Dear colleagues and friends,

After two postponements due to the Covid-19 pandemic, we are eagerly looking forward to the October 2022 on-site iMRI Symposium in Leipzig. After the last gathering in 2018 in Boston, this will mark the reunion of the interventional MRI community with opportunities to interact with opinion leaders and innovators in the field, meet old friends or find new ones. This event is jointly organized by the University of Leipzig, the Department of Radiology at Brigham and Women’s Hospital, Harvard Medical School in Boston, and the Department of Radiology and Radiological Science at Johns Hopkins University in Baltimore – in close cooperation with Hannover Medical School, University of Magdeburg and Emory Healthcare, Atlanta.

The iMRI Symposium provides an ideal platform for researchers, clinicians and healthcare professionals alike to present their latest results. Sessions with both technical and clinical topics are composed of lectures by invited speakers and proffered scientific papers. The meeting is endorsed by the ISMRM (International Society for Magnetic Resonance in Medicine) and the ESMRMB (European Society for Magnetic Resonance in Medicine and Biology) and supported by the Ferenc Jolesz National Center for Advanced Technologies Image Guided Therapy (NCIGT) at Harvard Medical School and the Innovation Center for Computer Assisted Surgery (ICCAS) at University of Leipzig.

We are hoping to see you soon in Leipzig!

Clare Tempany   Thomas Kahn   Jonathan S. Lewin
General Chairs
Clare Tempany, Boston, USA
Jonathan S. Lewin, Atlanta, USA
Thomas Kahn, Leipzig, Germany

Co-Directors
Harald Busse, Leipzig, Germany
Timm Denecke, Leipzig, Germany
Andreas Melzer, Leipzig, Germany
Michael Moche, Leipzig, Germany
Frank Wacker, Hannover, Germany

Scientific Program Committee
Harald Busse, Leipzig, Germany
Jan Fritz, Baltimore, USA
Nobuhiko Hata, Boston, USA
Thomas Kahn, Leipzig, Germany
Maciej Pech, Magdeburg, Germany
Georg Rose, Magdeburg, Germany
Oliver Speck, Magdeburg, Germany
Frank Wacker, Hannover, Germany
Clifford R. Weiss, Baltimore, USA

Faculty
Roberto Blanco Sequeiros, Turku, Finland
Jeff Bulte, Baltimore, USA
Harald Busse, Leipzig, Germany
Jan Fritz, Baltimore, USA
Jurgen Füttterer, Nijmegen, The Netherlands
Afshin Gangi, Strasbourg, France
Nobuhiko Hata, Boston, USA
Ron Kikinis, Boston, USA
Kagayaki Kuroda, Hiratsuka, Japan
Nathan McDannold, Boston, USA
Arya Nabavi, Hannover, Germany
Kuberan Pushparajah, London, UK
Jens Ricke, Munich, Germany
Alexander Schaudinn, Leipzig, Germany
Kemal Tuncali, Boston, USA
Arndt Vogel, Hannover, Germany
Frank Wacker, Hannover, Germany
Clifford R. Weiss, Baltimore, USA
Bradford Wood, Bethesda, USA
David Woodrum, Rochester, USA

TOPICS
## FRIDAY, OCTOBER 14

<table>
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<tr>
<th>Session</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td><strong>Welcome</strong></td>
<td>8:00 am – 8:45 am</td>
<td>Ferenc Jolesz Memorial Lecture</td>
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<tr>
<td><strong>Session I</strong></td>
<td>08:45 am – 10:05 am</td>
<td>General Issues – Neuro</td>
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<tr>
<td><strong>Session II</strong></td>
<td>10:35 am – 12:35 pm</td>
<td>Prostate</td>
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<td>12:35 pm – 01:05 pm</td>
<td>Lunch Symposium</td>
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<td>Siemens Healthineers</td>
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<tr>
<td><strong>Session III</strong></td>
<td>01:45 pm – 03:00 pm</td>
<td>Poster Presentation</td>
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<tr>
<td><strong>Session IV</strong></td>
<td>03:30 pm – 05:35 pm</td>
<td>MR Thermometry – Technology</td>
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## SATURDAY, OCTOBER 15

