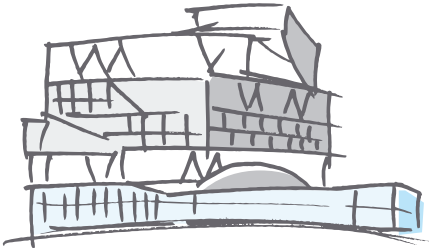
PROGRAM

SMIT

SLK-Kliniken

“New technology drives medicine”





SMIT 2019

October 10-11, 2019
Konzert- und Kongress-
zentrum Harmonie
Heilbronn

www.smit2019.com

ABOUT iSMIT

The international Society for Medical Innovation and Technology (iSMIT) is an international society, formed in 1989 under the name "Society for Minimally Invasive Therapy" (SMIT) by an innovative group of medical practitioners led by John Wickham. Prof. Jens Rassweiler was one of the founding members, all leaders in their fields and dedicated to the multidisciplinary advancement of minimally invasive therapy in an attempt to reduce patient trauma arising from traditional surgical operations or radiological interventions. The current membership base includes representatives from most medical specialties, instrument manufacturing, biomedical engineering and research out of >35countries. As to reflect this broader membership as well as to attract further members not necessarily only within minimally invasive therapy, the name of the Society was formally changed to "international Society for Medical Innovation and Technology" iSMIT.

iSMIT
international SOCIETY FOR MEDICAL INNOVATION AND TECHNOLOGY

SMIT looks back on over 25 years of achievement

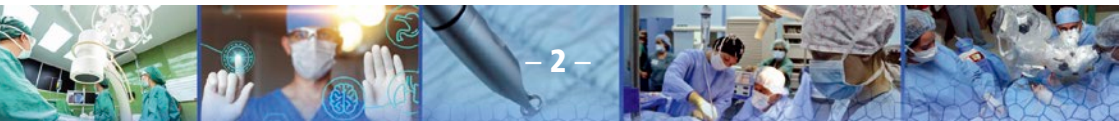
Since its inauguration in 1989, SMIT has served as an „interdisciplinary forum to promote the cooperation between physicians from various surgical specialities, but also medical engineers, respectively medical device manufacturers, whose expertise was needed to build the instruments that had to be developed to carry out the new concept of surgery." (Extract from: 25 years of SMIT: the past, the present, and the future of minimally invasive therapy).



© European Association of Urology

John Wickham (1929 – 2017)
Former President and Founder of the Society for Minimally Invasive Surgery (SMIT)

For further information regarding iSMIT and membership, please visit the website:
https://ismit.org/

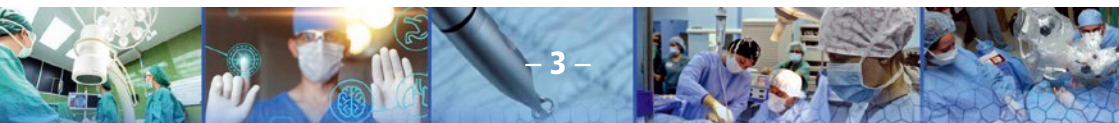


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Welcome of the Congress Chair

Invitation

The 31st International Congress of the Society for Medical Innovation and Technology (iSMIT) is taking place in Heilbronn, Germany from Thursday October 10th to Friday October 11th 2019. The theme of the congress is „Technology drives medicine".

The meeting is held at the Congress Center Harmonie, located in the center of Heilbronn, an inspiring city, which combines a history of wine cultivation with modern industry of car production (AUDI), food technology and alternative energy sources. In 2019 Heilbronn hosts the German Garden Expo.

The meeting focuses on minimally invasive surgery including flexible surgery and robotics, which concerns all faculties like urology, surgery, gynaecology, and ENT. Further topics are "interventional radiology, computer-assisted medicine, nanotechnology & nanomedicine, smart technologies, future OR & logistics, vision for the future, next generation technologies, and artificial intelligence.

The long tradition of this innovative meeting puts interdisciplinary exchange of ideas as well as the direct contact with our partners from the industry as main goal of SMIT 2019. Based on this, we also present a platform for start-up companies and ideas.

We want to invite to attend this exciting meeting in the beautiful city of Heilbronn.



Congress President:
Prof. Dr. med. Dr. h.c. mult. Jens Rassweiler
Chairman of Department of Urology
SLK Kliniken Heilbronn
University of Heidelberg, Germany
jens.rassweiler@slk-kliniken.de



Congress Co-President:
Prof. Dr.-Ing. Lena Maier-Hein
Div. Computer Assisted Medical
Interventions (CAMI)
German Cancer
Research Center (DKFZ)

Welcome of the Deputy Prime Minister

Ladies and Gentlemen,
Dear Participants,

A very warm welcome to the German Southwest, right in the very heart of Europe, and to the number one innovation region in all of Europe.

Baden-Württemberg is a highly dynamic, highly innovative state. Our State Government is working with full power for the digital transformation. This legislative period from 2016 to 2021, we will be spending one billion on this: which means 500,000 euros on every single day. This goes to show: we in Baden-Württemberg are working for the future.

Digital transformation is changing our word. It confronts us with some very real questions concerning humanity as such. What will happen if a failed eye sight can be reclaimed through digital processes, or when we have brain controlled artificial limbs or if we can expand our capability to acquire intelligence artificially? These are the questions that will occupy us in the future.

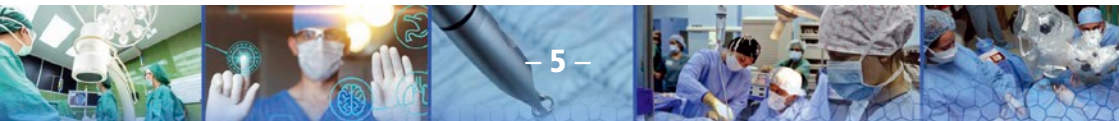
The International Congress of the Society for Medical Innovation and Technology traditionally spearheads medical innovation. Therefore – in my capacity as Minister for Digitisation and thus as the one in charge of the future – I claim that it is excellently suited to take place in Baden-Württemberg and – as a true native of Heilbronn – that it belongs to Heilbronn.

I wish you a most successful, insightful and inspirational meeting!

With warmest regards,



Thomas Strobl
Deputy Prime Minister
Minister of the Interior, Digitisation and Migration



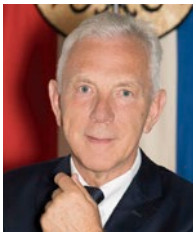
Welcome of the Lord Mayor

Dear Members and Guests,

On behalf of the city of Heilbronn I want to express a warm welcome to all delegates of this important meeting. We are proud to host the 31st Congress of the Society of Minimally Invasive Therapy under the guidance of Professor Rassweiler as president. The idea of this meeting fits excellently into the philosophy of the city of Heilbronn: The close collaboration of engineers with doctors as well as the exchange of medicine with industry. Interestingly, several engineers who are actively involved in this meeting have been educated at the Institutes of Medical Informatics in our University of Applied Sciences here in Heilbronn.

Beside this, Heilbronn has a lot to offer to its visitors. You will enjoy the famous wines cultivated in our area during the welcome reception in the Wine Villa. However, you may also walk through the National Garden Show, which will be our highlight this year. Not only at the Technology Night our brand-new science centre "experimenta" invites you to novel ways of technological education. Of course you may also just take it easy and enjoy the riverside of the Neckar.

Together with the organizers, I wish the SMIT-Meeting the best success providing exchange of the most recent technologies in the field of medicine and with the session "Medicine 2030" also a glimpse into the future. I am sure, that Heilbronn – as Seoul last year and Chicago next year will offer an optimal platform and creative atmosphere.



Harry Mergel
Lord Mayor of Heilbronn

Organizing Committee

Local Organizing Committee

- Porf. Dr. Rolf Bendl
- Dr. med. Marcel Fiedler
- Dr. Harald Fischer
- Dr. med. Ali Serdar Gözen, FEBU
- Prof. Dr. med. Egbert Hagmüller
- Prof. Dr. med. Marcus Hennersdorf
- Prof. Dr. med. Markus Hohenfellner
- Prof. Dr. Georg Kähler
- Prof. Dr. Konrad Karcz
- Thomas Kirchner
- Prof. Dr. med. Wolfgang Linhardt
- Prof. Dr. med. Burkhard Lippert
- Prof. Dr. med. Uwe Martens
- Keno März MSc. med. inf.
- Prof. Dr.-Ing. Gerrit Meixner
- Prof. Dr. med. Phillipe Perreira
- PD Dr. Martin Ringeisen
- Prof. Dr. Olver W. Sakowitz
- PD. Dr. med. Dr. h.c. Uwe Spetzger
- Prof. Dr. Arnulf Stenzl
- Prof. Dr. Dogu Teber

International Organizing Committee

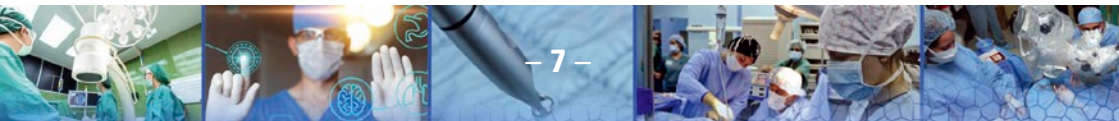
- Dr. Alberto Breda
- Allen W Chiu, MD, PhD
- Prof. Dr. med. Piotr Chlosta, FEBU
- Gerhard J Fuchs, MD, FACS
- Man Kay Li MD
- Prof. Evangelos Liatsikos
- Prof. Andreas Melzer
- Koon Ho Rha , MD FACS PhD
- Prof. Morgan Roupret
- Prof. Marc Schurr
- Prof. Dr. Jens-Uwe Stolzenburg
- Robert Sweet, MD
- Domenico Veneziano, MD, FEBU
- M.D. Paul Alan Wetter

Organizer

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Am Gesundbrunnen 20-26
74078 Heilbronn, Germany
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Fax: +49 (0) 7131 49 47 40 00 0
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Web: www.slk-kliniken.de

Organization of Registration / Exhibition / Sponsoring

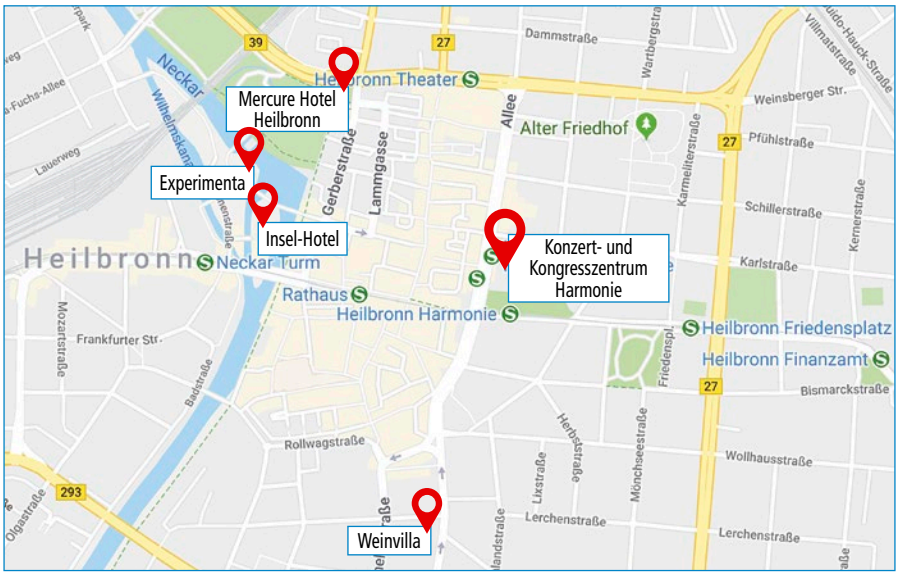
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Web: www.interplan.de



General Information

Venue

Konzert- und Kongresszentrum Harmonie
Allee 28
74072 Heilbronn, Germany

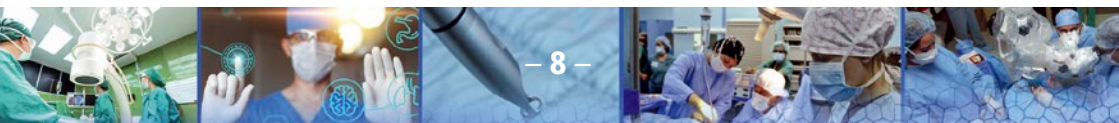


Registration

	Late Registration	Onsite Registration
Non-Member SMIT	450.00 €	500.00 €
Member SMIT	350.00 €	400.00 €
Bachelor/Master student / Physician in private practice	35.00 €	85.00 €
Postgraduate student*	150.00 €	200.00 €
Get together@Weinvilla	25.00 €	25.00 €
Science & Technology Night @Experimenta	75.00 €	75.00 €

incl. 19% VAT

* All Postgraduate students will be admitted at the Conference only after presentation by email to smit2019@interplan.de of a certificate of their postgraduate status. This rate is valid for PhD students and residents.



General Information

Registration fee includes

- All Scientific Sessions
- Admission to the Exhibition
- Electronic material (program, abstracts etc.)
- Certificate of Attendance
- Coffee at the breaks

Hands-On-Courses **50.00 €**

Terms and Conditions

All cancellations and amendments must be submitted in writing to the conference office (fax +49 (0)89 54 82 34 43 or by email to smit@interplan.de) before 31 July 2019 to receive a refund of registration fee deducting a 35.00 € cancellation fee. No refund will be made after this date, however an alternative participant's name may be submitted.

Social Program

Get-Together

SMIT is looking forward to meet you at the Get-together.

When: Thursday, October 10, 19:30

Where: Weinvilla
Cäcilienstrasse 66, 74072 Heilbronn
25,00 € per person

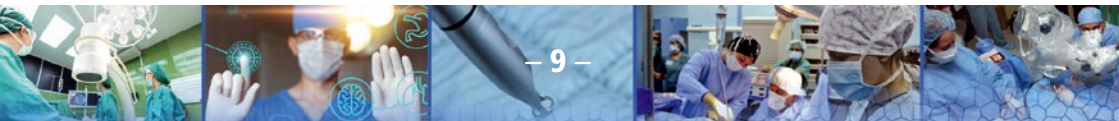
with the kind support of the
'Genossenschaftskellerei Heilbronn EG'
and 'Teusser Mineralbrunnen'.

Science & Technology Night

Entertaining, relaxed, cheerful – SMIT cordially invites you to the science & technology night. Let the conference end in a convivial atmosphere with your colleagues and spend a varied and exciting evening.

When: Friday, October 11, 19:30

Where: Experimenta – The Science Center
Experimenta-Platz, 74072 Heilbronn
75,00 € per person



SMIT Special Lectures

Gerhard Buess Lecture

Purpose: Innovation

Gerhard Buess (1948-2010) was one of the most influential genius persons in the field of endoscopic surgery, a pioneer, friend and mentor to many SMIT members. He was always very powerful, demanding, challenging, but fair and friendly in driving his ideas to realization. He was a scientist who boosted technical progress in surgery and pioneered the revolution of minimally invasive surgery in the late 1980s and early 1990s.

Speakers of Gerhard Buess Lecture:

2019 Rob Sweet
2018 Young Soo Kim
2017 Lee Swanstrom
2015 Amir Szold
2014 Arthur Erdman
2013 Alfred Ashoff
2012 Richard Satava

John Wickham Lecture

Purpose: Clinical leadership and clinical practice

John Wickham (1927-2017) was a British urologist, surgeon and founder of SMIT. He was a pioneer in keyhole surgery and the autonomous transurethral resection of the prostate (TURP) robot, forseeing the subsequent revolution on robotic surgery. He is quoted as saying: "I hope our efforts over these years may have had some small impact in reducing unnecessary surgical injury to our ever trusting patients."

