

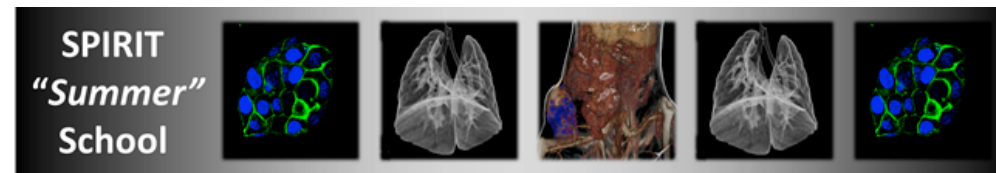
2nd Göttingen SPIRIT “Summer” School

“Multimodal Molecular Imaging: from high resolution *in vitro* towards *in vivo* imaging”

November 9th – 13th, 2015

University Medicine Göttingen
&
Max-Planck-Institute of Experimental Medicine

Main Lecture Hall MPI
Hermann-Rein-Str. 3
37075 Göttingen



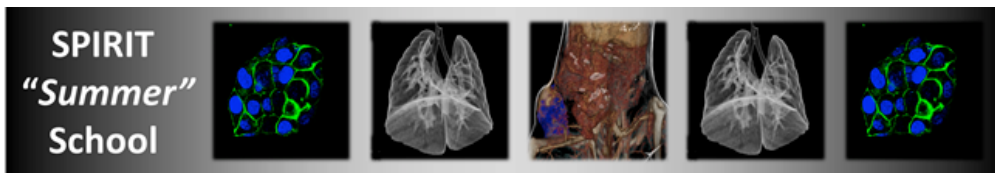
PROGRAM

Monday 9th November 2015

08:15 – 09:00	Registration
09:00 – 09:30	Welcome and Introduction: Walter Stühmer
09:30 – 10:15	Tim Salditt <i>X-ray imaging from the organ and tissues down to the cell: fundamentals and current state of the art</i>
10:15 – 10:30	Coffee break
10:30 – 11:15	Giuliana Tromba <i>The benefits of Synchrotron radiation x-ray imaging for preclinical research and medical applications</i>
11:15 – 12:00	Wolfgang Parak <i>Interaction of colloids with cells</i>
12:00 – 13:00	Lunch and meet the experts
13:00 – 15:30	Participants Presentations <i>10 Talks</i> Chair: Jürgen Goldschmidt
15:30 – 16:00	Coffee break
16:00 – 18:45	Participants Presentations <i>11 Talks</i> Chair: Joanna Napp and Frauke Alves
18:45 – 19:00	Introduction: Göttingen participants
19:00	Get together at MPI

Tuesday 10th November 2015

08:45 – 09:30	Susann Boretius <i>Introduction into magnetic resonance imaging and magnetic resonance spectroscopy of experimental animals</i>
09:30 – 10:15	Markus Rudin <i>Functional neuroimaging in rodents: towards the analysis of networks</i>
10:15 – 10:30	Coffee break
10:30 – 11:15	Annemie van der Linden <i>In vivo MRI: An excellent tool to study neuroplasticity</i>
11:15 – 12:00	Meeting of young scientists with ESMI members
12:00 – 13:30	Lunch and Discussion



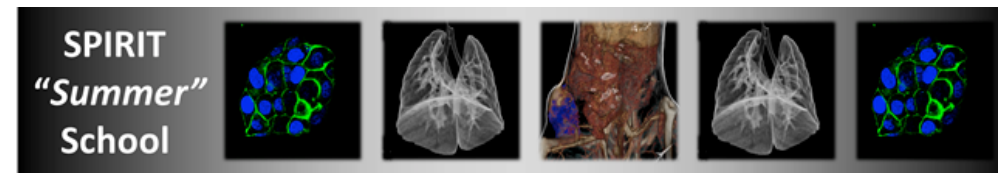
13:30 – 16:45	Hands-on sessions <i>STED Gr. 1; MRI Gr. 1; Optical imaging Gr. 1</i> <i>CT, μCT and X-ray imaging Gr. 1</i> <i>Microscopy and image analysis Gr. 1</i> <i>Optical endomicroscopy (Cellvisio) Gr. 1</i>
16:45 – 17:00	Coffee break
17:00 – 17:45	Ferdia Gallagher <i>Translational MRI</i>
17:45 – 18:00	Discussion
from 18:00	Bowling and dinner (Hotel Freizeit Inn)

Wednesday 11th November 2015

08:45 – 09:30	Tony Lahoutte <i>Molecular targeting using nanobodies</i>
09:30 – 10:15	Timothy Witney <i>Imaging aberrant tumor metabolism with positron emission tomography</i>
10:15 – 10:30	Coffee break
10:30 – 11:15	John Lees <i>The hybrid optical-gamma camera for intra-operative imaging</i>
11:15 – 12:00	Colin Self <i>Making antibodies work harder</i>
12:00 – 13:00	Lunch and meet the experts
13:00 – 16:15	Hands-on sessions <i>STED Gr. 2; MRI Gr. 2</i> <i>Optical imaging Gr. 2</i> <i>Microscopy and image analysis Gr. 2 and Gr.3</i> <i>Optical endomicroscopy (Cellvisio) Gr.2</i>
16:15 – 16:30	Coffee break
16:30 – 17:15	Chrit Moonen <i>Image guided, ultrasound triggered, local drug delivery</i>
17:15 – 18:00	Discussion
from 18:00	Tour of Göttingen & dinner @ Apex