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<tr>
<th>Session</th>
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<th>Topic</th>
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<tr>
<td><strong>Session V</strong></td>
<td>08:15 am – 10:10 am</td>
<td>Neuro – Ablation – Robotics</td>
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<tr>
<td><strong>Session VI</strong></td>
<td>10:40 am – 12:25 pm</td>
<td>Cardiovascular</td>
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<tr>
<td><strong>Session VII</strong></td>
<td>01:45 pm – 02:35 pm</td>
<td>Technology – Management</td>
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<tr>
<td><strong>Session VIII</strong></td>
<td>03:15 pm – 04:10 pm</td>
<td>Ablation</td>
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<tr>
<td><strong>Session IX</strong></td>
<td>04:10 pm – 05:20 pm</td>
<td>Focused Ultrasound</td>
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Upon completion of the scientific meeting, participants should be able to:

- Explain the underlying concepts and related methods in interventional and intraoperative MRI
- List specific indications and applications for different clinical questions
- Identify the advantages and limitations of interventional MRI approaches
- Describe key research areas and clinical findings
- Evaluate trends and developments within the field

This program is certified by the Saxonian medical association with 18 credit points category A
**WELCOME**

Friday, October 14, 08:00 am – 08:45 am

- **08:00** Welcoming address
  - C. Tempany, J. S. Lewin, Th. Kahn
  - C. Josten, Medical Director, University Hospital Leipzig

- **08:15** Ferenc Jolesz Memorial Lecture
  - The impact of artificial intelligence on iMRI
  - Ron Kikinis
  - Harvard Medical School
  - Boston, MA, USA

**SESSION I**

Friday, October 14, 8:45 am – 10:05 am

**GENERAL ISSUES – NEURO**

Moderators: A. Melzer, Leipzig, Germany
- A. Nabavi, Hannover, Germany

- **08:45** Why MRI for interventions? Cost effectiveness, workflow and treatment optimization (V-01)
  - J. Ricke
  - Munich, Germany

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker/Sponsor</th>
</tr>
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<tbody>
<tr>
<td>09:00</td>
<td>MR-guided neurosurgery – current status and future perspectives (V-02)</td>
<td>A. Nabavi Hannover, Germany</td>
</tr>
<tr>
<td>09:15</td>
<td>Passive motor fMRI for intraoperative 3T MRI: first results (V-03)</td>
<td>G. Hangel, J. Wais, M. Tomschick, P. Pruckner, C. Dorfer, G. Kasprian, K. Rössler Vienna, Austria</td>
</tr>
<tr>
<td>09:25</td>
<td>Transcranial MR-guided focused ultrasound surgery (V-04)</td>
<td>N. McDannold Boston, MA, USA</td>
</tr>
<tr>
<td>09:40</td>
<td>MRI and MPI of intra-arterial stem cell administration (V-05)</td>
<td>A. Shakeri-Zadeh, S. Kuddannaya, A. Bibic, P. Walczak, J. Bulte Baltimore, MD, USA</td>
</tr>
<tr>
<td>09:55</td>
<td>MR-guided vagal cryoablation for the treatment of obesity in a canine model (V-06)</td>
<td>D. Kraitchman, T. Ehtlati, C. Rice, A. Khalil, Y. Fu, C. Weiss Baltimore, MD, USA</td>
</tr>
<tr>
<td>10:05</td>
<td>Coffee Break</td>
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</tbody>
</table>
## SESSION II

**Friday, October 14, 10:35 am – 12:35 pm**

**PROSTATE**

**Moderators:** A. Gangi, Strasbourg, France  
J. Ricke, Munich, Germany

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:35</td>
<td>MR-guided prostate biopsies (V-07)</td>
<td>A. Schaudinn</td>
<td>Leipzig, Germany</td>
</tr>
<tr>
<td>10:50</td>
<td>Comparison of prostatic lesion conspicuity using a fast balanced SSFP sequence to shorten in-bore robotic transrectal MRI-guided biopsy: a feasibility study (V-08)</td>
<td>J. C. Vilanova, J. Puig, A. Pérez de Tudela, M. Planas, S. Sala, S. Thió-Henestrosa, J. Artazkoz</td>
<td>Girona, Spain</td>
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<tr>
<td>11:00</td>
<td>MR-guided prostate interventions – update on focal therapy with MRgFUS (V-09)</td>
<td>C. Tempany</td>
<td>Boston, MA, USA</td>
</tr>
<tr>
<td>11:15</td>
<td>MR-guided focused ultrasound ablation for intermediate risk prostate cancer (V-10)</td>
<td>S. Ghai, N. Perlis, K. Corr, R. Chan, S. McCluskey, T. van der Kwast, A. Finelli</td>
<td>Toronto, Canada</td>
</tr>
<tr>
<td>11:25</td>
<td>MR-guided prostate interventions – the Mayo experience (V-11)</td>
<td>D. Woodrum</td>
<td>Rochester, MN, USA</td>
</tr>
<tr>
<td>11:40</td>
<td>MR-guided prostate interventions – the Nijmegen experience (V-12)</td>
<td>J. Fütterer</td>
<td>Nijmegen, The Netherlands</td>
</tr>
<tr>
<td>12:05</td>
<td>AI-based prediction of iceball boundaries in focal cryoablation of prostate cancer (V-14)</td>
<td>P. Moreira, K. Tuncali, C. Tempany, J. Tokuda</td>
<td>Boston, MA, USA</td>
</tr>
<tr>
<td>12:15</td>
<td>MRI-guided focal laser ablation (MRgFLA) for localized intermediate-risk prostate cancer – results of a phase II trial (V-15)</td>
<td>S. Ghai, N. Perlis, K. Corr, A. Zisman, M. Gertner, R. Chan, S. McCluskey, T. van der Kwast, A. Finelli</td>
<td>Toronto, Canada</td>
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</table>
SESSION III

