



Pre-conference Workshop Experimental FUS and HIFU Wednesday – October 25, 2017 | Leipzig (Germany)

Supported by BMBF Project SONO-RAY, ICCAS, IGT, IBMT, Philips and endorsed by ISTU in collaboration with Deutsche Gesellschaft für Biomedizintechnik DGBMT Committee on Ultrasound

Faculty: Steffen Tretbar, Marc Fournelle, Michiel Postema, Björn Gerold, Maya Thanou, Nader Saffari, Ina Patties, Markus Kaiser, Chrit Moonen, Jean-Francois Aubry, Erik Dumont, Holger Grüll, Edwin Heijman et al.

Venue: ICCAS, Semmelweisstr. 14, 04103 Leipzig

Schedule	Topic	Speakers
9.30 – 9.35	Registration and Welcome	Andreas Melzer
9.35 – 9.45	Tumor therapy combining image-guided focused ultrasound and radiation therapy – introduction of Sono-Ray project (abstract 30)	Andreas Melzer (Leipzig, Germany)
9.45 – 10.40 Principles, technology and therapy planning Chair: Chrit Moonen		
9.45 – 9.55	Medical ultrasound: from imaging to FUS/HIFU	Steffen Tretbar (St. Ingbert, Germany)
9.55 – 10.05	MR guided FUS/HIFU	Chrit Moonen (Utrecht, Netherlands)
10.05 – 10.15	Ultrasound guided FUS/HIFU	Jean-Francois Aubry (Paris, France)
10.15 – 10.25	Treatment planning for abdominal HIFU	Nader Saffari (London, UK)
10.25 – 10.40	<u>Speed talks (3minutes)</u> A novel monitoring method for HIFU ablation using physics-based simulation(abstract 8) Prediction-based controller for MR-HIFU mediated hyperthermia (abstract 17) Development of a fat tissue mimicking phantom for lesion assessment in USgHIFU (abstract 14) Enhancement of thermal contrast in HIFU treatments by perfluorocarbon (abstract 22)	Chloé Audigier (Baltimore, USA) Lukas Sebeke (Cologne, Germany) Marta Gherardini (Pisa, Italy) Orane Lorton (Geneva, Switzerland)
10.40 – 11.00	Coffee break and poster session (optional)	

11.00 – 11.30 Ultrasound and drug delivery Chair: Jean-Francois Aubry		
11.00 – 11.10	Nanoparticle-mediated drug delivery	Achim Aigner (Leipzig, Germany)
11.10 – 11.20	Ultrasound mediated delivery of macromolecules	Maya Thanou (London, UK)
11.20 – 11.30	MR guided HIFU induced delivery of liposomes	Edwin Heijman (Cologne, Germany)
11.30 – 12.00 Bubbles, cavitation and simulations Chair: Steffen Tretbar		
11.30 – 11.40	Cavitation enhanced heating	Björn Gerold (Paris, France)
11.40 – 11.50	Approaches for a particle based in silico simulation model for combined effects of ultrasound and radiation on tumor cells <i>(abstract 25)</i>	Johann Berger (Leipzig, Germany)
11.50 – 12.00	Computational models of FUS stimulation tissue effects	Marcus Kaiser (Newcastle, UK)
12.00 – 13.00	<i>Lunch Break</i>	
13.00 – 13.40 Phantoms and tumor cell treatment Chair: Lisa Landgraf		
13.00 – 13.10	IGT-FUS reusable tissue mimicking material phantom <i>(abstract 40)</i>	Andrew Dennison (Dundee, Scotland)
13.10 – 13.20	Solutions for small animal FUS & HIFU	Erik Dumont (Pessac, France)
13.20 – 13.30	FUS/HIFU supporting radiation therapy	Ina Patties (Leipzig, Germany)
13.30 – 13.40	Comparison of experimental setups for in vitro studies using a clinical HIFU device <i>(abstract 24)</i>	Lisa Landgraf (Leipzig, Germany)
13.40 - 14.00	<i>Coffee Break</i>	
14.00 – 16.30	FUS/HIFU Hands-on: 1. How to build an ultrasound therapy system 2. Cell culture sonication 3. Sonalleve MRHIFU hands on demonstration (limited registration)	1. Marc Fournelle (Sulzbach, Germany) 2. Lisa Landgraf (Leipzig, Germany) 3. Edwin Heijman (Cologne, Germany)

19:00 Get together “Ratskeller Leipzig”

free admission, more information: <http://www.eufus.org/2017events/>

Venue: Lotterstraße 1, 04109 Leipzig