Speakers of John Wickham Lecture:

2019 Peter Alken
2018 Jun-Gi Kim
2017 Paolo Dario
2015 Paul Wetter
2014 George Hanna
2013 Karl Schaller
2012 Nicola Di Lorenzo



Earl Owen Lecture

Earl Owen (1934-2014) was an Australian microsurgeon and classical music specialist who led in many pioneering achievements in the field of microsurgery, including many "world firsts", such as the world´s first finger reattachment, vasectomy reversal, fallopian tube ligation, hand transplant, double hand transplant, and face transplant. He was a musician, winning piano competition when he was 14, and lectured in the music department of the University of Sydney. He was also a designer interested in ergonomic design, heading up a company that designed chairs for dental clinics.

Speakers of Earl Owen Lecture:

2019 Thomas Wendler

2018 Yuan-Ting Zhang

2015 Jeen M Duberned

John Abele Lecture

Purpose: Entrepreneurship

John E. Abele (born in 1937) is an American businessman, and the co-founder and a director of Boston Scientific, a medical device company. He was awarded the ASME Medal (the highest award for eminently distinguished engineering achievement) in 2010. He served as a chairman for FIRST robotics till 2010. He is also a member of the USA Science and Engineering Festival´s Advisory Board.

Speakers of John Abele Lecture:

2019 Stefanie Speidel

2018 Byoung Goo Min

2017 Silvio Aime

2015 Joe Hage

2014 John Abele

2013 Fady Charbel

2012 Richard Satava



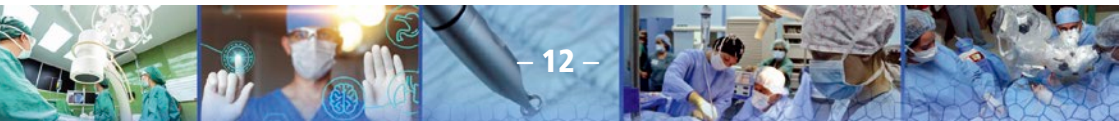
Scientific Program – Overview

Thursday, October 10, 2019

	Wilhelm Maybach Saal A	Willhelm Maybach Saal B
08:30 – 10:00	**Session 1:** News for endoscopy and laparoscopy	**Session 2:** Soft-tissue navigation
10:00 – 10:15	Coffee Break	
10:15 – 11:15	Opening	
11:15 – 12:45	**Session 4:** Artificial intelligence and surgery	**Session 5:** Intraoperative (3D)-navigation for interventional radiology and percutaneous technique
12:45 – 13:45	Lunch Symposia: Steba biotech	Lunch Symposia: Gelita Medical
13:45 – 14:30	**Session 7:** Surgical Data Science	**Session 8:** Image guided therapies and navigation
14:30 – 15:15		
15:15 – 16:00	**Session 10:** Robotics – New systems for laparoscopy and endourology	**Session 11:** Simulation and training
16:00 – 16:45		
16:45 – 17:00	Coffee Break	
17:00 – 18:30	**Session 13:** Startup Showcases & Know-How	**Session 14:** Modern management of upper and lower urinary tract TCC
19:30 – 23:00	Get-Together in the "Weinvilla"	

Friday, October 11, 2019

	Wilhelm Maybach Saal A	Willhelm Maybach Saal B
08:30 – 10:00	**Session 16:** The role of single-use endoscopy intravesical treatment - Lasers	**Session 17:** Controversies in Minimally Invasive Urogynecology
10:00 – 10:30	Coffee Break	
10:30 – 12:00	**Session 19:** Focal interdisciplinary therapy	**Session 20:** What is new in intraoperative imaging?
12:00 – 13:00	Lunch-Science-Slam	Lunch
13:00 – 14:30	**Session 22:** Operating room of the future	**Session 23:** Minimally invasive oncologic therapy for renal cancer
14:30 – 16:00	**Session 25:** Medicine 2030	**Session 26:** Minimally invasive oncologic therapy on prostate cancer
16:00 – 17:00	Closure	
17:00 – 18:30	General Assembly	
19:15 – 23:00	Science & Technology Night @Experimenta, SMIT Awards, Closing Ceremony	



Scientific Program – Overview

Thursday, October 10, 2019

Seminarraum	Foyer	Theodor Heuss Saal	
Session 3: Start up presentations			08:30 – 10:00
Coffee Break			10:00 – 10:15
			10:15 – 11:15
Session 6: Bio-inspired medical devices	**ePoster 1:** Urology-upper urinary tract + ESWL	P.O.P. Training in Laparoscopy	11:15 – 12:45
SMIT-Board Meeting (SC)	Lunch		12:45 – 13:45
Session 9: Medical Device Design	**ePoster 2:** Urology-lower urinary tract	E-BLUS	13:45 – 14:30
			14:30 – 15:15
Session 12: ESWT – interdisciplinary indications	**ePoster 3:** New devices		15:15 – 16:00
			16:00 – 16:45
Coffee Break			16:45 – 17:00
Session 15: Cardiac Surgery	**ePoster 4:** Laparoscopy, robotics	Workshop Retrograde intrarenal surgery / flexible ureteroscopy	17:00 – 18:30
Get-Together in the "Weinvilla"			19:30 – 23:00

Friday, October 11, 2019

Seminarraum	Foyer	Theodor Heuss Saal	
Session 18: Affordable devices for global surgery	**ePoster 5:** Image guided surgery, navigation, imaging	P.O.P. Training in Laparoscopy	08:30 – 10:00
Coffee Break			10:00 – 10:30
Session 21: Innovation in and around the neurosurgery operating room	**ePoster 6:** Simulation and Training	Workshop Retrograde intrarenal surgery / flexible ureteroscopy	10:30 – 12:00
MITAT Editorial Board Meeting	Lunch		12:00 – 13:00
Session 24: Robotics around the head	**ePoster 7:** Miscellaneous	E-BLUS	13:00 – 14:30
Session 27: EIRSS-last supper			14:30 – 16:00
			16:00 – 17:00
			17:00 – 18:30
Science & Technology Night @Experimenta, SMIT Awards, Closing Ceremony			19:15 – 23:00



Scientific Program

Thursday, October 10, 2019

Wilhelm Maybach Saal A

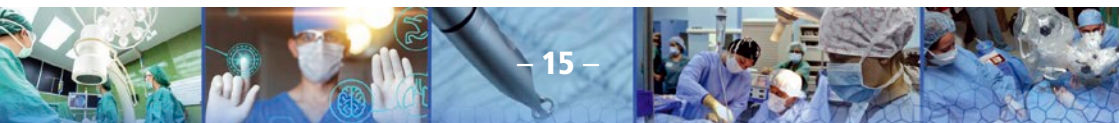
08:30–10:00		Session 1: News for endoscopy and laparoscopy
		Moderation: Georg Kaehler, Strasbourg , Germany Silvana Perretta, Strasbourg, France Ali-Serdar Goezen, Heilbronn, Germany
08:30–08:40		**New robotic systems for endoscopy** Silvana Perretta, Strasbourg, France
08:40–08:50		**Clinical evaluation of transgastric surgery (NOTES)** Georg Kaehler, Mannheim, Germany
08:50–09:00		**Road Ahead for Endoluminal Therapy in the Digestive Tract** Alberto Arezzo, Torino, Italy
09:00–09:10		**Endorectal surgical repair for intractable vesicorectal fistula developing after radical prostatectomy** Eiji Kanehira, Soka, Japan
09:10–09:20		**New technology for 3D-Laparoscopy and Endoscopy** Ali-Serdar Goezen, Heilbronn, Germany
09:20–09:30		**Single port robot assisted radical prostatectomy** Franco Gaboardi, Milan, Italy
09:30–09:40		**Standardization of laparoscopic access trauma** Giovanni Alberto Pini, Milan, Italy
09:40–09:50	A-103	**Evaluation of a variable-view rigid endoscope in female urethrocystoscopy – a feasibility study** Frank Waldbillig[1], Lennart von Rohr[1], Malin Nientiedt[1], Britte Gruene[1], Simon Hein[2], Rodrigo Suarez-Ibarrola[2], Arkadiusz Miernik[2], Manuel Ritter[3], Maximilian Christian Kriegmair[1] *[1]University Medical Centre Mannheim, Department of Urology, Mannheim, Germany, [2]University of Freiburg, Medical Centre, Department of Urology, Freiburg, Germany, [3]University of Bonn, Medical Centre, Department of Urology, Bonn, Germany*
09:50–10:00		**Minimal invasive BPH treatment- for young and old!** Karl-Dietrich Sievert, Bielefeld, Germany



Thursday, October 10, 2019

Willhelm Maybach Saal B

08:30–10:00		Session 2: Soft-tissue navigation
		Moderation: Ole Jacob Elle, Oslo, Norway Manuel Ritter, Bonn, Germany
08:30–08:40		**Navigating in soft tissue – unique challenges and opportunities (update on the HiPerNav project)** Ole Jacob Elle, Oslo, Norway
08:40–08:50		**New tracking modalities for access to the renal collecting system** Manuel Ritter, Bonn, Germany
08:50–09:00		**Development of US-guided navigation during radiotherapy using a robotic arm** Peter Seitz, Heilbronn, Germany
09:00–09:09	A-101	**Image-based 3D reconstruction of the bladder using structure-from-motion – results from the BMBF-funded RaVENNA4pi consortium** Simon Hein[1], Alexander Reiterer[2, 3], Parupalli Ujwala[2], Misgana Negassi[2], Rodrigo Suarez-Ibarrola[1], Frank Waldbillig[4], Maximilian C. Kriegmair[4], Arkadiusz Miernik[1] *[1]Medical Center, University of Freiburg, Deptartment of Urology, Division of Urotechnology, Freiburg, Germany, Freiburg, Germany, [2]INATECH, University of Freiburg, Dept. of Sustainable Systems Engineering, Freiburg, Germany, [3]Fraunhofer Institute for Physical Measurement Techniques IPM, Freiburg, Germany, [4]Department of Urology, University Medical Center Mannheim, University of Heidelberg, Mannheim, Germany*
09:09–09:18	A-189	**Endoscopic target tracking in virtual colonoscopy** Emanuela Mo, Herman Alexander Jaeger, Pádraig Cantillon-Murphy *University College Cork, Electrical and Electronic Engineering, Cork, Ireland*
09:18–09:27	A-134	**Smart Electrosurgical Knife with Diffuse Reflectance Spectroscopy for Real-time Oncological Guidance** Sara Azizian Amiri[1], Carlijn M. van Gent[1], Jenny Dankelman[1], Benno H. W. Hendriks[1, 2] *[1]Delft University of Technology, BioMechanical Engineering, Delft, The Netherlands, [2]Philips Research, In-Body Systems Department, Eindhoven, The Netherlands*
09:27–09:36	A-169	**Kidney and tumor segmentation on CT images using combined detection and segmentation methods based on neural networks** Yuliia Kamkova[1, 2], Hemin Ali Qadir[1, 2], Bjørn Edwin[2, 3, 4], Ole Jakob Elle[1, 2], Rahul Prasanna Kumar[2] *[1]University of Oslo, Departament of Informatics, Oslo, Norway, [2]Oslo University Hospital, The Intervention Center, Oslo, Norway, [3]University of Oslo, Institute of Clinical Medicine, Faculty of Medicine, Oslo, Norway, [4]Oslo University Hospital, Department of HPB Surgery, Oslo, Norway*



Thursday, October 10, 2019

Seminarraum

08:30–10:00 **Session 3: Start up – Start up presentations**

Moderation: Marc Schurr, Tübingen, Germany
Thomas Villinger, Heilbronn, Germany

08:30–08:40

How to transfer MedTech research into business; Lessons learned from 10 years of experience at Pontes Medical
Joris Jaspers, Utrecht, Niederlande

08:40–08:50 A-209

Training of Soft Skills for Surgical Teams using an immersive Serious Game
Luisa F. Sánchez Peralta[1], José Blas Pagador[1], Enrique Mediero[2], Carlos Rubiales[2], Ilja Tacheci[3], Eva Macourková[3], György György Wéber[4], Krisztina Krisztina Juhos[4], António Arco[5], Francisco M. Sánchez Margallo[6]
[1]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Bioengineering, Cáceres, Spain, [2]Viral Studios, Badajoz, Spain, [3]Charles University, Prague, Czech Republic, [4]Semmelweis University, Budapest, Hungary, [5]Polytechnic Institute of Portalegre, Portalegre, Portugal, [6]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Scientific Direction, Cáceres, Spain

08:50–09:00 A-205

Gastroenterologists' perceptions about a new multimodal photonics endoscope for in-vivo colorectal cancer diagnosis
Juan Francisco Ortega Durán[1], Jorge Bote[2], José Blas Pagador[1], Resurección López[3], Federico Soria[4], Joaquín González Sánchez[5], Francisco M. Sánchez Margallo[6]
[1]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Bioengineering, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Animal Model, Cáceres, Spain, [3]Jesús Usón Minimally Invasive Surgery Center - JUMISC, OTRI, Cáceres, Spain, [4]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Endoscopy, Cáceres, Spain, [5]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Image, Cáceres, Spain, [6]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Scientific Direction, Cáceres, Spain

09:00–09:10 A-133

CHASER – Multidisciplinary development of a smartphone application guiding patients and physicians through perioperative management of antithrombotic therapy
Friederike Praus[1], Arkadiusz Miernik[1], Christian Gratzke[1], Anna Runge[2], Julia Tamm[2], Pawel Balsam[3], Joanna Zembala-John[4], Philippe-Fabian Pohlmann[1]
[1]Medical Center - University of Freiburg, Department of Urology, Freiburg, Germany, [2]HID Human Interface Design GmbH, Hamburg, Germany, [3]Medical University of Warsaw, 1st Department of Cardiology, Warsaw, Poland, [4]Silesian Center for Heart diseases, Zabrze, Poland



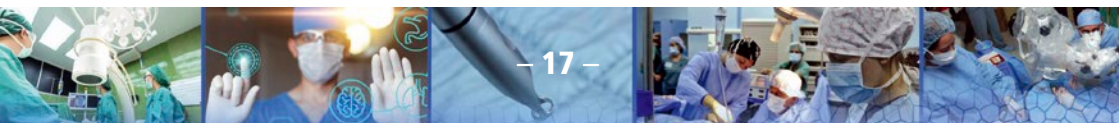
Thursday, October 10, 2019

09:10–09:20 A-112 **500 times cheaper – innovating by simplifying – MRI compatible injector example**
Michael Friebe, Marco Kalmar, Axel Boese
Otto-von-Guericke-University, Magdeburg, Germany

09:20–09:30 A-113 **From Idea Generation to Validation – experiences and lessons learned from a weeklong Biomedical Engineering Innovation Lecture in Bangalore**
Michael Friebe[1], Abhishek Appaji[2], Hn Suma[2]
[1]Otto-von-Guericke-University, Magdeburg, Germany, [2]B.M.S. College of Engineering, Department of Medical Electronics, Bangalore, India