Friday, October 14, 01:45 pm – 03:00 pm

01:45 – Poster Presentation
with presenters expected to remain with their posters throughout the session to engage in discussion with attendees

03:00 – Coffee Break
03:30

SESSION IV

Friday, October 14, 03:30 pm – 05:35 pm

MR THERMOMETRY – TECHNOLOGY

Moderators: J. Fütterer, Nijmegen, The Netherlands
O. Speck, Magdeburg, Germany

03:30 How accurate and reliable is MR-thermometry? (V-17)
K. Kuroda
Hiratsuka, Japan

03:45 Prospective phase correction – A novel approach to phase drift correction in proton-resonance-frequency-shift thermometry with non-cartesian sequences (V-18)
O. Belker, K. Meyer zu Hartlage, M. Gutberlet, C. Löning C., D. Reimert, F. Wacker, B. Hensen
Hannover, Magdeburg, Germany

03:55 Accuracy of MRI real-time 3D temperature mapping during microwave heating – in-vitro results in gel phantoms (V-19)
O. Dietrich, S. Lentini, O. Öcal, P. Bour, T. Faller, J. Ricke, M. Seidensticker
Munich, Germany
Pessac, France
04:05  Susceptibility-corrected proton-resonance-frequency-shift (PRFS)-based magnetic resonance (MR) thermometry for monitoring microwave ablation (MWA) in the porcine liver (V-20)
Hannover, Germany
Salt Lake City, UT, USA

04:15  Using magnetic resonance fingerprinting for proton-resonance-frequency-shift-based temperature monitoring of microwave ablation (V-21)
M. Gutt, J. J. Löning Caballero, D. Horstmann, F. Wacker, B. Hensen, M. Gutberlet
Hannover, Germany

04:25  A robust motion compensation algorithm for volumetric MR-temperature monitoring during microwave ablation of liver tumor in patients (V-22)
V. Ozenne, B. Quesson, P. Bour, T. Faller, O. Öcal, S. Lentini, M. Seidensticker, O. Dietrich
Bordeaux, Pessac, France
Munich, Germany

04:35  Clinical experience of 3D MR thermometry for liver microwave ablation (V-23)
J. Tokuda, V. M. Levesque, M. C. Bernardes, R. Seethamraju, K. Tuncali
Boston, MA, USA

04:45  Performance of advanced DWI and MR thermometry near interventional needle-like devices (V-24)
Iowa City, IA, USA
Madison, WI, USA
Niskayuna, NY, USA

M. Desclides, V. Ozenne, P. Bour, G. Machinet, C. Pierre, S. Chemouny, B. Quesson
Bordeaux, Pessac, Talence, France

05:05  Feasibility of PRF thermometry at 0.55 T (V-26)
W. Majeed, A. Krafft, H. Odéen, D. Parker, J. Pang, H. Bhat
Malvern, PA, USA
Salt Lake City, UT, USA
Erlangen, Germany

05:15  Implementation of a real-time 3D-thermometry pipeline in Gadgetron for hepatic thermal ablation (V-27, Video)
Hannover, Germany
SESSION V

Saturday, October 15, 08:15 am – 10:10 am

NEURO – ABLATION - ROBOTICS

Moderators:  R. Blanco-Sequeiros, Turku, Finland
N. Hata, Boston, USA

08:15  Interventional MR neurography – applied precision medicine (V-29)
J. Fritz
New York, NY, USA

