September 23rd, 2026

07:30-08:10: Registration

08:10-08:20: Welcome

08:20-09:00: Memorial Lecture in Honor of Professor Kevin J. Parker - Marvin Doyley & Jeff Bamber

09:00-10:00: Session 1: Ultrasound Methods I

09:00-09:15: Haokang Shi1, Shemar Anderson1, Saachi Munot1, Parth Gami1, Cagla Ozsoy1, Elisa E. Konofagou1,2,3 "**A Feasibility Study of 4-D Pulse Wave Imaging Using A Row-Column-Addressed Array**"

1Department of Biomedical Engineering, Columbia University, New York, New York, USA
2Department of Radiology, Columbia University, New York, New York, USA
3Department of Neurological Surgery, Columbia University, New York, New York, USA

09:15-09:30: Corentin Alix1, Marlene Iversen Halvorsrød2, Torvald Espeland2, Lasse Lovstakken2, Sébastien Salles1, "**Cardiac Natural Mechanical Waves Trajectories as a Marker of Tissue Pathological State**"

1Centre de Résonance Magnétique des Systèmes Biologiques, Bordeaux, France
2Department of Circulation and Medical Imaging, NTNU, Trondheim, Norway

09:30-09:45: Andressa Araujo Andrade Sousa1, Ahmed Youssef1, Laurine Wouters1, Miaomiao Liu1, Fatemeh Mashayekhi1, Annette Caenen2, Jurgen Duchenne2, Jan D'hooge1, Jens-Uwe Voigt1 , "**Cardiac Shear Wave Elastography: Echocardiography Parameters Influencing Shear Wave Speed Propagation after Mitral and Aortic Valve Closure**"

1KU Leuven, Cardiology, Leuven, Belgium
2Hasselt University, Hasselt, Belgium

09:45-10:00: Clément Foullounoux, Bruno Giammarinaro, Cyril Lafon, Stefan Catheline, Maxime Lafond, "**Ultrasonic Cavitation-induced Shear Wave Elastography**"

LabTAU, INSERM, Centre Léon Bérard, Université Claude Bernard Lyon 1, F-69003, LYON, France

10:00-10:30: Morning Coffee Break

10:30-11:30: Session 2: Magnetic Resonance Methods I

10:30-10:45: Merijn Calis1,2,3, Yanglei Wu4, Tom Meyer4, Patrick Segers2, Pim Pullens1,2,3, Ingolf Sack4, Jakob Schattenfroh4 , "**Cardiac-Resolved MRE Reveals Cerebral Stiffness Pulsation**"

1Department of Radiology and Nuclear Medicine, University Hospital Ghent, Ghent, Belgium
2iBME – BioMMedA/MEDISIP, Ghent University, Ghent, Belgium
3Ghent Institute of Functional and Metabolic Imaging, Ghent University, Ghent, Belgium
4Department of Radiology, Charité-University Medicine Berlin, Berlin, Germany

10:45-11:00: Julia Martemyanova1,2, Kasper Grøndahl Klausen2, Oliver Geier3, Kenneth O. Pedersen4, Mona-Elisabeth Rootwelt-Revheim4,5, Einar Hopp4, Ivar Sjaastad1,5, Emil Espe1 , "**Effects of SNR and Tissue Displacement Amplitude on Cardiac MRE Stiffness Mapping**"

1Institute of Experimental Medical Research, Oslo University Hospital and University of Oslo, Oslo, Norway
2Department of Physics, Faculty of Mathematics and Natural Sciences, University of Oslo, Oslo, Norway
3Department of Physics and Computational Radiology, Clinics of Radiology and Nuclear Medicine, Oslo University Hospital, Oslo, Norway
4The Intervention Centre, Division for Technology and Innovation, Oslo University Hospital, Oslo, Norway
5Institute of Clinical Medicine, University of Oslo, Oslo, Norway

11:00-11:15: Marius Burman Ingeberg1, Elijah Van Houten2, Jaco Zwanenburg1 "**Evidence for the Ultra-soft Brain Provided by Uniqueness in Intrinsic MR Elastography**"

1UMC Utrecht, Center for Image Sciences, Utrecht, The Netherlands
2Université de Strasbourg, ICube (CNRS, INSERM, UMR7357), Strasbourg, France

11:15-11:30: Dieter Klatt1, Suraj Serai2, Aaron Anderson3, Bradley Sutton3, "**Feasibility of in vivo Human Kidney Multifrequency DTI-MRE**"

1UIC, BME, Chicago IL, USA,
2CHOP, Radiology Philadelphia PA, USA
3UIUC, Beckman Institute, Urbana, IL, USA