Thursday 12th November 2015

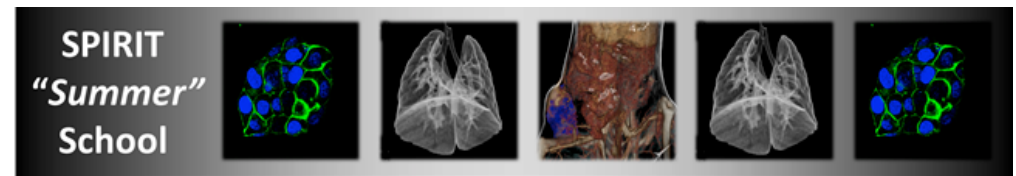
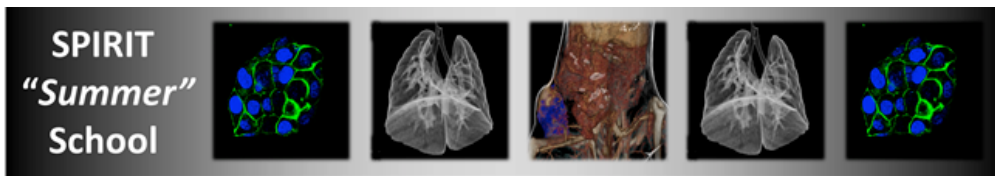
08:45 – 09:30	Claus Feldmann <i>Nanoparticles and concepts for optical imaging and drug release</i>
09:30 – 10:15	Marc Robillard <i>In vivo chemistry for cancer imaging and therapy</i>



10:15 – 10:30	Coffee break
10:30 – 11:15	Yuri Volkov <i>Nanotechnology-enabled solutions for cancer diagnostics</i>
11:15 – 12:00	Twan Lammers <i>In vivo application of nanoparticles</i>
12:00 – 13:00	Lunch and meet the experts
13:00 – 16:15	Hands-on sessions <i>STED Gr. 3</i> <i>Optical imaging Gr. 3 and Gr. 4</i> <i>CT, μCT and X-ray imaging Gr. 2</i> <i>Microscopy and image analysis Gr. 4</i> <i>Optical endomicroscopy (Cellvisio) Gr. 3</i>
16:15 – 16:30	Coffee break
16:30 – 17:15	Fabian Kiessling <i>Microbubbles for diagnostic and therapeutic ultrasound applications</i>
17:15 – 18:00	Discussion
from 18:00	Walking tour with Glühwein and dinner

Friday 13th November 2015

08:45 – 09:30	Rainer Heintzmann <i>Light Sheet Raman Microscopy</i>
09:30 – 10:15	Emmet McCormack <i>Avatars and imaging in cancer therapy development</i>
10:15 – 10:30	Coffee break
10:30 – 11:15	Stefan Jakobs <i>Switchable fluorescent proteins for RESOLFT nanoscopy</i>
11:15 – 12:00	Silvio Rizzoli <i>Molecular imaging in the spatial and temporal domain</i>
12:00 – 13:00	Lunch and meet the experts
13:00 – 13:45	Peter Friedl <i>Multiscale intravital microscopy of cancer invasion, metastasis and therapy response</i>
13:45 – 14:30	Leo Carlin <i>Imaging the mechanisms and functions of leukocytes</i>
14:30 – 14:45	Coffee break
14:45 – 15:30	Alan Chan/Alex Vahrmeijer <i>Image-guided surgery; clinical applications</i>
15:30 – 16:15	Concluding remarks and discussion



Locations:

Summer School Venue: Max-Planck-Institute of Experimental Medicine, Hermann-Rein-Str. 3, 37075 Göttingen

Dinner, Monday 9th November: Max-Planck-Institute of Experimental Medicine, Hermann-Rein-Str. 3, 37075 Göttingen

Dinner and social event, Tuesday 10th November: Hotel **Freizeit In**, Dransfelder Straße 3; 37079 Göttingen

Dinner, Wednesday 11th November: Restaurant **Apex**, Burgstraße 46, 37073 Göttingen

Dinner, Thursday 12th November: Restaurant **Knochenmühle**, Knochenmühle 1, 37075 Göttingen

Hands-on sessions:

- **Optical imaging:** University Medicine Göttingen, Robert-Koch-Str. 40, 37075 Göttingen
- **High resolution Microscopy STED:** European Neuroscience Institute Göttingen, Grisebachstraße 5, 37077 Göttingen
- **MRI:** Max-Planck-Institute of Biophysical Chemistry, Am Faßberg 11, 37077 Göttingen
- **CT, microCT and X-ray Imaging:** MPI of Experimental Medicine, Hermann-Rein-Str. 3, 37075 Göttingen & University Medicine Göttingen, Robert-Koch-Str. 40, 37075 Göttingen & Institute for X-Ray Physics, Friedrich-Hund-Platz 1, 37077 Göttingen
- **Advanced optical microscopy and image analysis:** MPI of Experimental Medicine, Hermann-Rein-Str. 3, 37075 Göttingen
- **Optical endomicroscopy (Cellvisio):** University Medicine Göttingen, Robert-Koch-Str. 40, 37075 Göttingen