-making Supporting System - Yuki Horise, Kitaro Yoshimitsu, Takashi Maruyama, Yroshi Iseki, Ken Masamune, Yoshiro Muragaki (Japan)</p> <p>OC 115: Hyper-spectral imaging of the human brain reveals slow sinusoidal, hemodynamic oscillations at distinct frequencies, Herke Jan Noordmans, Doien Van Blooij, Jeroel Siero, Jaco Zwanenburg, John Klaessens, Nik Ramsey (The Netherlands)</p>
17.00	Coffee break		
17.00 - 19.00	GENERAL ASSEMBLY		
20.00	SOCIAL EVENT AND DINNER Museo dell'Automobile		
22.00	SMIT AWARDS (iSMIT Best Abstract, iSMIT Best New Idea, iSMIT Rookie of the year, iSMIT Member Retriever, iSMIT Honorary Award)		
22.30	CLOSING CEREMONY Mario Morino (Italy), Arianna Menciassi (Italy), Gianluca Ciardelli (Italy) Alberto Arezzo (Italy), Young-Woo Kim (Korea), Andreas Melzer (Germany)		

Congress Venue:

Dental School – University of Turin – Via Nizza 230, 10126 Torino, Italy

The conference will be held in the Dental School in the Turin University, which is located just outside the city center of Turin, in front of EATALY, on the third floor of Lingotto.

Organizing Secretariat



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