11:30-12:30: Session 3: Optical Methods I

11:30-11:45: Nicolas Detrez1, Sazgar Burhan2, Dirk Theisen-Kunde1, Matteo Mario Bonsanto3, Robert Huber2,1, Ralf Brinkmann1,2, "**Air-Jet Based Optical Coherence Elastography Towards in-situ Brain tumor Delineation and Fundamental Tissue Mechanical Research**"

1Medical Laser Center Lübeck, Lübeck, Germany
2Institute of Biomedical Optics, University of Lübeck, Lübeck, Germany
3Department of Neurosurgery, University Hospital Schleswig-Holstein, Lübeck Germany

11:45-12:00: Salavat Aglyamov, Achuth Nair, Sharon Shajan, Christian Zevallos-Delgado, Manmohan Singh, Kirill V. Larin, "**Heartbeat Optical Coherence Elastography for Assessment of Corneal Biomechanics**"

University of Houston, Department of Biomedical Engineering, Houston, USA

12:00-12:15: Hari S. Nair1,2, Elijah Van Houten3, Sajad Ghazavi1,2, Rania Goucha1,2, Patrick Laplante4, Jean-François Cailhier4,5, Guy Cloutier1,2,6, "**High Frequency Optical Micro-elastography to Image the Temporal Impact of Inflammatory Phenotypes on Macrophage Mechanics**"

1LBUM, University of Montreal Hospital Research Center, Montréal, QC, Canada
2Institute of Biomedical Engineering, University of Montreal, Montréal, QC, Canada
3University of Strasbourg, CNRS, INSERM, ICube, UMR7357, Strasbourg, France
4University of Montreal Hospital Research Center, Montréal, QC, Canada
5Department of Medicine, University of Montreal, Montréal, QC, Canada
6Department of Radiology, Radio-Oncology and Nuclear Medicine, University of Montreal, Montréal, QC, Canada

12:15-12:30: Sajad Ghazavi1,2, Elijah Van Houten3, Hari S. Nair1,2, Rania Goucha1,2, Hugo Paulus4,5, Nicolas Malaquin4,5, Patrick Laplante4,5, Jean-François Cailhier4,5, Francis Rodier4,5,6, Guy Cloutier1,2,6, "**Intracellular Mechanophenotyping of Macrophages: Cytoskeletal Contributions and Senescence-associated Changes Revealed by Optical Microelastography**"

1LBUM, University of Montreal Hospital Research Center, Montréal, QC, Canada
2Institute of Biomedical Engineering, University of Montreal, Montréal, QC, Canada
3University of Strasbourg, CNRS, INSERM, ICube, UMR7357, Strasbourg, France
4University of Montreal Hospital Research Center, Montréal, QC, Canada
5Department of Medicine, University of Montreal, Montréal, QC, Canada
6Department of Radiology, Radio-Oncology and Nuclear Medicine, University of Montreal, Montréal, QC, Canada

12:30-13:30: Lunch Break

13:30-14:15: Plenary Talk - Kristian Franze, **"The role of mechanics in brain development and disorder"**
University of Erlangen, Germany

14:15-15:15: Session 4: Forward and Inverse Problems I

14:15-14:30: Héloïse Bustin1, 2, Tom Meyer2, Jakob Jordan2, Lars Walczak3, Heiko Tzschätzsch2, Ingolf Sack2, Anja Hennemuth1, 2, 3, 4 "**Cross-modality Multifrequency Neural Network-based Wave Inversion**"
1Deutsches Herzzentrum der Charité, Institute of Computer-assisted Cardiovascular Medicine, Berlin, Germany
2Charité – Universitätsmedizin Berlin, Berlin, Germany
3Fraunhofer MEVIS, Berlin, Germany
4DZHK (German Centre for Cardiovascular Research), Berlin, Germany

14:30-14:45: Alexandra Vorobyeva1, Qifeng Wang2, Dieter Klatt1, Daniel Ludvig2,3, Kenneth R. Shull2, Eric J. Perreault2,3, Thomas J. Royston1, "**Elastography of Prestressed, Heterogeneous and Anisotropic Viscoelastic Materials: Inverse Modeling Challenges and Strategies**"
1University of Illinois Chicago, Chicago, IL, USA
2Northwestern University, Evanston, IL, USA
3Shirley Ryan AbilityLab, Chicago, IL, USA

14:45-15:00: Patricio González1, Joaquín Mura1, Stefan Klemmer2, Ingolf Sack2, "**Hybrid Convolution-Based Method for Inverting the Helmholtz Equation**"
1Department of Mechanical Engineering, Federico Santa Maria Technical University, Santiago, Chile
2Department of Radiology, Charité-Universitätsmedizin, Berlin, Germany

15:00-15:15: Atiyeh Taheri, Paul E. Barbone, Katherine Yanhang Zhang, "**Viscoelastic Inversions from Multifrequency Shear Wave Data**"
Boston University, Mechanical Engineering and Center for Multiscale & Translational Mechanobiology, Boston, Massachusetts, United States