08:30  Retroperitoneal lateral femoral cutaneous nerve blocks in the workup of thigh pain: performance analysis of a new technique (V-30)
D. Dalili, S. Ahlawat, D. Shakoor, A. Rashidi, A. Isaac, J. Fritz
London, United Kingdom
Baltimore, MD, USA
New Haven, CT, USA
New York, NY, USA

08:40  Accurate targeting in lumbar and sacral nerve root infiltrations using MRI guidance, with 5-month follow-up (V-31)
Geneva, Switzerland

08:50  3-Tesla MR neurography guided nerve blocks for the treatment of pudendal neuralgia (V-32)
London, United Kingdom
New York, NY, USA

09:00  MR-guided ablations in high-field strength MRI (V-33)
K. Tuncali
Boston, MA, USA

05:25  A new versatile MR-guided high-intensity focused ultrasound (MRgHIFU) device: System performance assessment and clinical feasibility (V-28)
P. Cabras, P. Auloge, E. Dumont, B. Wach, E. Breton, A. Gangi, J. Vappou
Strasbourg, Pessac, France
09:15  MRI-guided radiofrequency ablation of small HCC nodules (d ≤ 12 mm) in pretreated livers – use of the gadoxetic-acid plateau phase (V-34)
Leipzig, Germany

09:25  MRI-guided robotic interventions - pathway to autonomous and AI-assisted approach (V-35)
N. Hata
Boston, MA, USA

09:40  Demonstration of versatile anatomically designed instrument alignment units for the remote operated µRIGS instrument micropositioning system (V-36)
R. Odenbach, I. Fomin, N. Thoma, B. Hensen, F. Wacker, G. Rose
Magdeburg, Hannover, Germany

09:50  MRI-compatible low profile robots for in-bore interventions (V-37)
Washington, DC, USA
Cincinnati, OH, USA
New York, NY, USA
Atlanta, GA, USA
Baltimore, MD, USA

10:00  A piezo-driven MR-compatible assistance system for image-guided interventions (eGantryMate) (V-38)
A. Reichert, A. Caglar Özen, S. Reiss, T. Lottner, N. Verloh, S. Milosavljevic, M. Vogele, M. Bock
Freiburg, Germany
Kitzbühel, Austria

10:10 – 10:40  Coffee Break

10:40  

SATURDAY
SESSION V
NEURO – ABLATION – ROBOTICS
### SESSION VI

**Saturday, October 15, 10:40 am – 12:25 pm**

**CARDIOVASCULAR**

**Moderators:**  
F. Wacker, Hannover, Germany  
C. Weiss, Baltimore, USA

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<td>10:40</td>
<td>MR-guided cardiac interventions (V-39)</td>
<td>K. Pushparajah</td>
<td>London, Great Britain</td>
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<td>11:25</td>
<td>MR-guided coronary catheterization in a porcine model at 3 T: success rate and learning curve (V-43)</td>
<td>S. Reiss, T. Lottner, T. Heidt, A. Özen, C. von zur Mühlen, M. Bock</td>
<td>Freiburg, Germany</td>
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<td>11:35</td>
<td>MR-guided treatment of vascular malformations (V-44)</td>
<td>C. Weiss</td>
<td>Baltimore, MD, USA</td>
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<td>11:50</td>
<td>Combined 3D printed and silicone moulded vascular phantoms to develop and train catheter based MRI-guided interventions (V-45)</td>
<td>D. G. Bajestani, C. Martin Reich, C. Mulik, A. Melzer</td>
<td>Leipzig, Germany</td>
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<td>12:00</td>
<td>Artifact exploration of metallic and non-metallic guide-wires at 0.5 T, 1.5 T, and 3 T MR systems (V-46)</td>
<td>W. B. Buchenberg, K. Düring, M. Rube, A. J. Krafft</td>
<td>Krün, Erlangen, Germany</td>
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12:10  MR-guided drug delivery (V-47)
       B. Wood
       Bethesda, MD, USA

12:25 – Lunch Break
01:45

SESSION VII

Saturday, October 15, 01:45 pm – 02:35 pm

TECHNOLOGY – MANAGEMENT

Moderators:  G. Rose, Magdeburg, Germany
            B. Wood, Bethesda, USA

01:45  Techniques and devices for interventional MRI guidance
        (V-48)
        H. Busse
        Leipzig, Germany

02:00  Intensity-based tracking technique to register devices in
        MRI-guided procedures (V-49)
        I. Fomin, R. Kowal, M. Gutberlet, B. Hensen, F. Wacker, O. Speck, G. Rose
        Magdeburg, Hannover, Germany