Wilhelm Maybach Saal A

10:15–11:15	Opening
	Moderation: Harald Fischer, Ettlingen, Germany Lena Maier-Hein, Heidelberg, Germany Jens Rassweiler, Heilbronn, Germany Eiji Kanehira, Soka, Japan
10:15–10:20	**Official Opening of the Meeting** Jens Rassweiler, Heilbronn, Germany
10:20–10:25	**Welcome of the Co-president** Lena Maier-Hein, Heidelberg, Germany
10:25–10:30	**Welcome of the CEO of SLK Kliniken Heilbronn** Thomas Jendges, Heilbronn, Germany
10:30–10:35	**Welcome of the Deputy Prime Minister of Baden-Württemberg, Minister of Interior, Digitisation and Migration** Thomas Strobl, Stuttgart, Germany
10:35–10:55	**Gerhard Buess lecture: Synthetic models with senses: the modular Manikin** Robert M Sweet, Seattle, United States
10:55–11:15	**Bringing robotics and machine learning to clinical practice** Thomas Wendler, Garching, Germany



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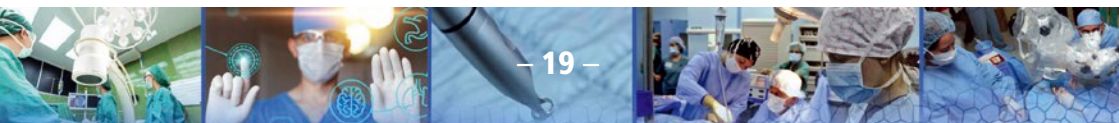
11:15–12:45		Session 4: Artificial intelligence and surgery
		Moderation: Konrad Karcz, Munich, Germany Egbert Hagmüller, Heilbronn, Germany
11:15–11:25		**Artificial intelligence in radiology – the game changer** Clemens Cyran, Munich, Germany
11:25–11:35		**Aspects of Algorithms and Machine Learning in Orthopedic Surgery** Simon Weidert, Munich, Germany
11:35–11:45		**Integration of Artificial Intelligence Tools into Surgical Pathology** Lika Svanadze, Tbilisi, Georgia
11:45–11:55		**Anesthesia Artificial-Cyber Controlling by Affiliation Pre- and Post-Operative Care** Ludwig Hinske, Munich, Germany
11:55–12:05		**Cyber-Physical Systems for the Operation Tasks and Complication Detection** Hubertus Feussner, Munich, Germany
12:05–12:15		**Automatic Content Analysis in Laparoscopic Surgery** Andreas Leibetseder, Klagenfurt, Austria
12:15–12:25		**Surgical Documentation – the Digital Wind of Change** Alexander Frank, Munich, Germany
12:25–12:35		**RECUR (BMBF) – creation of a national registry for Urolithiasis – MIRACUM initiative of German Medical Informatics** Martin Schönthaler, Freiburg, Germany
12:35–12:45	A-203	**Deep Deformation Map Regressor** Javier Pérez de Frutos[1, 2], Frank Lindseth[2], Thomas Langø[1] *[1]SINTEF, SINTEF Digital, Trondheim, Norway, [2]NTNU, Department of Computer Science, Trondheim, Norway*



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11:15–12:45		Session 5: Intraoperative (3D)-navigation for interventional radiology and percutaneous technique
		Moderation: Götz Martin Richter, Stuttgart, Germany Joachim Kettenbach, Vienna, Austria Philippe Pereira, Heilbronn, Germany
11:15–11:25		**Navigated percutaneous access to the kidney** Marie-Claire Rassweiler-Seyfried, Mannheim, Germany
11:25–11:35		**Optimized Trajectories for Dose Reduction in Interventional CBCT Imaging** Gernot Kronreif, Vienna, Austria
11:35–11:45		**Beyond morphology: the rise of hybrid imaging in everyday clinical practice** Clemens Cyran, Munich, Germany
11:45–11:55		**Stereotactic concept of tumor ablation** Reto Bale, Innsbruck, Austria
11:55–12:05		**Advantages of MR guidance for percutaneous therapies of NCC** Philippe Pereira, Heilbronn, Germany
12:05–12:15		**Virtual reality in planning and performing repair of aortic dissections and aneurysms** Götz Martin Richter, Stuttgart, Germany
12:15–12:25		**Perspectives in interventional radiology: will robot do our work in the future?** Joachim Kettenbach, Vienna, Austria
12:25–12:35	A-159	**Quantitative volumetric assessment of percutaneous image-guided microwave ablations for colorectal liver metastases** Raluca-Maria Sandu[1], Iwan Paolucci[1], Trinidad Castillo Castillo[1], Pascale Tinguely[2], Daniel Candinas[2], Jacob Freedman[3], Stefan Weber[1] *[1]ARTORG Center for Biomedical Engineering Research, Image-Guided Therapy, Bern, Switzerland, [2]Inselspital, Bern University Hospital, Department of Visceral Surgery and Medicine, Bern, Switzerland, [3]Danderyd Hospital, Karolinska Institute, Department of Clinical Science, Stockholm, Sweden*
12:35–12:45	A-200	**Visualization of instruments for minimally invasive MR-guided interventions** Annekatrin Pfahl[1], C. Martin Reich[1], Andreas Seifert[1], Bernhard Uihlein[2], Senta Schauer[2], Andreas Melzer[1] *[1]Innovation Center Computer Assisted Surgery (ICCAS), Leipzig University, Leipzig, Germany, [2]EPflex Feinwerktechnik GmbH, Dettingen an der Erms, Germany*



Scientific Program

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Seminarraum

11:15–12:45		Session 6: Bio-inspired medical devices
		Moderation: Harald Fischer, Ettlingen, Germany Don Martin, La Tronche, France
11:15–11:25		**Challenges for the implantation of symbiotic implantable medical devices** Don Martin, La Troche, France
11:25–11:35		**Swallowable pill for new diagnostic purposes** Thomas Soranzo, Fontaine, France
11:35–11:45		**New therapy system for the duodenum** Jean-Pierre Alcaraz, La Tronche, France
11:45–11:55		**Soft and tunable stiffness technologies for medical devices** Arianna Menciassi, Pontedera, Italy
11:55–12:05		**Resorbable Zink-stent, first results from animal trials** Ernst Nennig, Ettlingen, Germany
12:05–12:15		**3D catheter intervention during magnetic resonance imaging (MRI)** Christoph Hehrlein, Freiburg, Germany
12:15–12:25	A-135	**Force and motion sensing in total hip arthroplasty: instrumented implant for optimum soft tissue tension** Jonathan Wei[1], Bryan Blaauw[2], Dieter van der Pol[1], Raoul Boedhoe[1], Nianlei Zhang[1], Gabriëlle Tuijthof[3, 4], Jenny Dankelman[1], Tim Horeman[1] *[1]Delft University of Technology, Department of Mechanical, Maritime and Materials Engineering, Delft, The Netherlands, [2]Elkerliek Hospital, Department of Orthopaedic Surgery, Helmond, The Netherlands, [3]Maastricht University, Department of Engineering, Maastricht, The Netherlands, [4]Amsterdam University Medical Centre, Department of Orthopaedic Surgery, Amsterdam, The Netherlands*
12:25–12:35	A-198	**Experimental evaluation of a self-propelling bio-inspired ultra-thin needle through single-/multi-layered tissue-mimicking phantoms and ex-vivo biological tissues** Marta Scali, Paul Breedveld, Dimitra Dodou *Delft University of Technology, Biomechanical Engineering, Delft, The Netherlands*
12:35–12:45	A-210	**Mesenchymal stem cell-coated meshes: Laparoscopic placement in a porcine model of abdominal hernia.** Francisco M. Sánchez Margallo[1], Federica Marinaro[2], Rebeca Blázquez[2], Javier García Casado[2] *[1]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Scientific Direction, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Center - JUMISC, Stem cell therapy, Cáceres, Spain*



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Foyer

11:15–12:45 **ePoster 1: Urology-upper urinary tract + ESWL**

Moderation: Christian Netsch, Hamburg, Germany
Thomas Frede, Muellheim, Germany

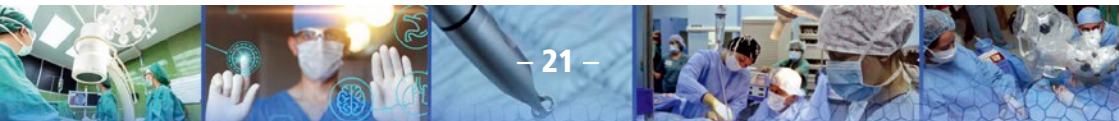
11:15–11:23 A-154 **Analysis of ureteral stent's encrustations: comparison between silicone and Percuflex™**
Luigi Bevilacqua[1], Marco Amato[1], Corradino Di Pietro[1], Francesco Fidanza[1], Mino Rizzo[1], Giulio Guarino[1], Maria Chiara Sighinolfi[1], Giampaolo Bianchi[2], Bernardo Rocco[1], Salvatore Micali[1]
[1]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy, [2]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy

11:23–11:31 A-206 **Outcomes of Kidney Stone Treatment using the Avicenna Roboflex URS System. A single Center Institutional experience**
Nikolaos Charalampogiannis[1], Jan, Torsten Klein[2], Hagen Weiss[3], Ali Serdar Gozen[3], Marcel Fiedler[3], Anna Calderaro[3], Phillip Rieker[3], Spyros Achinas[4], Jens Rassweiler[3]
[1]SLK am Gesundbrunnen, Urology, Heilbronn, Germany, [2]University of Ulm Ulm, Dept. of Urology and Pediatric Urology, Ulm, Germany, [3]SLK am Gesundbrunnen, Dept. of Urology and Pediatric Urology, Heilbronn, Germany, [4]University of Groningen, Dept. of Mathematics and Natural Sciences, Groningen, The Netherlands

11:31–11:39 A-109 **The efficacy of the disposable flexible ureterorenoscopy (Lithovue®) for renal stone smaller than 2cm.**
Tae Hoon Oh[1], Kyung Jin Oh[2], Ill Young Seo[1] *[1]Wonkwang University School of Medicine & Hospital, Urology, Iksan, South Korea, [2]Chonnam National University Hospital, Urology, Kwang-Ju, South Korea*

11:39–11:47 A-222 **Intelligent use of single-use ureterorenoscopes to reduce costs of (robot-assisted) retrograde intra-renal surgery (RIRS)**
Hagen Weiss, Nikolaos Charalampogiannis, Marcel Fiedler, Joachim Bromberg, Jens Rassweiler *SLK am Gesundbrunnen, Dept. of Urology and Pediatric Urology, Heilbronn, Germany*

11:47–11:55 A-232 **Visual navigated, ultrasound guided, freehand percutaneous calyceal puncture – simplifying a complex surgical task – Preclinical evaluation of a novel device**
Gamal Wakileh, Manuel Hohmann, Jan-Thorsten Klein *University Hospital Ulm, Medical School, Department of Urology, Ulm, Germany*



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11:55–12:03 A-163 **Molecular effects of low-intensity extracorporeal shockwave therapy (LI-ESWT) on the urinary bladder in an experimental diabetic rat model.**
Ioannis Sokolakis[1], Fotios Dimitriadis[2], Maria Papaioannou[3], Ekaterini Fragkou[3], Georgios Hatzichristodoulou[1], Dimitrios Hatzichristou[2], Apostolos Apostolidis[4]
[1]Julius-Maximilians-University of Würzburg, Department of Urology and Pediatric Urology, Würzburg, Germany, [2]Aristotle University of Thessaloniki, A' Department of Urology, Thessaloniki, Greece, [3]Aristotle University of Thessaloniki, Laboratory of Biochemistry, Faculty of Medicine, Thessaloniki, Greece, [4]Aristotle University of Thessaloniki, B' Department of Urology, Thessaloniki, Greece

12:03–12:11 A-152 **In-vitro comparison of two different ESWL concepts: "wide-focus, low-pressure" versus "small-focus, high-pressure"**
Philip Rieker[1], Jan-Thorsten Klein[2], Rainer Pecha[3], Martin Dressel[4], Wolfgang Eisenmenger[4], Jens Rassweiler[1]
[1]SLK Kliniken Heilbronn GmbH, Urology, Heilbronn, Germany, [2]University of Ulm, Urology, Ulm, Germany, [3]Rp. Acoustics, Leutenbach, Germany, [4]University of Stuttgart, 1. Physical Institute, Stuttgart, Germany

12:11–12:19 A-151 **Shockwaves in Urology: From extracorporeal stone disintegration to the stimulation of healing process**
Pavel Novak
Storz Medical AG, Corporate Business Development, Tägerwilen, Switzerland

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13:45–15:15 Session 7: Surgical Data Science

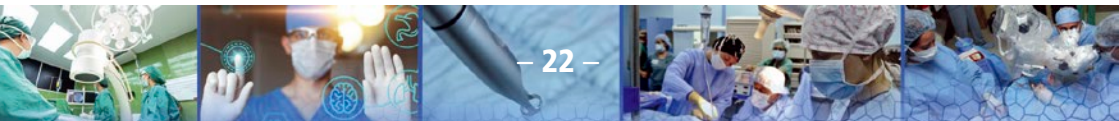
Moderation: Lena Maier-Hein, Heidelberg, Germany
Hans Peter Meinzer, Heidelberg, Germany

13:45–13:55 **What is surgical data science?**
Lena Maier-Hein, Heidelberg, Germany

13:55–14:10 **Modelling the surgical knowledge for computer-assisted preoperative planning**
Caroline Essert, Illkirch, France

14:10–14:25 **Navigation with Enhanced Surgical Vision for Robot-Assisted Operations**
Stamatia Giannarou, London, United Kingdom

14:25–14:40 **Surgical data science for training**
Anand Malpani, Baltimore, United States



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14:40–14:48 A-148 **Complex pancreatic head resection with portal reconstruction planned in mixed reality**

Egidijus Pelanis[1, 2], Tomas Sakinis[3], Karolis Naskauskas[4], Trond Buanes[5], Rahul P. Kumar[1], Ole Jakob Elle[1, 6], Bjørn Edwin[1, 2, 5]
[1]Oslo University hospital, Riskhospitalet, The Intervention Centre, Oslo, Norway, [2]Faculty of Medicine / University of Oslo, Institute of Clinical Medicine, Oslo, Norway, [3]Oslo University Hospital, Rikshospitalet, Division of Radiology and Nuclear Medicine, Oslo, Norway, [4]Lithuanian University of Health Sciences, Faculty of Medicine, Kaunas, Lithuania, [5]Oslo University Hospital, Rikshospitalet, Department of HPB Surgery, Oslo, Norway, [6]The Faculty of Mathematics and Natural Sciences / University of Oslo, Department of Informatics, Oslo, Norway

14:48–14:57 A-123 **Ultrasound navigation with active liver tracking in open liver surgery – preliminary results**

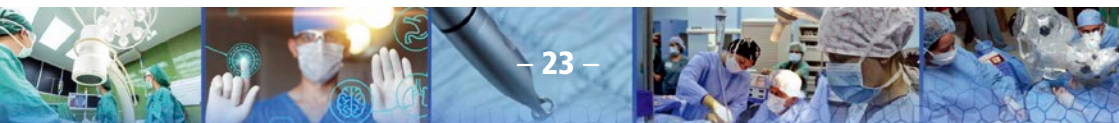
Jasper Smit[1], Bart Thomson[1], Matteo Fusaglia[1], Niels Kok[1], Thomas Langø[2], Koert Kuhlmann[1], Theo Ruers[1, 3]
[1]The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Surgical Oncology, Amsterdam, The Netherlands, [2]SINTEF, Medical Technology, Trondheim, Norway, [3]University of Twente, Faculty of Science and Technology (TNW), Nanobiophysics group (NBP), Enschede, The Netherlands