02:10  Testing of a transperineal guide grid for MR guided prostate procedures using optical and fiducial fusion (V-50)
       D. Woodrum, S. Thompson, D. Adamo, C. Favazza, A. Lu, P. Foroughi, A. Demir, K. Harlan, L. Mynderse
       Rochester, MN, USA

02:20  Development of a clinical interventional MRI service at Mayo Clinic Rochester: 2009-2021 (V-51)
       S. M. Thompson, D. A. Adamo, E. M. Knavel Koepsel, B. T. Welch,
       D. Lomas, D. R. Barker, D. F. Ekrem, P. L. Hanson, W. S. Stenzel,
       K. J. Gehling, M. Eggert, L. M. Cranston, D. L. Howe-Clayton, D.
       Berg, P. Callahan, E. M. Hoffman, T. B. Curry, C. P. Favazza, A. Lu,
       Rochester, MN, USA

02:35 – Coffee Break
03:15
SESSION VIII

Saturday, October 15, 03:15 pm – 04:10 pm

ABLATION

Moderators:  
J. Fritz, New York, USA  
D. Woodrum, Rochester, USA

03:15  
MR-guided abdominal interventions (V-52)  
F. Wacker  
Hannover, Germany

03:30  
Ablation and immunotherapy – a GI oncologists view (V-53)  
A. Vogel  
Hannover, Germany

03:45  
MR-guided cryotherapy – state-of-the-art (V-54)  
A. Gangi  
Strasbourg, France

04:00  
Extreme MR ablation cases: The power of MRI-guidance (V-55)  
D.A. Woodrum, S.M. Thompson, D.A. Adamo, D. Lomas, C.P. Favacca, A. Lu, L. Mynderse  
Rochester, MN; USA

Session IX

Saturday, October 15, 04:10 – 05:20 pm

FOCUSED ULTRASOUND

JOINT SESSION WITH THE EUROPEAN FOCUSED ULTRASOUND CHARITABLE SOCIETY (EUFUS)

04:10  
MR-guided focused ultrasound in musculoskeletal diseases (V-56)  
R. Blanco-Sequeiros  
Oulu, Finland

04:25  
Retrospective analysis of MR-guided high intensity focused ultrasound (MRgFUS) in 65 patients with symptomatic lumbosacral facet joint arthritis (V-57)  
D. Düx, M. Düx, C. Stroszczyński, L. Beyer  
Hannover, Frankfurt, Regensburg, Potsdam, Germany

04:35  
Assessment of intercostal sonication capabilities of a dedicated transducer by MR-ARFI/thermometry (V-58)  
F. Dabrin, M. Guyot, V. Ozenne, S. Chemouny, P. Bour, B. Quesson  
Pessac, Bordeaux, France

04:45  
MR-HIFU therapy of uterine fibroids – experience within an interdisciplinary fibroid center (V-59)  
Leipzig, Germany
04:55  Combination of MRI-guided focused ultrasound and radiation therapy - experimental rodent study (V-60)
Leipzig, St. Ingbert, Germany
Zürich, Switzerland

05:05  Validation of the accuracy of a new transcostal phased-array HIFU transducer dedicated to hepatic ablation (V-61)
Geneva, Switzerland

05:15  Poster Awards and Conclusions
C. Tempany, J. S. Lewin, Th. Kahn

05:20  Adjourn
**GENERAL ISSUES**

**P-01**
**Towards a specialized software for interventional radiology**
Magdeburg, Hannover, Germany

**NEURO**

**P-02**
**Lateral femoral cutaneous nerve cryoablation for the treatment of meralgia paresthetica: first results of a pilot study**
S. Walter, D. Dalili, J. Fritz
New York, NY, USA
London, United Kingdom

**P-03**
**3 Tesla selective MR neurography-guided anterior femoral cutaneous nerve blocks for diagnosing anterior thigh neuralgia**
D. Dalili, S. Ahlawat, A. Isaac, A. Rashidi, J. Fritz
London, United Kingdom
Baltimore, MD, USA
New York, NY, USA

**P-04**
**One-stop-shop 3-Tesla MRI and MR-guided MR arthrography of the shoulder: A clinical practice evaluation with MSK fellows**
D. Dalili, A. Isaac, J. Fritz
London, United Kingdom
New York, NY, USA