14:57–15:06 A-204 **Augmented Reality-Based Treatment Planning for Robotic Positioning in Image-Guided Interventions**

Johann Berger, Michael Unger, Lisa Landgraf, Andreas Melzer
Innovation Center Computer Assisted Surgery, Leipzig, Germany

15:06–15:15 A-99 **Deep learning approach to live monitoring of hemodynamic changes with multispectral image analysis**

Leonardo Ayala[1], Sebastian Wirkert[1], Janek Gröhl[1, 2], Mildred Herrera[3], Adrián Hernández-Aguilera[3], Anant Vermuri[1], Edgar Santos[3], Lena Maier-Hein[1, 2]
[1]German Cancer Research Center, Computer Assisted Medical Interventions, Heidelberg, Germany, [2]University of Heidelberg, Medical Faculty, Heidelberg, Germany, [3]Heidelberg University Hospital, Department of Neurosurgery, Heidelberg, Germany



Scientific Program

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13:45–15:15		Session 8: Image guided therapies and navigation
		Moderation: Thomas Lango, Trondheim, Norway Pádraig Cantillon-Murphy, Berrings, Ireland
13:45–13:55		**Image guided therapies and technologies for airway disease** Thomas Lango, Trondheim, Norway
13:55–14:05		**Ultrasound navigation for percutaneous interventions** Alexander Seitel, Heidelberg, Germany
14:05–14:15		**Advances in electromagnetic tracking for navigation** Alex Jaeger, Berrings, Ireland
14:15–14:25		**Multi-modal imaging for image-guided therapy** Theo Ruers, Amsterdam, The Netherlands
14:25–14:35		**Open source platform and deep learning tools for ultrasound guided procedures** Gabor Fichtinger, Kingston, Canada
14:35–14:44	A-120	**Towards Magnetic Resonance image-guided Focused Ultrasound in vivo in 7 Tesla preclinical MRI** Upasana Roy[1], Marc Fournelle[2], Sebastian Greiser[3], Robbert van Gorkum[4], Daniel Speicher[2], Thomas Grunwald[3], Sebastian Kozerke[4], Steffen Tretbar[2], Lisa Landgraf[1], Andreas Melzer[1] *[1]Innovation Center Computer Assisted Surgery, Leipzig, Germany, [2]Fraunhofer Institut für Biomedizinische Technik, St. Ingbert, Germany, [3]Fraunhofer Institute for Cell Therapy and Immunology, Department of Cell Therapy, Leipzig, Germany, [4]University and ETH Zurich, Institute for Biomedical Engineering, Zurich, Switzerland*
14:44–14:52	A-147	**Surgical Audio Guidance SurAG: novel non-invasive proximally acquired information on tip-tissue interactions** Alfredo Illanes, Axel Boese, Nazila Esmaeili, Thomas Sühn, Anna Schaufler, Iván Maldonado, Chien-Hsi Chen, Michael Friebe *Otto-von-Guericke Universität, INKA Intelligente Katheter, Magdeburg, Germany*
14:52–14:59	A-199	**Sensor design for electromagnetic tracking in image guided interventions** Marco Cavaliere, Oisin McVeigh, Padraig Cantillon-Murphy, Herman Alexander Jaeger, Stephen Hinds, Kilian O'Donoghue *University College Cork, Electrical and Electronic Engineering, Cork, Ireland*



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14:59–15:07 A-176 **Renal Three-Dimentional Reconstruction to plan robotic-assisted laparoscopicpartial nephrectomy: Our preliminary experience**
Raffaele Inzillo[1], Stefano Puliatti[1], Aurus Dourado Meneses[2], Ahmed Eissa[3], Ahmed Zoeir[3], Chiara Del Prete[1], Maria Chiara Sighinolfi[1], Giampaolo Bianchi[4], Bernardo Rocco[1], Salvatore Micali[1]
[1]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy, [2]Hospital São Marcos. Teresina. Brazil., Teresina, Brazil, [3]Egypt 3 Dep.t of Urology, Tanta, Egypt, [4]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy

15:07–15:15 A-236 **3D-printed ready-to-apply X-marker reference bodies for single use in surgical navigation**
Oliver Gieseler, Hubert Roth, Jürgen Wahrburg
Universität Siegen, ZESS, Siegen, Germany

Seminarraum

13:45–15:15 Session 9: Medical Device Design

Moderation: Jenny Dankelmann, Delft, The Netherlands
Pierre Renaud, Strasbourg, France

13:45–13:55 **The ForceSenseNG for training of advanced laparoscopic surgery with steerable instruments**
Tim Horemann, Delft, The Netherlands

13:55–14:05 **Workflow studies / OR processess**
Maryam Gholinejad, Delft, The Netherlands

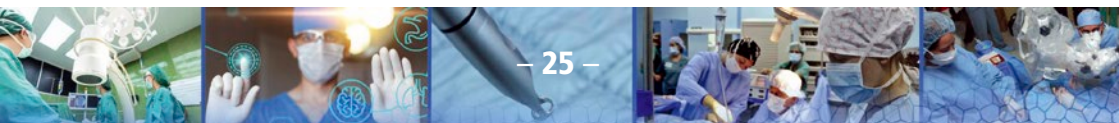
14:05–14:15 **Steerable needles und 3D printing of medical devices**
Nick van de Berg, The Hague, The Netherlands

14:15–14:25 **Steerable percutaneous devices**
John van den Dobbelsteen, Delft, The Netherlands

14:25–14:35 **Articulating devices**
Tim Horemann, Delft, The Netherlands

14:35–14:45 **Creating robots for image-guided interventions**
Pierre Renaud, Strasbourg, France

14:45–14:55 A-166 **Design and Fabrication of a Two Degrees of Freedom Soft Fluidic Actuator for Steerable Catheters**
Gilles Decroly[1], Pierre Lambert[2], Alain Delchambre[1]
[1]Université libre de Bruxelles, Faculty of Engineering, BEAMS, Bruxelles, Belgium, [2]Université libre de Bruxelles, Faculty of Engineering, TIPS, Bruxelles, Belgium



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14:55–15:05 A-145 **Co-operation between medical engineers and physicians is essential to deal with challenges in the design and regulatory affairs of 3D-printed surgical implants**
Joris Jaspers[1], Herke Jan Noordmans[1], Koen Willemsen[2], Moyo Kruyt[2], Harrie Weinans[2]
[1]University Medical Centre Utrecht, Medical Technology & Clinical Physics, Utrecht, The Netherlands, [2]University Medical Centre Utrecht, Orthopaedics, Utrecht, The Netherlands

15:05–15:15 A-111 **BME Entrepreneurship Motivation and Stimulation – an interdisciplinary recipe!**
Michael Friebe, Holger Fritzsche, Axel Boese
Otto-von-Guericke-University, Magdeburg, Germany

Foyer

13:45–15:15 ePoster 2: Urology-lower urinary tract

Moderation: Andreas Gross, Hamburg, Germany
Marcel Fiedler, Heilbronn, Germany

13:45–13:53 A-192 **Comparison of three different energy modalities in the treatment of large bladder calculi over 3cm**
Jae Young Choi[1], Woojin Bang[2 1]
Yeungnam University Medical Center, Daegu, South Korea, [2]Hallym Sacred Heart Hospital, Hallym University, Urology, Anyang, South Korea

13:53–14:01 A-212 **Inflammatory myofibroblastic tumour of the bladder: A case report**
Mehriban Bayramova, Nikolaos Charalampogiannis, Ali Serdar Gozen, Hagen Weiss, Mohamed Merdad, Marcel Fiedler, Anna Calderaro, Jens Rassweiler
SLK am Gesundbrunnen, Dept. of Urology and Pediatric Urology, Heilbronn, Germany

14:01–14:09 A-129 **VisIMon – Development of an intelligent monitoring system that observes and guarantees continuous bladder irrigation**
Anja Christina Reichelt[1], Arkadiusz Miernik[1], Christian Gratzke[1], Gerd Reis[2], Xiaoying Tan[2], Daniel Marcato[3], Christof Steiner[3], Steffen Weber[4], Marc Fournelle[4], Stefan Wehr[5], David Leuschner[5], Dominik Stefan Schöb[1]
[1]University Medical Center Freiburg, Urology, Faculty of Medicine, Freiburg, Germany, [2]German Research Center for Artificial Intelligence, Kaiserslautern, Germany, [3]Digital Biomedical Imaging Systems AG, Pforzheim, Germany, [4]Fraunhofer Institute for Biomedical Technology, St. Ingbert, Germany, [5]Lohmann und Birkner Health Care Consulting GmbH, Berlin, Germany



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14:09–14:17 A-227 **Effectivity of Intravescical Thermo Chemotherapy Prophylaxis for Patients with High Recurrence and Progression Risk for Non-muscle Invasive Bladder Cancer**

Ali Serdar Gozen[1], Paolo Umari[2], Walter Scheitlin[1], Fuat Ernis Su[3], Yigit Akin[4], Jens Rassweiler[1]

[1]SLK-Kliniken, University of Heidelberg, Heilbronn, Urology, Heilbronn, Germany, [2]Cattinara Hospital, University of Trieste, Urology, Trieste, Italy, [3]Kanuni Sultan Süleyman Education and Research Hospital, Urology, Istanbul, Turkey, [4]Harran University School of Medicine, Urology, Sanliurfa, Turkey

14:17–14:25 A-250 **5-aminolevurinic acid inhibits proliferation of bladder cancer cells by reducing iron levels**

Yasushi Nakai[1], Yoshihiro Tatsumi[1], Shunta Hori[2], Yosuke Morizawa[2], Kota Iida[2], Kenta Onishi[2], Makito Miyake[2], Takuya Owari[2], Keiji Shimada[2], Sayuri Onishi[2], Nobumichi Tanaka[2], Kiyohide Fujimoto[2]

[1]Department of Urology, Nara Medical University, Nara, Japan, Nara, Japan, [2]Department of Urology, Nara Medical University, Nara, Japan

14:25–14:33 A-229 **Comparison of the Efficacy of Holmium Laser Enucleation of the Prostate in Treating Prostate Volumes of ≤ 80 and > 80 mL**

Eymen Gazel[1], Engin Kaya[2], Serdar Yalcin[2], Halil Cagri Aybal[3], Tahsin Batuhan Aydogan[4], Lutfi Tunc[5]

[1]Ankara acibadem Hospital, Urology, Ankara, Turkey, [2]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [3]Health Science University Dr. Abdurrahman Yurtaslan Ankara Oncology Hospital, Urology, Ankara, Turkey, [4]Kahramanmaras Goksun State Hospital, Urology, Kahramanmaras, Turkey, [5]Gazi University, Urology, Ankara, Turkey

14:33–14:41 A-223 **The Low Power Effect on Holmium Laser Enucleation of Prostate (HoLEP); A Comparative Study With 12 Months Follow Up**

Eymen Gazel[1], Engin Kaya[2], Serdar Yalcin[2], Theodoros Tokas[3], Halil Cagri Aybal[4], Sercan Yilmaz[2], Tahsin Batuhan Aydogan[5], Lutfi Tunc[6]

[1]Ankara acibadem Hospital, Urology, Ankara, Turkey, [2]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [3]General Hospital Hall i.T., Hall in Tirol, Urology, Hall in Tirol, Austria, [4]Health Science University Dr. Abdurrahman Yurtaslan Ankara Oncology Hospital, Urology, Ankara, Turkey, [5]Kahramanmaras Goksun State Hospital, Urology, Kahramanmaras, Turkey, [6]Gazi University, Urology, Ankara, Turkey



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14:41–14:49 A-231 **Prostate shape significantly affects the HoLEP procedure time and energy usage: A retrospective pilot study**
Serdar Yalcin[1], Eymen Gazel[2], Bhaskar Somani[3], Sercan Yilmaz[1], Lutfi Tunc[4]
[1]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [2]Ankara acibadem Hospital, Urology, Ankara, Turkey, [3]University Hospital Southampton NHS Trust, Urology, Southampton, United Kingdom, [4]Gazi University, Urology, Ankara, Turkey

14:49–14:57 A-230 **The effect of prostatic tissue density on the perioperative outcomes of Holmium laser enucleation of prostate (HoLEP): a pilot study**
Engin Kaya[1], Eymen Gazel[2], Serdar Yalcin[1], Theodoros Tokas[3], Tahsin Batuhan Aydogan[4], Halil Cagri Aybal[5], Lutfi Tunc[6]
[1]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [2]Ankara acibadem Hospital, Urology, Ankara, Turkey, [3]General Hospital Hall i.T., Hall in Tirol, Urology, Hall in Tirol, Austria, [4]Kahramanmaras Goksun State Hospital, Urology, Kahramanmaras, Turkey, [5]Health Science University Dr. Abdurrahman Yurtaslan Ankara Oncology Hospital, Urology, Ankara, Turkey, [6]Gazi University, Urology, Ankara, Turkey

14:57–15:05 A-239 **The Novel Omega Sign technique improves continence outcomes of HoLEP: A retrospective comparative study of 400 patients**
Lutfi Tunc[1], Serdar Yalcin[2], Eymen Gazel[3], Engin Kaya[2], Sercan Yilmaz[2], Halil Cagri Aybal[4], Theodoros Tokas[5]
[1]Gazi University, Urology, Ankara, Turkey, [2]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [3]Ankara acibadem Hospital, Urology, Ankara, Turkey, [4]Health Science University Dr. Abdurrahman Yurtaslan Ankara Oncology Hospital, Urology, Ankara, Turkey, [5]General Hospital Hall i.T., Hall in Tirol, Urology, Hall in Tirol, Austria

Wilhelm Maybach Saal A

15:15–16:45 Session 10: Robotics – New systems for laparoscopy and endourology

Moderation: Evangelos Liatsikos, Patras, Greece
Joris Jaspers, Utrecht, The Netherlands
Piotr Chlosta, Krakow, Poland

15:15–15:25 **Da Vinco XI – the gold standard**
Alberto Breda, Barcelona, Spain

15:25–15:35 **Revo I – the Korean Robot and Asian developments**
Koon Rha, Seoul, South Korea

15:35–15:45 **Senhance – first clinical experience**
Piotr Chlosta, Krakow, Poland



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15:45–15:55 **SPORT-System – where are we now?**
Eric Barret, Paris, France

15:55–16:05 **Avatera – The German Robot**
Jens-Uwe Stolzenburg, Leipzig, Germany

16:05–16:15 **Multi center clinical use of HandX, a robotized laparoscopic instrument**
Amir Szold, Tel Aviv, Israel

16:15–16:25 **Long-term experience with Avicenna Roboflex for robotic flexible ureterorenoscopy**
Jens Rassweiler, Heilbronn, Germany

16:25–16:35 **Aquablation – robotic TURP: the future?**
Meryem Akkoyun, Hannover, Germany

16:35–16:45 A-173 **First results of robot-assisted endoscopic extraperitoneal radical prostatectomy (RAS EERPE) using the Senhance™ digital laparoscopic platform.**
Laurent Fossion, Kevin De Laet
Maxima Medisch Centrum, Urology, Veldhoven, The Netherlands

Willhelm Maybach Saal B

15:15–16:45 Session 11: Simulation and training

Moderation: Robert M. Sweet, Seattle, United States
Domenico Veneziano, Calabria, Italy

15:15–15:25 **Phantom development**
John van den Dobbelsteen, Delft, The Netherlands

15:25–15:35 **Exponential technologies and the evolution of hands-on training**
Domenico Veneziano, Calabria, Italy

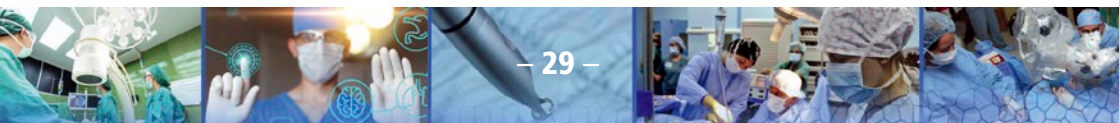
15:35–15:45 **Technical skills training: state of the art**
Ali-Serdar Goezen, Heilbronn, Germany

15:45–15:55 **Simulation-what can doctors learn from aviation**
Kai-Jörg Sommer, Bad Camberg, Germany

15:55–16:05 **Non-technical skills training: evolution on the field**
Prokar Dasgupta, London, United Kingdom

16:05–16:15 **Expected Outcomes of Technical Enhanced Learning Development**
Calin Tiu, Campina, Romania

16:15–16:25 A-107 **Track & Teach – Simplified endoscope tracking in prostate enucleation reveals differing motion patterns dependent on surgeon experience**
Franz Friedrich Dressler, Christian Gratzke, Arkadiusz Miernik, Dominik Schoeb
Uniklinik Freiburg, Urology, Freiburg, Germany



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16:25–16:35 A-106 **Augmented Reality for teaching practical tasks in urology: a randomized prospective trial on teaching catheter placement to medical students**
Dominik Schoeb, Jessica Schwarz, Daniel Schlager, Simon Hein, Philippe Müller, Arkadiusz Miernik
Uniklinik Freiburg, Urology, Freiburg, Germany

16:35–16:45 A-194 **Proving Effectiveness of the Fundamentals of Robotic Surgery (FRS) Curriculum**
Richard M. Satava
University of Washington, Surgery, United States, United States

Seminarraum

15:15–16:45 Session 12: ESWT – interdisciplinary indications

Moderation: Martin Ringeisen, Augsburg, Germany
Paolo Verze, Naples, Italy

15:15–15:25 **Biological basis of ESWT for ED and IPP**
Ioannis Sokolakis, Würzburg, Germany

15:25–15:35 **Limitations of currently used ESWT parameters for a correlation with clinical effectiveness**
Matias de la Fuente, Aachen, Germany

15:35–15:45 **ESWT for urological disorders – experience with piezoelectric shock waves**
Igor Motil, Brno, Czech Republic

15:45–15:55 **ESWT for Prostatitis and IPP – where is the evidence?**
Paolo Verze, Naples, Italy

15:55–16:05 **Mechanobiological mechanisms of extracorporal shock wave therapy in orthopedic disorders**
Jörg Hausdorf, Munich, Germany

16:05–16:15 **Orthopedic Indications and additional methods: ESWT and soft-tissue engineering**
Ludger Gerdesmeyer, Kiel, Germany

16:15–16:25 **Brain Stimulation for Alzheimer's Disease**
Roland Beisteiner, Vienna, Austria

16:25–16:35 A-187 **Longterm Experiences Of ESWT For IPP**
Franziska Radecke[1], Jens Rassweiler[2] *[1]Univercity of Heidelberg, Medical faculty Mannheim, Mannheim, Germany, [2]SLK Kliniken Heilbronn, Department of Urology, Heilbronn, Germany*



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16:35–16:45 A-164 **Low intensity shockwave therapy (LiST) promotes angiogenesis and alters α1/α2 adrenergic receptors ratio with decrease in sympathetic activity in the erectile tissue of naturally aged rats.**
Ioannis Sokolakis[1], Fotios Dimitriadis[2], Dimitra Psalla[3], Dimitrios Kalyvianakis[2], Georgios Hatzichristodoulou[1], Dimitrios Hatzichristou[2]
[1]Julius-Maximilians-University of Würzburg, Department of Urology and Pediatric Urology, Würzburg, Germany, [2]Aristotle University of Thessaloniki, A' Department of Urology, Thessaloniki, Greece, [3]Aristotle University of Thessaloniki, Laboratory of Pathology, Faculty of Veterinary Medicine, Thessaloniki, Greece

Foyer

15:15–16:45 ePoster 3: New devices

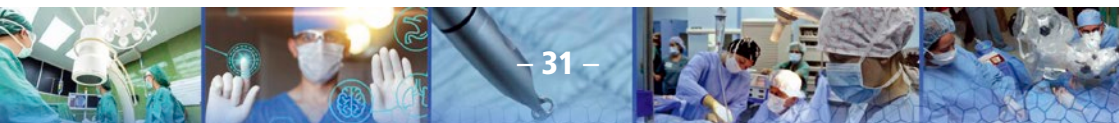
Moderation: Harald Fischer, Ettlingen, Germany
Gernot Kronreif, Vienna, Austria

15:15–15:23 A-102 **Hypothermia in laparoscopic surgery and new-concept air conditioning system of operating room**
Hisashi Usuki[1], Hironobu Suto[2], Eisuke Asano[2], Minoru Ohshima[2], Takayoshi Kishino[2], Kensuke Kumamoto[2], Keiichi Okano[2], Yasuyuki Suzuki[2]
[1]Kagawa University Hospital, Surgical Theater, Kagawa, Japan, [2]Kagawa University, Gastroenterological Surgery, Kagawa, Japan

15:23–15:31 A-110 **From complication of metallic colon stent for obstructive upper rectal cancer to suggestion of material choice design**
Chou-Chen Chen[1, 2], Pin-Chuan Yao[3], Joe-Bin Chen[1]
[1]Taichung Veterans General Hospital, Surgery, Taichung, Taiwan, [2]Yayeh University,, Department of Environmental Engineering, Changhua county, Taiwan, [3]Department of Environmental Engineering, Yayeh University, Department of Environmental Engineering, Changhua county, Taiwan

15:31–15:39 A-141 **Multimodal Intracorporeal Smart Surgical Hand – new paradigm in Endoscopic surgery**
Radosvet Gornev, Vanya Mitova
University Hospital Lozenetz, General Surgery Department, Sofia, Bulgaria

15:39–15:47 A-179 **Initial experience using the FlexDex® needle holder: Assessment of surgical performance and surgeon's ergonomics**
Francisco M. Sánchez-Margallo[1], Juan A. Sánchez-Margallo[2]
[1]Jesús Usón Minimally Invasive Surgery Centre, Scientific Direction, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Centre, Bioengineering and Health Technologies, Cáceres, Spain



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15:47–15:55 A-190 **Design of a statically balanced compliant laparoscopic grasper**
Jan-Willem Klok[1], Asthor T. Steinþórsson[2], Jenny Dankelman[1], Tim Horeman[1]
[1]Delft University of Technology, BioMechanical Engineering, Delft, The Netherlands, [2]Reon, Reykjavík, Iceland

15:55–16:03 A-128 **Compliant steerable needle mechanism for prostate HDR brachytherapy**
Martijn de Vries, Nick J. van de Berg, John J. van den Dobbelsteen
Delft University of Technology, BioMechanical Engineering, Delft, The Netherlands

16:03–16:11 A-162 **Adaptive Materials-Based Medical Devices**
Loïc Blanc[1], Alain Delchambre[2], Pierre Lambert[1]
[1]Université Libre de Bruxelles, TIPs Department, Brussels, Belgium, [2]Université Libre de Bruxelles, BEAMS Department, Brussels, Belgium

16:11–16:19 A-131 **Self-folding magnetic tools for minimally invasive surgery**
Tim Helge Fass[1], Guangbo Hao[2], Pádraig Cantillon-Murphy[3]
[1]University Collage Cork, Tyndall National Institute, Cork, Ireland, [2]University College Cork, Electronic and Electrical Engineering, Cork, Ireland, [3]University College Cork, Tyndall National Institute, Cork, Ireland

16:19–16:27 A-197 **An adaptor equipped with a gamma probe to empower ultrasound-guided surgery of sentinel lymph nodes**
Ali Pashazadeh, Marco Kalmar, Axel Boese, Michael Friebe
Otto von Guericke University Magdeburg, Magdeburg, Germany

16:27–16:35 A-114 **Development and simulation of an innovative double chamber syringe**
Filipa Carneiro[1], Ricardo Freitas[1], Ângelo Marques[1], Marta Gomes[1], Ricardo Sá[1], Liliana Sousa[2], Inês Cardoso[2], Sara Cortez[3], Pedro Parreira[2], Bruno Silva[1]
[1]PIEP - Innovation in Polymer Engineering, Guimarães, Portugal, [2]The Health Sciences Research Unit: Nursing, Nursing School of Coimbra, Coimbra, Portugal, [3]Muroplás - Indústria de Plásticos, S.A., Trofa, Portugal

16:35–16:43 A-124 **'Touchless' body length measuring instrument for growth monitoring of premature infants**
Ronald van Gils[1, 2], Onno Helder[1, 2], Linda Wauben[2, 3]
[1]Erasmus MC, Pedeatrics, Neonatology, Rotterdam, The Netherlands, [2]Rotterdam University of Applied Sciences, Research Centre Innovations in Care, Rotterdam, The Netherlands, [3]Delft University of Technology, Department of Biomechanical Engineering, Faculty of Mechanical, Maritime and Materials Engineering, Delft, The Netherlands



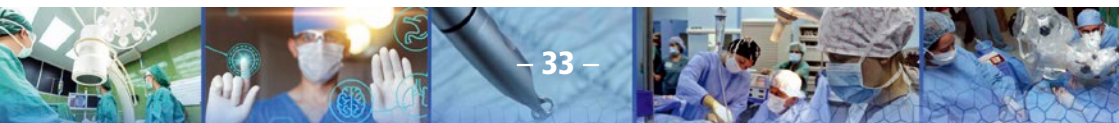
Thursday, October 10, 2019

Wilhelm Maybach Saal A

17:00–18:30	Session 13: Startup Showcases & Know-How
	Moderation: Tim Lampe, Heilbronn, Germany
17:00–17:10	**Introduction** Manuel Böhringer, Heilbronn, Germany
17:10–17:20	**The role of Zukunftsfond and B2Grow** Manuel Böhringer, Heibronn, Germany
17:20–17:30	**CampusFounder – a new platform for start-ups** Oliver Hanisch, Heilbronn, Germany
17:30–17:40	**Physician-entrepreneur: A journey between your day job and your dream** Amir Szold, Tel Aviv, Israel
17:40–18:30	**Physician-entrepreneur: A journey between your day job and your dream** Tim Lampe, Heilbronn, Germany

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17:00–18:30	Session 14: Modern management of upper and lower urinary tract TCC
	Moderation: Morgan Roupret, Paris, France Arnulf Stenzl, Tübingen, Germany Maximilian Burger, Regensburg, Germany
17:00–17:10	**A new cryo-device for upper tract biopsy** Jan-Thorsten Klein, Ulm, Germany
17:10–17:20	**Role of NLR in Personalized Conservatively Treated UTUC Management** Anup Patel, London, United Kingdom
17:20–17:30	**Pathological evaluations of en bloc TURB: new perspectives** Salvatore Micali, Modena, Italy
17:30–17:40	**MMC-gel for upper tract tumors** Nir Kleinmann, Qiryat Ono, Israel
17:40–17:50	**What is new in intravesical therapy?** Maximilian Burger, Regensburg, Germany
17:50–18:00	**Chemotherapy and/or immunotherapy in advanced TCC** Jens Bedke, Tübingen, Germany
18:00–18:10	**Precision Oncology in Urothelial Cancer: Recent Advances** Christian Bolenz, Ulm, Germany



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18:10–18:20 A-177 **Ex vivo fluorescence confocal microscopy in the assessment of urothelial carcinoma grading in bladder and ureter: Our preliminary experience**
Stefano Puliatti[1], Raffaele Inzillo[1], Ahmed Eissa[2], Luigi Bevilacqua[1], Maria Chiara Sighinolfi[1], Paola Azzoni[3], Luca Bertoli[3], Luca Reggiani Bonetti[3], Ahmed Elsherbiny[2], Salvatore Micali[1], Vipul Patel[4], Bernardo Rocco[1], Giampaolo Bianchi[5]
[1]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy, [2]Egypt 3 Dep.t of Urology, Tanta, Egypt, [3]University of Modena, Modena, Italy, [4]Global Robotics Institute, Florida Hospital-Celebration Health Celebration, Celebration, United States, [5]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy

18:20–18:30 **Summary**
Morgan Roupret, Paris, France

Seminarraum

17:00–18:30 Session 15: Cardiac Surgery

Moderation: Daniel Wendt, Essen, Germany
Matthias Thielmann, Essen, Germany

17:00–17:10 **Transit Time Flow Measurement and HFUS to control for CABG quality**
Daniel Wendt, Essen, Germany

17:10–17:20 **Insights from the North Rhine Westphalia infarct registry**
Matthias Thielmann, Essen, Germany

17:20–17:30 **Update on novel strategies for PCI**
Hagen Kaelsch, Essen, Germany

17:30–17:40 **Intraoperative Haemoadsorption using to treat inflammation**
Sharaf-Eldin Shehada, Essen, Germany

17:40–17:49 A-132 **Detection of mitral and aortic valve events by accelerometer attached to the heart**
Ali Wajdan[1, 2], Magnus R. Krogh[1, 2], Manuel Villegas-Martínez[1, 3], Per Steiner Halvorsen[1], Ole Jakob Elle[1, 2], Espen W. Remme[1]
[1]The Intervention Centre, Oslo University Hospital, Rikshospitalet, Oslo, Norway, [2]University of Oslo, Department of Informatics, Oslo, Norway, [3]University of Oslo, Institute of Clinical Medicine, Oslo, Norway

17:49–17:58 A-136 **Pressure Change Simulation in the Aorta and the Left Ventricle with Compression**
Nobuhiko Mukai, Kazuhiro Aoyama, Takuya Natsume, Youngha Chang
Tokyo City University, Graduate School of Integrative Science and Engineering, Tokyo, Japan



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17:58–18:07 A-213 **Audio Transducers and Signal Conditioning Strategies for Auscultation and Monitoring of the Carotid Artery**
Rutuja Salvi, Thomas Sühn, Ivan Maldonado, Axel Boese, Alfredo Illanes, Michael Friebe
Otto-von-Guericke-Universität Magdeburg, Institut für Medizintechnik, Intelligente Katheter - INKA, Magdeburg, Germany

18:07–18:16 A-241 **Evaluation of a novel design of Artificial Aortic Valve**
Yinling Zhu[1], David Wheatley[2] *[1]University of Dundee, Science and Engineering, Dundee, United Kingdom, [2]University of Glasgow, Glasgow, United Kingdom*

Foyer

17:00–18:30 ePoster 4: Laparoscopy, robotics

Moderation: Christopher Netsch, Hamburg, Germany
Paul Wetter, Miami, United States

17:00–17:08 A-228 **Does surgical approach have an impact on the development of symptomatic lymphoceles after radical prostatectomy and pelvic lymph node dissection?**
Anita Thomas, Robert Dotzauer, Stefanie Ziewers, Georg Bartsch, Alex Haferkamp, Christian Thomas, Igor Tsaur
Universitätsmedizin Mainz, Urologie, Mainz, Germany

17:08–17:16 A-243 **The All-in-One suture, a new approach to avoid lymphoceles during the retzius sparing-prostatectomy with pelvic lymph node dissection**
Mohammed Alfarra, Niklas Harland, Moritz Maas, Viktoria Stühler, Steffen Rausch, Bastian Amend, Jens Bedke, Arnulf Stenzl
Department of Urology, university of Tuebingen, Tuebingen, Germany