**PROSTATE**

**P-05**
**Focal MR-guided high-dose-rate brachytherapy for localized prostate cancer: A prospective clinical trial**
E. Gutierrez, M. Ramotar, J. Helou, S. Raman, R. Glicksman, A. Rink, R. Weersink, P. Chung, A. Berlin
Toronto, Canada

**P-06**
**Comparison of preprocedural and intraprocedural distances of the urethra to the prostatic capsule when performing prostate ablation with the TULSA-PRO device**
D. Sella, J. Legout, A. Montazeri, C. Dora, G. Frey
Jacksonville, FL, USA
MR THERMOMETRY

P-07
Estimating uncertainty of 3D ablation zones using MR thermometry
S. Schröer, M. Gutberlet, K. Meyer zu Hartlage, J. Löning Caballero,
F. Wacker, B. Hensen
Hannover, Germany

P-08
Higher resolution T1-weighted imaging of a liver lesion: a step to correlate thermal dose and lesion extent
T. Faller, D. El Hamrani, P. Bour, C. Marcelin, M. Guyot, V. Ozenne, B. Quesson
Pessac, Bordeaux, France

P-09
Rapid 3D post-ablation assessment of thermal ablation using accelerated wave-encoding MRI
Q. Lebret, P. Bour, V. Ozenne, B. Quesson
Bordeaux, France

P-10
Real time volumetric MR-temperature monitoring during microwave ablation of a patient with hepatocellular carcinoma
O. Öcal, S. Lentini, P. Bour, T. Faller, J. Ricke, O. Dietrich, M. Seidensticker
Munich, Germany
Pessac, France

P-11
Echo-time selection in PRFS MR thermometry to minimize errors in adipose tissues
A. Josset, J. Vappou, K. Choquet, O. Ishak, E. Breton
Strasbourg, France

FOCUSED ULTRASOUND

P-12
Assessment of MR compatibility of focused ultrasound systems
N. Evripidou, M. Giannakou, C. Damianou
Limassol, Cyprus

P-13
Design of a new MR-compatible HIFU device for intercostal sonication into the heart
M. Guyot, E. Dumont, B. Quesson
Pessac, Bordeaux, France

P-14
Combination of MRI-guided HIFU, bioluminescence imaging and transgenic mouse model to assess efficiency of noninvasive thermal therapies for solid tumors and their microenvironments
D. El Hamran, P. Jeanjean, C. Genevois, F. Couillaud, B. Quesson
Bordeaux, France
**P-15**

MR-guided high-intensity focused ultrasound therapy monitoring using transient supersonic shear wave MR elastography
O. Ishak, E. Breton, K. Choquet, A. Josset, P. Cabras, J. Vappou
Pessac, Strasbourg, France

**P-16**

MR-HIFU as treatment option for desmoid tumors in the abdominal wall: clinical setup and first results
J. Leonhardi, H. Surup, J. Donig, N. Bailis, A. Hoffmeister, T. Schönherr,
S. Niebisch, I. Gockel, A. Melzer, M. Martin, S. Ebel, H. Gößmann, H. Busse,
T. Denecke
Leipzig, Germany

**ROBOTICS – CARDIOVASCULAR – LYMPHANGIOGRAPHY**

**P-17**

A simple MRI-guided robotic system for breast biopsy
A. Antonioua, M. Giannakoub, C. Damianoua
Limassol, Cyprus

**P-18**

Prospective observational study of pain severity and pain interference outcomes following percutaneous MRI-guided laser ablation or cryoablation for focal painful peripheral, soft tissue vascular malformations: 12-month outcomes
Rochester, MN, USA
Madison, WI, USA

**P-19**

MRI-guided conventional catheter ablation of isthmus-dependent atrial flutter using active catheter imaging
A. J. Krafft, K. Lindborg, C. Piorkowski, T. Gaspar
Dresden, Erlangen, Germany
Burnsville, MN, USA

**P-20**

MRI-driven endovascular thrombectomy
M. F. Phelan III, M. Sitti
Pittsburgh, PA, USA
Zurich, Switzerland
Istanbul, Turkey
Peripheral MR lymphangiography: Integration into clinical workflow in a hybrid MR-US interventional suite
S. M. Thompson, E. M. Knavel Koepsel, E. C. Bendel, C. P. Favazza, A. Lu, D. Woodrum, J. D. Collins
Rochester, MN, USA
Madison, WI, USA