17:16–17:24 A-202 **The effect of GELITA® on lymphocele formation after robotic extraperitoneal pelvic lymphadenectomy in Prostate Cancer. A prospective, matched pair study.**
Mohammed Merdad, Ali Gözen, Hagen-Oliver Weiss, Jens Rassweiler
SLK-Kliniken Heilbronn GmbH, Urology, Heilbronn, Germany



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17:24–17:32 A-221 **Impact of Eliminating The Lateral Trocars During Extraperitoneal Radical Prostatectomy; The Initial Series of Pilot Study**

Yigit Akin[1], Osman Kose[1], Hakan Gulmez[2], Rodrigo Leon Mar[3], Sakip Erturhan[4], Sacit Nuri Gorgel[1], Abdullah Demirtas[5], Yasar Ozgok[6], Serkan Ozcan[1], Yuksel Yilmaz[1]

[1]Izmir Katip Celebi University School of Medicine, Urology, Izmir, Turkey, [2]Izmir Democracy University School of Medicine, Family Medicine, Izmir, Turkey, [3]Centro Medico Nacional Siglo XXI'da médico de base Urología, Urology, Mexico City, Turkey, [4]Gaziantep University School of Medicine, Urology, Gaziantep, Turkey, [5]Erciyes University School of Medicine, Urology, Kayseri, Turkey, [6]Cankaya Hospital, Urology, Ankara, Turkey

17:32–17:40 A-224 **The Effect Of Anterior Fixation With Bladder Neck Sparing On Postoperative Results Of Robot-Assisted Radical Prostatectomy**

Eymen Gazel[1], Engin Kaya[2], Halil Cagri Aybal[3], Serdar Yalcin[2], Sercan Yilmaz[2], Theodoros Tokas[4], Lutfi Tunc[5]

[1]Ankara acibadem Hospital, Urology, Ankara, Turkey, [2]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [3]Health Science University Dr. Abdurrahman Yurtaslan Ankara Oncology Hospital, Urology, Ankara, Turkey, [4]General Hospital Hall i.T., Hall in Tirol, Urology, Hall in Tirol, Austria, [5]Gazi University, Urology, Ankara, Turkey

17:40–17:48 A-178 **Needlescopic Appendectomy – as a standard procedure for appendcitis**

Toshiharu Miyazawa

IMS group, Yokohama Asahi Chuo General Hospital, junior resident, Yokohama-shi,kanagawa-ken, Japan

17:48–17:56 A-146 **Transanal Endoscopic Microsurgery for Rectal Neuroendocrine TumorFull thickness resection – The punched out technique –**

Masahiro Waseda

IMS group Yokohama Asahi Chuo General Hospital, Department of Surgery, Kanagawa, Japan

17:56–18:04 A-167 **Laparoscopic partial nephrectomy for centrally located renal tumor, a case report**

Sinan Çelen[1, 2], Yusuf Ozlulerden[2], Omer Levent Tuncay[2]

[1]Pamukkale Unıversity, Urology, Denizli, Turkey, [2]Pamukkale University, Urology, Denizli, Turkey



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18:04–18:12 A-225 **The Effect Of Increasing Surgıcal Experience For Descending Radical Nephrectomy And Proven Advantages In Long Term**

Serdar Yalcin[1], Huseyin Gumustas[2], Engin Kaya[1], Eymen Gazel[3], Esat Ak[4], Lutfi Tunc[5]

[1]Health Science University Gulhane Hospital, Urology, Ankara, Turkey, [2]Adana Cukurova State Hospital, Urology, Adana, Turkey, [3]Ankara acibadem Hospital, Urology, Ankara, Turkey, [4]Mersin State Hospital, Urology, Mersin, Turkey, [5]Gazi University, Urology, Ankara, Turkey

18:12–18:20 A-249 **Utility of a hemostatic absorbable oxidized cellulose and hydrogel patch (Veriset®) as an alternative to parenchyma suturing in laparoscopic nephron-sparing surgery – First results and surgeons perspecitv**

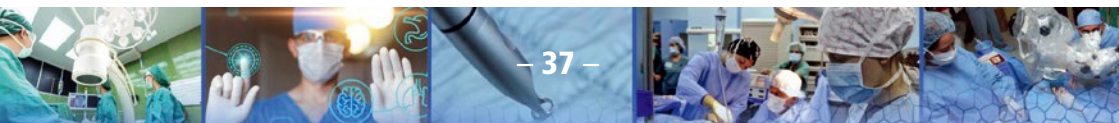
E. Erne[1], S. Kruck[2], S. Izquierdo[1], T. Todenhoefer[3], B. Amend[1], J. Bedke[4], Arnulf Stenzl[5], S. Rausch[1]

[1]University Hospital Tuebingen, Department of Urology , Tuebingen, Germany, Tuebingen, Germany, [2]Siloah St. Trudpert clinic, Department of Urology , Pforzheim, Germany, Tuebingen, Germany, [3]University Hospital Tuebingen, Department of Urology , Tuebingen, Germany,, Tuebingen, Germany, [4]University Hospital Tuebingen, Department of Urology, Tuebingen, Germany, Tuebingen, Germany, [5]University Hospital Tuebingen, Department of Urology , Tuebingen, Germany, Germany, Germany

18:20–18:28 A-161 **Audio as a means for tissue differentiation in robotic-assisted minimally invasive surgery?**

Chien-Hsi Chen[1], Alfredo Illanes[1], Thomas Sühn[1], Marco Kalmar[1], Roland Croner[2], Axel Boese[1], Michael Friebe[1]

[1]Otto-von-Guericke-Universität, Intelligente Katheter (INKA), Magdeburg, Germany, [2]Otto-von-Guericke-Universität, Universitätsklinik für Allgemein-, Viszeral-, Gefäß- und Transplantationschirurgie, Magdeburg, Germany



Scientific Program

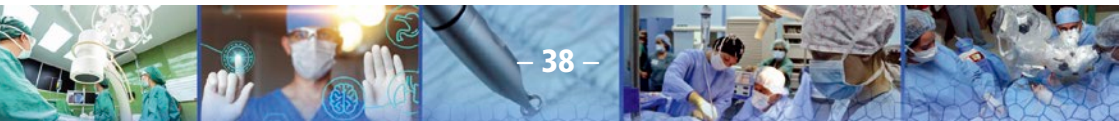
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08:30–10:00	Session 16: The role of single-use endoscopy intravesical treatment - Lasers
	Moderation: Thomas Knoll, Sindelfingen, Germany Young Seo, Iksan, Jeobuk, South Korea Arkadiusz Miernik, Freiburg, Germany
08:30–08:40	**Single-use ureteroscopy using LithoVue Empower** Thomas Knoll, Sindelfingen, Germany
08:40–08:50	**Single-use ureteroscopy using PUSEN** Marin Georgiev, Sofia, Bulgaria
08:50–09:00	**Retrograde intrarenal stone surgery using disposable flexible ureterorenoscope** Young Seo, Iksan, Jeobuk, South Korea
09:00–09:10	**How selective use of disposable flexible uretereroscopes reduce overall costs** Jens Rassweiler, Heilbronn, Germany
09:10–09:20	**Single-use cystoscopy with ISIRIS** Michael Straub, Munich, Germany
09:20–09:30	**Intravesical therapy – new interdisciplinary options** Thomas Bschleipfer, Weiden, Germany
09:30–09:40	**Development of mechanic lithotripters for stone treatment** Rainer Hofmann, Marburg, Germany
09:40–09:50	**The TFL SuperPulse Laser** Felix Chun, Frankfurt, Germany
09:50–10:00	**The role of EPS (enhanced pulse setting) for treatment of BPH with Holmium-Laser** Sven Piesche, Hof, Germany

Willhelm Maybach Saal B

08:30–10:00	Session 17: Controversies in Minimally Invasive Urogynecology
	Moderation: Franco Gaboardi, Milano, Italy Liselotte Mettler, Kiel, Germany
	Panel: Gynecology Ibrahim Alkatout, Kiel, Germany
	Panel: Urology Martin Hatzinger, Mannheim, Germany Giovanni Alberto Pini, Milano, Italy



Topics discussed: 1. Gynecological indications for laparoscopic / robot-assisted anterior exenteration

Topics discussed: 2. The role of robotic and conventional laparoscopic surgery for cervical cancer after the recent LACC study and others

Topics discussed: 3. The best way to treat pelvic prolapse

Topics discussed: 4. Endometriosis close to the ureter an interdisciplinary challenge

09:50–10:00 A-130 **Meta analysis of ScopeControl data of 5 hospitals**
Herke Jan Noordmans, Joris Jaspers
UMC Utrecht, FB Medical Technology and Clinical Physics, Utrecht, The Netherlands

Seminarraum

08:30–10:00 Session 18: Affordable devices for global surgery

Moderation: Jenny Dankelmann, Delft, The Netherlands
Samuel Vincent G. Yrastorza, Quezon City, Philippines

08:30–08:40 **Introduction on lack of safe global surgery**
Jenny Dankelmann, Delft, The Netherlands

08:40–08:50 **Practical examples of context-specific design of medical equipment for low-resource regions**
Julie Fleischer, Amsterdam, The Netherlands

08:50–09:00 **Virtual reality and mobile technology for delivering simulation training on the management of emergencies in LMICs**
Chris Paton, Oxford, United Kingdom

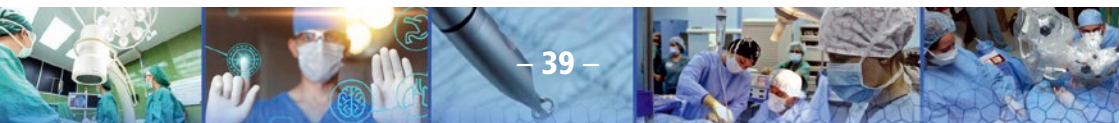
09:00–09:10 **Low-cost endoscopy for gastric cancer screening in LMIC**
Pietro Valdastri, Leeds, United Kingdom

09:10–09:20 **Development of an orthopaedic drill cover**
Elise Huisman, Vancouver, Canada

09:20–09:30 **Training of BMETs in low resource settings**
Jenny Dankelmann, Delft, The Netherlands

09:30–09:40 **Retroperitoneoscopy introduced from Heilbronn to the Phillipines**
Juvido Agatep, Quezon City, Philippines

09:40–09:50 A-186 **Manpower needed, equipment available: First world medicine for a third world region**
Benjamin Zeier
Mosbach, Germany



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08:30–10:00 **ePoster 5: Image guided surgery, navigation, imaging**

Moderation: Joachim Kettenbach, Vienna, Austria
Michele Diana, Saverne, France

08:30–08:38 A-240 **Interpreting of the MR examination time of MR Conditional implant labeling**
Gregor Schaefers[1, 2], Hans Engels[1]
[1]MRI-STaR - Magnetic Resonance Institute for Safety, Technology and Research GmbH, Gelsenkirchen, Germany, [2]MR:comp GmbH, MRI Safety Test Laboratory, Gelsenkirchen, Germany

08:38–08:46 A-150 **Endoscopic panoramic imaging and multidimensional diagnostics in the urinary bladder**
Konrad Wilhelm[1], Philippe Müller[1], Thomas Wittenberg[2], Lukas Braun[3], Christoph Krafft[4]
[1]University Medical Center Freiburg, Freiburg, Germany, [2]Fraunhofer Institute for Integrated Circuits IIS, Erlangen, Germany, [3]Becker & Hickl GmbH, Berlin, Germany, [4]Leibniz Institute of Photonic Technology Jena, Jena, Germany

08:46–08:54 A-201 **Influence of 3D versus 2D vision on surgical performance and ergonomics in urological laparoscopy**
Francisco M. Sánchez-Margallo[1], Juan A. Sánchez-Margallo[2]
[1]Jesús Usón Minimally Invasive Surgery Centre, Scientific Direction, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Centre, Bioengineering and Health Technologies, Cáceres, Spain

08:54–09:02 A-105 **Ex-vivo evaluation of an ultrasound-based planning and navigation method for non-anatomical liver resections**
Iwan Paolucci[1], Raluca Sandu[1], Luca Sahli[1], Daniel Candinas[2], Stefan Weber[1], Anja Lachenmayer[2]
[1]University of Bern, ARTORG Center for Biomedical Engineering Research, Bern, Switzerland, [2]Department of Visceral Surgery and Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland



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09:02–09:10 A-193 **3-dimensional evaluation of reactive emphysema caused by implanted magnesium plate: potential of microfocus CT imaging technology**

Kazuki Odagiri[1, 2], Kotaro Yamashita[2], Takuro Saito[2], Koji Tanaka[2], Tomoki Makino[2], Tsuyoshi Takahashi[2], Yukinori Kurokawa[2], Makoto Yamasaki[2], Masaki Mori[3], Yuichiro Doki[2], Kiyokazu Nakajima[1, 2]
[1]Osaka University, Department of Next Generation Endoscopic Intervention, Suita city, Osaka, Japan, [2]Osaka University, Department of Gastroenterological Surgery, Suita city, Osaka, Japan, [3]Kyushu University, Department of Surgery and Science, Graduate School of Medical Sciences, Fukuoka city, Fukuoka, Japan

09:10–09:18 A-196 **Vessel Enhancement Technique for Hepatic Vessel Segmentation**

Shanmugapriya Survarachakan[1], Egidijus Pelanis[2, 3], Rahul Prasanna Kumar[2], Frank Lindseth[1]
[1]Norwegian University of Science and Technology, Department of Computer Science, Trondheim, Norway, [2]Oslo University Hospital, Riskhospitalet,, The Intervention Centre,, Oslo, Norway, [3]University of Oslo,, Faculty of Medicine, Institute of Clinical Medicine,, Oslo, Norway

09:18–09:26 A-214 **3D-printed liver mold for phantom liver experimental model**

Florin Graur[1, 2], Radu Claudiu Elisei[1, 3], Nadim Al Hajjar[1, 2], Calin Popa[1, 2], Emil Mois[1, 2], Calin Vaida[4], Doina Pisla[4]
[1]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Cluj-Napoca, Romania, [2]Institute of Gastroenterology and Hepatology "O. Fodor" Cluj-Napoca, 2nd General Surgery Department, Cluj-Napoca, Romania, [3]County Emergency Hospital Bistrita, General Surgery, Bistrita, Romania, [4]Technical University Cluj-Napoca, Robotics, Cluj-Napoca, Romania

09:26–09:34 A-242 **A novel synthetic tissue mimicking prostate model for image guided robotic surgery training**

Jashan Singh, Andrew Dennison, Yuting Ling, Andreas Melzer
University of Dundee, Institute for Medical Science & Technology, Division of Imaging Sciences & Technology, Dundee, United Kingdom

09:34–09:42 A-234 **Investigation of computer-assisted registration techniques for minimally invasive endopancreatic surgery**

Benjamin Eigl[1], Caroline Haslebacher[1], Philip Müller[2]
[1]CAScination, Bern, Switzerland, [2]University Hospital Zürich, Department of Surgery, Zürich, Switzerland