TECHNOLOGY

Hybrid deformable registration for motion compensation – a feasibility study with realtime 3D MRI-US
Madison, WI, USA
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J. Peter, S. Gantz, L. Karsch, J. Pawelke, A. Hoffmann
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Improving accuracy of white marker contrast-based rapid 3D passive MR biopsy needle localization by utilizing a total variation-regularized image reconstruction
J. F. Faust, D. Polak, M. E. Ladd, F. Maier
Erlangen, Heidelberg, Germany

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O. Kocaturk, D. K. Yildirim, D. Uzun, N. Rafiee, R. J. Lederman
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MRI-visible pen for marking the entry point of an MRI-guided needle intervention
A. Brockmann, J. Albrecht, F. Maier
Erlangen, Aalen, Germany

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A. Aleong, P. Chung, A. Berlin, R. A. Weersink
Toronto, Canada
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Boston, MA, USA
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M. Eisenmann, I. Fomin, R. Odenbach, B. Hensen, F. Wacker, G. Rose
Magdeburg, Hannover, Germany
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Magdeburg, Hannover, Germany

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J. Felmlee, A. Lu, C. Favazza, L. Mynderse, D. Woodrum
Rochester, MN, USA

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W. M. Brink, R. Oosterveld, R. M. Verdaasdonk
Enschede, The Netherlands

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Magdeburg, Hannover, Germany

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S. Hickey, A. Reichert, W. Ptacek, T. Bortfeld, M. Bock
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K. Engel, I. Fomin, T. Gerlach, B. Hensen, M. Gutberlet, F. Wacker, G. Rose
Magdeburg, Hannover, Germany
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A. Lu, L. Ren, K. R. Gorny, J. P Felmlee, C. P. Favazza, D. A. Adamo,
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Rochester, MN, USA

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L. A. Mynderse, D. A. Woodrum
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J. Glandorf, D. Horstmann, M. Gutberlet, D. M. Düx, F. Wacker, B. Hensen
Hannover, Germany

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B. Hensen, M. Gutberlet
Hannover, Magdeburg, Germany

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C. P. Favazza, S. M. Thompson, E. M. Hoffman, J. P. Felmlee, B. T. Welch,
D. A. Adamo, D. A. Woodrum, A. Lu
Rochester, MN, USA

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D. A. Adamo, S. M. Thompson, A. Lu, C. P. Favazza, E. Knavel Koepsel,
L. A. Mynderse, D. A. Woodrum
Rochester, MN, USA | Madison, WI, USA
Shaft heating risk mitigation during MRI-guided microwave ablation using non-actively cooled applicators
A. Lu, L. Ren, J. P. Felmlee, C. P. Favazza, D. A. Adamo, S. M. Thompson, D. A. Woodrum
Rochester, MN, USA

Evaluation of cryoablation probe artifacts at 0.55 T
F. Maier, J. J. Fütterer
Erlangen, Germany
Nijmegen, The Netherlands

Investigation of cryoneedle induced RF heating risk during MRI-guided cryoablation at 1.5 T
Rochester, MN, USA

Intraoperative neurophysiological monitoring with motor evoked potentials during MRI-guided cryoablation: Initial feasibility, safety and clinical experience
Rochester, MN, USA

MRI-guided high-dose-rate interstitial brachytherapy of small hepatic malignancies (d ≤ 12 mm) – use of the gadoxetic-acid plateau phase
Leipzig, Germany

MR-based volumetric assessment of thyroid nodule radiofrequency ablation in anthropomorphic phantoms
T. Boers, G. Wennemars, S. J. Braak, M. Versluis, S. Manohar, W.M. Brink
Enschede, Hengelo, The Netherlands
CONFERENCE DATE
October 14-15, 2022

Venue
The Westin Leipzig
Gerberstr. 15, 04105 Leipzig, Germany
Phone / Fax: +49 (341) 988-0 / -1229

INFORMATION FOR AUTHORS

Main Lectures
Lectures on selected scientific topics will be given by invited speakers.

Oral Presentations
Proffered papers will be formally presented in topical oral sessions. Your total time will be restricted to 10 minutes with 8 minutes for speaking and 2 more minutes for a short discussion. We kindly ask all speakers to strictly respect this time limit. Please prepare your presentation in PPT(X) format, copy it to either a USB medium or CD-ROM and hand it in to one of our technical staff members in the speaker ready room at least one hour before the start of your session.

Poster Presentations
Posters will be exhibited throughout the meeting. A dedicated poster discussion session will be organized on Friday, October 14, 01:45 – 3:00 pm and poster authors are expected to be present throughout that time to engage in discussion with attendees.