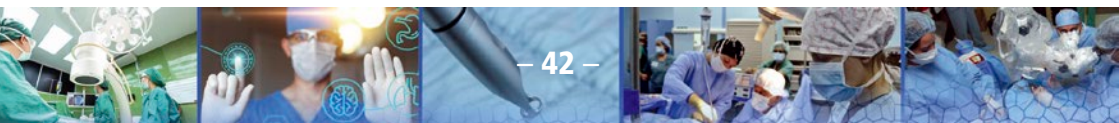


Friday, October 11, 2019

09:42–09:50 A-149 **Hyperspectral imaging of pig liver ischemia: a proof of concept**
Eric Felli[1, 2], Manuel Barberio[1, 2], Takeshi Urade[2], Emanuele Felli[3], Jacques Marescaux[2, 4], Michele Diana[1, 2, 4]
[1]University of Strasbourg, Mitochondrie, stress oxydant et protection musculaire, Strasbourg, France, [2]Institute of Image-Guided Surgery (IHU) Strasbourg, Strasbourg, France, [3]Nouvel Hôpital Civil, Université de Strasbourg, General, Digestive, and Endocrine Surgery,, Strasbourg, France, [4]Institut de Recherche Contre les Cancers de l'Appareil Digestif (IRCAD), Strasbourg, France

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10:30–12:00	**Session 19: Focal interdisciplinary therapy**
	Moderation: Jochen Walz, Marseille, France Burkhard Lippert, Heilbronn, Germany
10:30–10:40	**The role of Fusion-MRI-based biopsy for focal therapy of the prostate** Jochen Walz, Marseille, France
10:40–10:50	**MRI and Ultrasound for Software-Based Fusion-Guided Prostate Biopsy** Ulrich Humke, Stuttgart, Germany
10:50–11:00	**Robotic prostate biopsy** Dan Stoianovici, Baltimore, United States
11:00–11:10	**VTP-therapy for the focal treatment of the prostate cancer** Angelika Borkowetz, Dresden, Germany
11:10–11:20	**IRE from scratch to clinic in prostate cancer** Martijn de Bruin, Amsterdam, The Netherlands
11:20–11:30	**Electrochemotherapy - mode of action and treatment of skin tumors and metastases** Harald Löffler, Heilbronn, Germany
11:30–11:40	**Electrochemotherapy – experiences in ENT** Magnus Tiefenbach, Heilbronn, Germany
11:40–11:50	**REZUM-technology for transurethral management of the prostate (BPO)** Ullrich Witzsch, Frankfurt, Germany



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10:30–12:00 **Session 20: What is new in intraoperative imaging?**

Moderation: Alberto Breda, Barcelona, Spain
Bernardo Rocco, Modena, Italy
Dogu Teber, Karlsruhe, Germany

10:30–10:40 **Confocal laser microscopy in dermatology**
Harald Löffler, Heilbronn, Germany

10:40–10:50 **Confocal laser microscopy in the upper urinary tract – ready to go?**
Alberto Breda, Barcelona, Spain

10:50–11:00 **Confocal laser microscopy during RALP**
Bernardo Rocco, Modena, Italy

11:00–11:10 **Multispectral imaging – ready for laparoscopy**
Anant Vemuri, Heidelberg, Germany

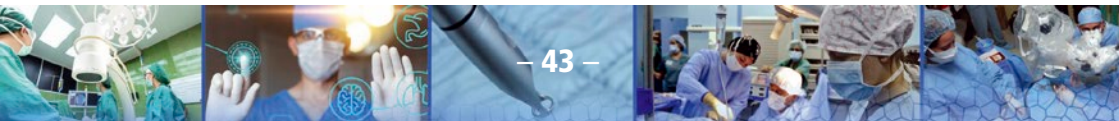
11:10–11:20 **Raman vs. PDD in Neurosurgey**
Gernot Kronreif, Vienna, Austria

11:20–11:30 **HD-PDD for imaging of bladder tumors**
Arnulf Stenzl, Tübingen, Germany

11:30–11:40 **Multiparametric cystoscopy**
Maximilian Kriegmair, Mannheim, Germany

11:40–11:47 A-126 **How to evaluate surgical navigation accuracy for laparoscopic liver resection.**
Andrea Teatini[1, 2], Egidijus Pelanis[1, 3], Bjørn Edwin[1, 3, 4], Ole Jakob Elle[1, 2], HiPerNav - H2020-MSCA-ITN 722068
[1]Oslo University Hospital, Rikshopitalet, The Intervention Centre, Oslo, Norway, [2]University of Oslo, Department of Informatics, Oslo, Norway, [3]University of Oslo, Institute of Clinical Medicine, Oslo, Norway, [4]Oslo University Hospital, Rikshopitalet, Hepato-Pancreatic-Biliary surgery, Oslo, Norway

11:47–11:54 A-156 **Towards real-time in vivo intraoperative surgical instrument guidance using Diffuse Reflectance Spectroscopy during spinal implant placement procedures**
Akash Swamy[1, 2], Gustav Burström[3], Jarich W Spliethoff[2], Drazenko Babic[2], Christian Reich[2], Joanneke Groen[2], John Racadio[4], Erik Edström[3], Adrian Elmi Terander[3], Jenny Dankelman[1], Benno H. W. Hendriks[1, 2]
[1]Delft University of Technology, Biomechanical Engineering, Delft, The Netherlands, [2]Philips Research, In-Body Systems, Eindhoven, The Netherlands, [3]Karolinska Institutet, Department of Clinical Neuroscience and Neurosurgery, Stockholm, Sweden, [4]Cincinnati Children's Hospital Medical Center, Cincinnati, United States



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11:54–12:00 A-174 **Computer-assistance in minimally invasive endopancreatic surgery**
Benjamin Eigl[1], Philip Müller[2], Caroline Haslebacher[1]
[1]CAScination, Bern, Switzerland, [2]University Hospital Zürich, Department of Surgery, Zürich, Switzerland

Seminarraum

10:30–12:00 Session 21: Innovation in and around the neurosurgery operating room

Moderation: Uwe Spetzger, Karlsruhe, Germany
Oliver Sakowitz, Ludwigsburg, Germany

10:30–10:40 **The use of augmented reality with HoloLens for neurosurgery**
Michal Hlavac, Günzburg, Germany

10:40–10:50 **Laser interstitial thermal therapy (LITT) and intraoperative MRT in Neurosurgery**
Oliver Bozinov, Zurich, Switzerland

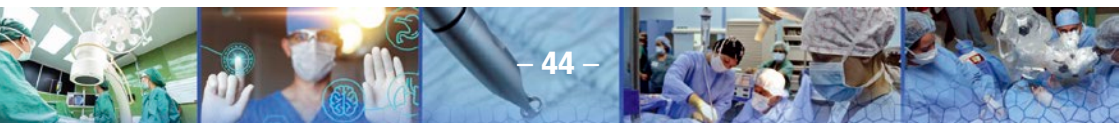
10:50–11:00 **The of a 3D-HD-Exoskops for neuro-surgical interventions**
Jan Regelsberger, Hamburg, Germany

11:00–11:10 **Intraoperative MRI in Neurosurgery: Hybrid-, two-room, three-room, etc. solutions. What makes sense?**
Oliver Sakowitz, Ludwigsburg, Germany

11:10–11:19 A-217 **Interventional brain imaging of hemodynamics with multispectral photoacoustics**
Thomas Kirchner[1], Adrian H. Aguilera[2], Mildred A. Herrera[2], Janek Gröhl[1], Edgar Santos[2], Lena Maier-Hein[1]
[1]German Cancer Research Center (DKFZ), Computer Assisted Medical Interventions, Heidelberg, Germany, [2]University Hospital Heidelberg, Department of Neurosurgery, Heidelberg, Germany

11:19–11:28 A-170 **Focused Ultrasound at the Tipping Point: A new Modality in Neurosurgery**
Thomas Andreae
Focused Ultrasound Foundation, Charlottesville, VA, United States

11:28–11:37 A-226 **Magnetic Drug Targeting: Novel Treatment for Intramedullary Spinal Cord Tumors**
Pouyan Kheirkhah[1], Steven Denyer[1], Abhiraj Bhimani[1], Gregory Arnone[1], Darian Esfahani[1], Tania Aguilar[1], Jack Zakrzewski[1], Indu Venugopal[2], Nazia Habib[2], Gary Gallia[3], Andreas Linninger[2], Fady Charbel[1], Ankit Mehta[1]
[1]University of Illinois at Chicago, Neurosurgery, Chicago, United States, [2]University of Illinois at Chicago, Department of Bioengineering, Chicago, United States, [3]Johns Hopkins University School of Medicine, Neurosurgery, Baltimore, United States



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Foyer

10:30–12:00 **ePoster 6: Simulation and Training**

Moderation: Konrad Karcz, Munich, Germany
Calin Tiu, Campina, Romania

10:30–10:38 A-153 **Telementored bipolar enucleation of the prostate: A magic way to teach surgery**

Marco Amato[1], Riccardo Milandri[1], Giulio Guarino[1], Maria Chiara Sighinolfi[1], Agostino Meneghini[2], Giampaolo Bianchi[3], Bernardo Rocco[1], Salvatore Micali[1]

[1]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy, [2]Santa Maria degli Angel Hospital, Adria, Italy, [3]University of Modena, Dept. of Urology, University of Modena and Reggio Emilia, Italy,, Modena, Italy

10:38–10:46 A-104 **Expandable 3D-printed human bladder phantom to enhance endourological skills**

Frank Waldbillig[1], Eujin Choi[2], Britte Gruene[1], Simon Hein[3], Rodrigo Suarez-Ibarrola[3], Arkadiusz Miernik[3], Manuel Ritter[4], M K Jeong[2], Peer Fischer[2], Tian Qiu[2], Maximilian Christian Kriegmair[1]

[1]University Medical Centre Mannheim, Department of Urology, Mannheim, Germany, [2]Max Planck Institute, Intelligent Systems, Stuttgart, Germany, [3]University of Freiburg, Medical Centre, Department of Urology, Freiburg, Germany, [4]University of Bonn, Medical Centre, Department of Urology, Bonn, Germany

10:46–10:54 A-215 **New concept of a 3D-printed pelvi-trainer for pelvic laparoscopic surgery training program**

Radu Claudiu Elisei[1, 2], Florin Graur[2, 3], Calin Popa[2, 3], Emil Mois[2, 3], Luminita Furcea[2, 3], Nadim Al Hajjar[2, 3]

[1]County Emergency Hospital Bistrita, General Surgery, Bistrita, Romania, [2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Cluj-Napoca, Romania, [3]Institute of Gastroenterology and Hepatology "O. Fodor" Cluj-Napoca, 2nd General Surgery Department, Cluj-Napoca, Romania

10:54–11:02 A-182 **Comparative analysis of surgical performance and motor skills between a handheld robotic and a conventional needle holder during urethrovesical anastomosis**

Juan A. Sánchez-Margallo[1], Francisco M. Sánchez-Margallo[2]

[1]Jesús Usón Minimally Invasive Surgery Centre, Bioengineering and Health Technologies, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Centre, Scientific Direction, Cáceres, Spain



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11:02–11:10 A-245 **Using virtual reality simulation data to inform an automated surgical coach for robot-assisted surgery**
Anand Malpani[1], Monica Garcia Sevilla[2, 3], Gina Adrales[4]
[1]Johns Hopkins University, Malone Center for Engineering in Healthcare, United States, United States, [2]Johns Hopkins University, Computer Science, Baltimore, United States, [3]Universidad Carlos III de Madrid, Bioengineering and Aeroespace Engineering, Madrid, Spain, [4]Johns Hopkins S chool of Medicine, Surgery, Baltimore, United States

11:10–11:18 A-181 **Visual force feedback using ForceFilm™ technology for training in laparoscopic suturing**
Juan A. Sánchez-Margallo[1], Francisco M. Sánchez-Margallo[2]
[1]Jesús Usón Minimally Invasive Surgery Centre, Bioengineering and Health Technologies, Cáceres, Spain, [2]Jesús Usón Minimally Invasive Surgery Centre, Scientific Direction, Cáceres, Spain

11:18–11:26 A-233 **How To Improvise When High-tech Fails Us?**
Hichem Kouicem
Private centre: Urology Maghreb Centre, Urology, Setif, Algeria

Wilhelm Maybach Saal A

12:00–13:00 Lunch-Science-Slam

Moderation: Thomas Kirchner, Heidelberg, Germany
Amir Szold, Tel Aviv, Israel

12:00–12:05 **Did you know that every day approximately 5800 biopsies are performed in Germany?**
Patmaa Sridharan, Bunyamin Pekdemir and Laura Aguilera Saiz, Heidelberg, Germany

12:05–12:10 **RAINBOW Surgery: Live perfusion monitoring with multispectral imaging**
Silvia Seidlitz, Thuy Nuong Tran and Diana Mindroc-Filimon, Heidelberg, Germany

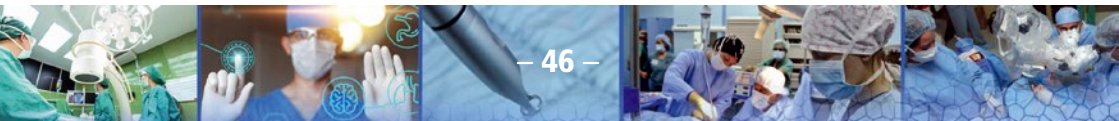
12:10–12:15 **The how and why of computer-assisted surgical navigation**
Sebastian Bodenstedt, Dresden, Germany

12:15–12:20 **The hard predictible road from the idea to success**
Calin Tiu, Prahova, Romania and Andreas Melzer, Dundee, United Kingdom

12:20–12:25 **Photoacoustics: Listen to light!**
Niklas Holtzwarth and Kris Dreher, Heidelberg, Germany

12:25–12:30 **The Sexiness of MRI guided Interventions**
Christoph Martin Reich and Lisa Landgraf, Leipzig, Germany

12:20–12:35 **Science Fiction in the OR – How Robert learned to fight Cancer**
Johann Berger, Leipzig, Germany



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13:00–14:30		Session 22: Operating room of the future
		Moderation: Andreas Melzer, Dundee, United Kingdom Keno März, Heidelberg, Germany Markus Hohenfellner, Heidelberg, Germany
13:00–13:10		**Software defined healthcare: translational trends in urology interventions and current challenges of scaling them** Magdalena Görtz, Heidelberg, Germany
13:10–13:30		**Software defined healthcare: scaling translational interventions massively via the OP 4.1 business and technology platform** Michael Byczkowski, Walldorf, Germany
13:30–13:40		**Endoscopy. Integration. Digitalisation – Digitalisation of OR-Workflows** Ingo Brechtel, Tuttlingen, Germany
13:40–13:50		**Value-added services based on SDC** Thomas Neumuth, Leipzig, Germany
13:50–14:00		**State of the Art and future developments of OR technology** Andreas Melzer, Dundee, United Kingdom
14:00–14:10		**Hybrid is the key: OR, procedures and navigation** Michele Diana, Saverne, France
14:10–14:20	A-140	**Technological devices in operating rooms of the future: a validation study of a protocol for the implementation of new (medical) devices.** Navin Sewberath Misser[1, 2], Joris Jaspers[1], Bas van Zaane[1], Hein Gooszen[3], Jurre van der Maazen[4], Robin de Jong[4], John van Meerten[4], Johan Versendaal[2, 5] *[1]University Medical Center Utrecht, Medical Technology and clinical physics, Utrecht, The Netherlands, [2]HU University of Applied Sciences, Research Group Digital Smart Services, Utrecht, The Netherlands, [3]Radboud Medical Center, Operating Room, Nijmegen, The Netherlands, [4]HU University of Applied Sciences Utrecht, Business Information Management, Utrecht, The Netherlands, [5]Open University, Management Science, Heerlen, The Netherlands*
14:20–14:30		**3 Best MITAT-paper 2019** Eiji Kanehira, Soka, Japan