Video Presentations
Cases may illustrate a particular setup, indication, procedure, workflow or result. Your total time will be restricted to 8 minutes for speaking and 2 more minutes for a short discussion. Please prepare your digital presentation in a standard movie file format (AVI, MOV, MPG, MP4) and check proper play-back with one of our technical staff members in the speaker ready room at least one hour before the start of the session.

Poster Award
Three poster prizes will be awarded to appreciate the high level of the scientific exhibits.

Conference Language
All lectures and presentations will be in English.
CONFERENCE FEES

Conference fee includes lunch and coffee breaks on Oct 14-15. All fees are in EURO (€).

Reduced fees by September 15, 2022 (On-site fees after that date in parentheses)

- Physicians and Scientists  € 300,- (350,-)
- Residents*, Fellows*, Medical Technologists*  € 250,- (300,-)
- Students*  € 150,- (200,-)
- Social Event – Gondwanaland Zoo Leipzig  € 60,-
*proper validation document required

One-day tickets for either October 14 or 15 are available for 50% of the fees listed above and include lunch and coffee breaks on the respective date.

SOCIAL EVENT

Gondwanaland at Zoo Leipzig
Friday, October 14, 2022, 7:15 pm

Gondwanaland at Zoo Leipzig will appeal to all of your senses as you experience the tropical rainforests of Africa, Asia and South America. Gondwanaland is home to about 300 exotic animals and 17,000 tropical plants.

Enjoy a welcome cocktail before entering the impressive tropical complex. You will then have time to follow the jungle paths or treetop trail and drift along in a boat on the jungle river Gamali before having dinner and drinks at Restaurant Patakan.

This event can be booked for a fee of 60 Euro for registered iMRI participants and accompanying persons.

The entrance to this event is located at Pfaffendorferstr. 29, 04105 Leipzig, about 150 m to the right from the main entrance of the zoo, and a 5-minute walk from the conference venue (Westin Hotel Leipzig).

All symposium registrations and hotel reservation must be send to akd congress & events. Please understand that registration can only be completed when full payment has been received.

You can also register online:
Follow the link on the iMRI website
www.imri2020.org
CONGRESS OFFICE

Thursday, October 13, 2022  5.00 pm - 8.30 pm
Friday, October 14, 2022    7.30 am - 6.00 pm
Saturday, October 15, 2022 8.00 am - 6.00 pm

INDUSTRIAL EXHIBITION

Friday, October 14, and Saturday, October 15, 2022 in the foyer of the Conference Center. For more information please contact akd congress & events.

CONGRESS AGENCY

akd congress & events
Waldstr. 57
04105 Leipzig
Germany
Phone / Fax: +49 (341) 268276-35 / -36
Email: info@akd-congress.de

HOTEL RESERVATION

Hotel Reservation will be handled by akd congress & events. Requests for accommodation should be made on the enclosed official registration form or via online registration.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Single Room</th>
<th>Double Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Westin Leipzig (Congress Center)</td>
<td>€ 145,-</td>
<td>€ 165,-</td>
</tr>
<tr>
<td>InterCityHotel Leipzig (2-minute walking distance)</td>
<td>€ 99,-</td>
<td>€ 119,-</td>
</tr>
<tr>
<td>H2 Hotel Leipzig City (8-minute walking distance)</td>
<td>€ 79,-</td>
<td>€ 89,-</td>
</tr>
<tr>
<td>Seaside Park Hotel (5-minute walking distance)</td>
<td>€ 99,-</td>
<td>€ 119,-</td>
</tr>
</tbody>
</table>

Above rates are per room and night (in €) and include breakfast, service charge and VAT.

Payments will be made directly at the hotel.
PAYMENT

You will receive a confirmation/invoice once you have registered for the symposium.

Payment is possible via bank transfer or credit card (Visa, Eurocard, Mastercard, American Express)

All payments must be in EURO

CANCELLATIONS

Cancellation is possible in writing or by fax only.

Symposium
Until September 15, 2022, the cancellation fee will be € 100,-
No refunds will be made after September 01, 2022.

Hotel
After September 1, 2022, the hotel may charge you the applicable no-show fee for each night cancelled.

Distances

Airport (Leipzig/Halle) – Congress Center (The Westin): 20 min by taxi
Airport – Main train station: 13 min by rail (S-Bahn, every 30 min)
Main train station – Congress Center: 6 min by foot
InterCityHotel – Congress Center: 2 min by foot
H2 Hotel Leipzig City – Congress Center: 8 min by foot
Seaside Park Hotel Leipzig – Congress Center: 5 min by foot
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