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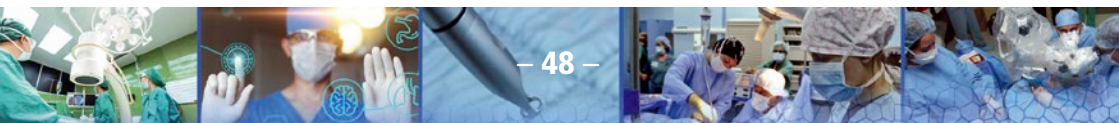
Scientific Program

Friday, October 11, 2019

13:00–14:30	Session 23: Minimally invasive oncologic therapy for renal cancer
	Moderation: Uwe Martens, Heilbronn, Germany Philippe Pereira, Heilbronn, Germany Maurice-Stephan Michel, Mannheim, Germany
13:00–13:10	**The role of RFA in the management of the metatastases** Philippe Pereira, Heilbronn, Germany
13:10–13:20	**The role of genetic diagnostic / nanosurgery** Carsten Grüllich, Heidelberg, Germany
13:20–13:30	**The role of minimal-invasive surgery** Piotr Chlosta, Krakow, Poland
13:30–13:40	**The role of targeted therapy** Michael Staehler, Munich, Germany
13:40–13:50	**Is there still a role for open surgery?** Markus Hohenfellner, Heidelberg, Germany
13:50–14:00	**Case presentations** Marcel Fiedler, Heilbronn, Germany

Seminarraum

13:00–14:30	Session 24: Robotics around the head
	Moderation: Cem Bulut, Heilbronn, Germany Gernot Kronreif, Vienna, Austria
13:00–13:10	**Robotics in cochlear implantation** Marco Caversaccio, Bern, Switzerland
13:10–13:20	**Update in head and neck robotics** Tom Vauterin, Brugge, Belgium
13:20–13:30	**Quality of life outcome in head and neck robotics** Cem Bulut, Heilbronn, Germany
13:30–13:40	**A low-profile robot for neurosurgery** Gernot Kronreif, Vienna, Austria
13:40–13:50	**Robotics in lateral skull base surgery** Philippe Federspil, Heidelberg, Germany
13:50–14:00	**Robotics and sensors for vitreoretinal surgery** Yanik Douven, Nederweert-Eind, The Netherlands
14:00–14:10	**Design and control of ENT instruments; challenges and implications** Julie Legrand, Leuven, Belgium



14:10–14:20 A-97 **Increasing health-related quality of life with sialendoscopy intervention in patients after prostate-specific membrane antigene targeting alpha-therapy (PSMA-TAT)**

Olcay Cem Bulut[1, 2], B.M. Lippert[1], Hendrik Rathke[2]

[1]SLK Kliniken Am Gesundbrunnen, Department of Otorhinolaryngology, Head and Neck surgery, Heilbronn, Germany, [2]University of Heidelberg, Department of Nuclear Medicine, Heidelberg, Germany

Foyer

13:00–14:30 ePoster 7: Miscellaneous

Moderation: Marc Schurr, Tübingen, Germany
Arianna Menciassi, Pontedera, Italy

13:00–13:08 A-171 **Long term outcomes of transobturator tape (TOT) compared with tension-free vaginal tape (TVT) in women with stress urinary incontinence**

Gökhan Ergin[1], Martin Hatzinger[2], Ali Gözen[3], Jens Jochen Rassweiler[4]

[1]Urologie Praxis Heilbronn, Heilbronn, Germany, [2]Diakonissen Krankenhaus Mannheim, Urologie, Mannheim, Germany, [3]SLK Klinikum Heilbronn, Urology, Heilbronn, Germany, [4]SLK Kliniken, Urology, Heilbronn, Germany

13:08–13:16 A-235 **Magnetic Resonance Imaging-Targeted 3D Transrectal Ultrasound Guided Fusion Biopsy of Prostate Cancer Suspected Patients: Results of 292 patients**

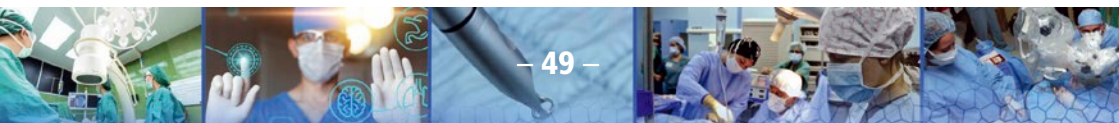
Sercan Yilmaz[1], Hakan Ozdemir[2], Eymen Gazel[3], Engin Kaya[1], Serdar Yalcin[1], Mehmet Ezer[4], Ali Yusuf Oner[5], Mehmet Yorubulut[6], Lutfi Tunc[7]

[1]University of Health Sciences, Gulhane Education and Research Hospital, Urology, Ankara, Turkey, [2]Diason Ultrasound Imaging Center, Radiology, Ankara, Turkey, [3]Acibadem Hospital, Urology, Ankara, Turkey, [4]Mus State Hospital, Urology, Mus, Turkey, [5]Gazi University, Radiology, Ankara, Turkey, [6]Acibadem Hospital, Radiology, Ankara, Turkey, [7]Gazi University, Urology, Ankara, Turkey

13:16–13:24 A-185 **Design on carried out on the development of exercise robot devices for differentiated rehabilitation between spinal cord injury levels**

JinYoung Lee[1], Tae-Hyeon Kim[2], Ki-Cheol Yoon Yoon[3], Kwang Gi Kim[4], Jung-Su Lee[5]

[1]Gachon University & Gil medical center, Medical Devices R&D Center, Incheon, South Korea, [2]Gachon University & Gil medical center, Medical Devices R&D center, Incheon, South Korea, [3]Gachon University & Gil medical center, Medical Devices R&D Center & Dept. of Biomedical Engineering, College of Medicine, Incheon, South Korea, [4]Gachon University, Dept. of Biomedical Eng., College of medicine & Medical Devices R&D Center, Incheon, South Korea, [5]Gachon Univer. & Gil Med. Center, Medical Devices R&D Center, Incheon, South Korea



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13:24–13:32 A-183 **Reaction force measurement for application of upper extremity rehabilitation exercise equipment control system**
Taehyeon Kim, Jinyoung Lee, Jung-soo Lee, Ki-Cheol Yoon, Kwang gi Kim *Gachon University, Inchon, South Korea*

13:32–13:40 A-139 **The use of negative pressure wound therapy to treat groin lymphatic fistula: A case report.**
Nariaki Okamoto, Masahiro Waseda, Natsu Hukunaga, Mariko Tanaka, Ken Sujishi, Ryohei Sato, Chiyo Maeda, Shuichiro Takanashi, Ken Hayashi, Tetsutaro Suzuki
Yokohama Asahi Chuo General Hospital, Kanagawa, Japan

13:40–13:48 A-160 **Validity of interval laparoscopic appendectomy**
Natsu Fukunaga
IMS Group, Yokohama Asahi Chuo General Hospital, Senior Resident, Gastrointestinal Surgery, 4-20-1,Wakabadai, Asahi-ku, Yokohama-shi, Kanagawa-ken, Japan

13:48–13:56 A-172 **Focused ultrasound radiosensitize prostate cancer cells in vitro**
Xinrui Zhang[1], Micheal Unger[1], Ina Patties[2], Lisa Landgraf[1], Andreas Melzer[1]
[1]Innovation Center Computer Assisted Surgery (ICCAS), Leipzig, Germany, [2]University of Leipzig, Department of Radiooncology, Leipzig, Germany

13:56–14:04 A-165 **Impact Of Oral Immunonutrition On Radical Prostatectomy For Prostate Cancer: Results Of A Pilot, Controlled Clinical Trial**
Sinan Çelen[1, 2], Omer Levent Tuncay[2], Yusuf Ozlulerden[2]
[1]Pamukkale Unıversity, Urology, Denizli, Turkey, [2]Pamukkale University, Urology, Denizli, Turkey

14:04–14:12 A-184 **A research on light reflection reduce method of endoscopy image using convolutional neural network (CNN) architecture based on artificial intelligence (AI)**
Ki-Cheol Yoon[1], Tae-Hyeon Kim[2], Jin-Young Lee[2], Kwang Gi Kim[3]
[1]Gachon University, Medicine, Incheon, South Korea, [2]Gachon University & Gil Medical Center, Medical devices R&D center, Inchon, South Korea, [3]Gachon University & Gil Medical Center, Medical devices R&D center & College of medicine, Dept. of Biomedical Engineering, Inchon, South Korea



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14:30–16:00		Session 25: Medicine 2030
		Moderation: Jens Rassweiler, Heilbronn, Germany Domenico Veneziano, Calabria, Italy Fady Charbel, Chicago, United States
14:30–14:40		**AI and big data analysis in genome sequencing** Uwe Martens, Heilbronn, Germany
14:40–14:50		**Why Apps are disrupting healthcare, what innovators need to know?** Paul Wetter, Miami, United States
14:50–15:00	A-195	**Surgery Beyond Robotics: Directed Energy for Non-invasive Surgery** Richard M. Satava, Pebble Beach, CA, United States
15:00–15:10		**Could machine become a doctor? The review of the deep learning systems for computer aided diagnosis** Franciszek Binczyk, Katowice, Poland
15:10–15:20		**Seoul declaration for ethical medical technology: update and future** Young Woo Kim, Inchon, South Korea
15:20–15:30		**The future role of VR in Medicine** Gerrit Meixner, Heilbronn, Germany
15:30–15:40		**Robot meets Robot – 3D and functional navigation during robot-assisted surgery** Dogu Teber, Karlsruhe, Germany
15:40–15:55		**How science fiction influences science** Nicoletta Iacobacci, Geneve, Switzerland

Willhelm Maybach Saal B

14:30–16:00		Session 26: Minimally invasive oncologic therapy on prostate cancer
		Moderation: Kurt Miller, Berlin, Germany Francesco Porpiglia, Turin, Italy
14:30–14:40		**The role of minimally invasive surgery in advanced prostate cancer** Francesco Montorsi, Milano, Italy
14:40–14:50		**3D-Navigation during robotic assisted radical prostatectomy** Matteo Manfredi, Turin, Italy
14:50–15:00		**Long-term results after brachytherapy** Stefan Carl, Freiburg, Germany
15:00–15:10		**The role of open surgery in advanced prostate cancer** Kurt Miller, Berlin, Germany



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15:10–15:20 **The role of PSMA-PET in imaging of advanced prostate cancer**
Wolfgang Jäger, Mainz, Germany

15:20–15:30 **The role chemotherapy in advanced prostate cancer**
Stefan Machtens, Leverkusen, Germany

15:30–15:40 **The role of anti-hormonal treatment in advanced prostate cancer**
Christian Schwentner, Stuttgart, Germany

15:40–15:50 A-142 **Pivotal Study of MRI-guided transurethral ultrasound ablation (TULSA) in men with localized prostate cancer**
Jurgen Fütterer[1], Steven S. Raman[2], Joseph Chin[3], Gencay Hatiboglu[4], Aytekin Oto[5], Christian Pavlovich[6], Sandeep S. Arora[7], Michael Koch[8], James Relle[9], Marc Serrallach[10], Carlos Nicolau[10], Thorsten Persigehl[11], Daniel Costa[12], Yair Lotan[12], Allan Pantuck[2], Michiel Sedelaar[1], David Bonekamp[4], Masoom Haider[13], Axel Heidenreich[11], Gregory Zagaja[5], Joyce Bomers[1], Robert Staruch[14], Mathieu Burtnyk[14], David Penson[7], Katarzyna Macura[6], Temel Tirkes[8], Laurence Klotz[13, 15], Scott Eggener[5]
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15:50–16:00 **Summary**
Kurt Miller, Berlin, Germany



Friday, October 11, 2019

Seminarraum

14:30–16:00	Session 27: EIRSS-last supper
	Moderation: Maurice-Stephan Michel, Mannheim, Germany Joachim Thüroff, Mannheim, Germany
14:30–14:40	**Management of Level-4 cava thrombus** Markus Hohenfellner, Heidelberg, Germany
14:40–14:50	**How RIRS was developed** Gerhard Fuchs, Beverly Hills, United States
14:50–15:00	**NLR in Optimizing Selection of Adjuvant Therapy Candidtates for Post Nephrectomy High Risk M0 Clear Cell RCC Patients** Anup Patel, London, United Kingdom
15:00–15:10	**Cytoreductive tumornephrectomy – update 2019** Gerald Mickisch, Bremen, Germany
15:10–15:20	**Urine cytology – what has changed** Peter Rathert, Düsseldorf, Germany
15:20–15:30	**The birth of laparoscopic radical prostatectomy** Bertrand Guillonneau, Berlin, Germany
15:30–15:40	**Posterior reconstruction after radical prostatectomy** Bernardo Rocco, Modena, Italy
15:40–15:50	**Development in the clinical evaluation of the modified Indiana pouch** Rainer Hofmann, Marburg, Germany
15:50–16:00	**The couple after radical prostatectomy** Claude Abbou, Paris, France

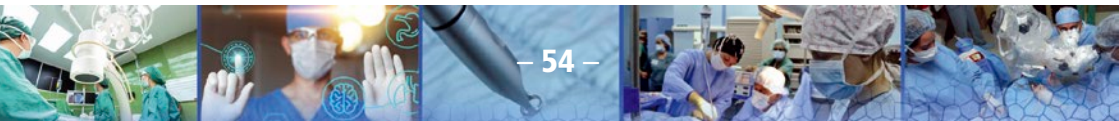
Wilhelm Maybach Saal A

16:00–17:00	Closure
	Moderation: Joachim Kettenbach, Vienna, Austria Andreas Melzer, Dundee, United Kingdom Jens Rassweiler, Heilbronn, Germany
16:00–16:20	**John Abele Lecture** Stefanie Speidel, Dresden, Germany
16:20–16:30	**Start Up Award**
16:30–16:50	**John Wickham Lecture** Peter Alken, Mannheim, Germany
16:50–17:00	**MITAT Award**



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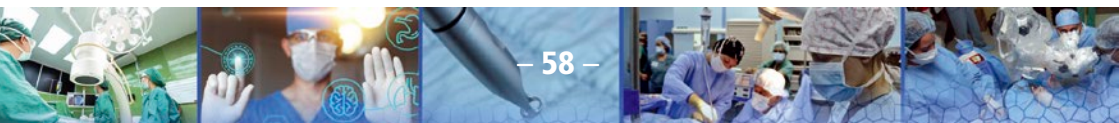
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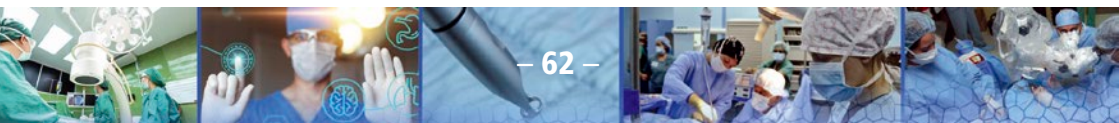
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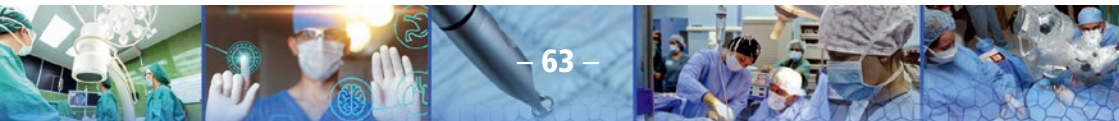
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