15:15-16:30: Afternoon Coffee Break + Poster session

16:30-17:30: Session 5: Instrumentation

16:30-16:45: Mahsa Sotoodeh Ziksar1, Corentin Alix2, Andreas Austeng1, Sébastien Salles2, Yücel Karabiyik1, "**Directional Clutter Filter Wave Imaging in Time Harmonic Elastography**"
1University of Oslo, Department of Informatics, Oslo, Norway
2University of Bordeaux, Magnetic Resonance Center for Biological Systems, Bordeaux, France

16:45-17:00: Nina Dufour1, Maud Legrand1, Aude Loumeaud1, Simon Chatelin1, Jean-Luc Gennisson2, Amir Nahas1, "**Noise Correlation Inspired (NCi) Method: All-in-one Method for MRI, Ultrasound and Optical Elastography**"
1Université de Strasbourg, CNRS, Inserm, ICube, UMR 7357, Strasbourg, France
2BioMaps, Université Paris-Saclay, CEA, CNRS UMR 9011, INSERM UMR 1281, Orsay, France

17:00-17:15: Sara Gomez-Ramirez1, Gilmer A. Flores Barrera2, Benjamin Castañeda2, "**Radial Energy-Quantile (REQ) Estimator for Robust Wavenumber Mapping across Directional and Diffuse Wavefields**"
1University of Rochester, Department of Physics and Astronomy, Rochester NY, United States
2University of Rochester, Department of Biomedical Engineering, Rochester NY, United States

17:15-17:30: Andre Victor Alvarenga, Hasan Koruk, Srinath Rajagopal, "**Uncertainty Evaluation in Shear Wave Speed Measurements using ARFI Ultrasound Elastography**"
Ultrasound and Underwater Acoustics Group, Department of Medical, Marine and Nuclear, National Physical Laboratory, Teddington, Middlesex, UK

18:00-21:00: Welcome Reception at the Botanical Garden Leipzig (Linnéstraße 1, 04103 Leipzig - 15 min walk)

September 24th, 2026

07:50-08:00 Announcements for Day 2

08:00-08:40: Keynote Talk 1 - Kathryn Nightingale, **"Shear Wave Elasticity Imaging: Opportunities and Challenges in Skeletal Muscle Characterization"**
Duke University, Durham, USA

08:40-09:00 Impulse Talk - Josef Käs, **"Can Biomechanics Detect Emergent Properties of Tumor Progression?"**
Leipzig University, Leipzig, Germany

09:00-10:00: Session 6: Tissue Properties and Models I

09:00-09:15: Shiva Ahsani, Sibylle Grégoire, Stefan Catheline and Bruno Giammarinaro, "**Flexural Pulse Wave velocity to Unveil Arterial Wall Elasticity**"
LabTAU, INSERM, Centre Léon Bérard, Université Claude Bernard Lyon 1, Lyon, France

09:15-09:30: Ariana Cihan1, Yanglei Wu2, Jennifer L. Heyl2, Pedro Dantas de Moraes2, Paul Spiesecke2, Jing Guo2, Ingolf Sack2, Patrick Segers1, Annette Caenen1,3, Tom Meyer2, "**Assessing Pressure-Induced Stiffness and Volume Changes in Ex Vivo Kidney with Ultrasound and MRI**"
1Ghent University, Department of Electronics and Information Systems, Ghent, Belgium
2Charité – Universitätsmedizin Berlin, Department of Radiology, Berlin, Germany
3KU Leuven, Department of Cardiovascular Sciences, Leuven, Belgium

09:30-09:45: Hossein S. Aghamiry1, Tom Meyer1, Stefan Klemmer Chandía1, Thomas Bartels2, René Schwesig3, Eduard Kurz3, Ingolf Sack1, "**Blood Flow Restriction and Its Immediate Biomechanical Effects on Vastus Lateralis Muscle Assessed by Ultrasound Time-Harmonic Elastography**"
1Department of Radiology, Charité – Universitätsmedizin Berlin, Berlin, Germany
2MVZ Sportklinik Halle GmbH, Halle (Saale), Germany
3Department of Orthopedic and Trauma Surgery, Martin-Luther-University Halle-Wittenberg, Halle, Germany

09:45-10:00: Wren E. Wightman, Ned C. Rouze, Shruthi Srinivasan, Mark L. Palmeri, Kathryn R. Nightingale, "**Feasibility of Characterizing in vivo Skeletal Muscle as an Elastic ITI Medium Using High-Resolution Phase Velocity Estimation Algorithms in Arbitrarily Sampled Wavefields**"
Duke University, Biomedical Engineering, Durham, USA

10:00-10:30: Morning Coffee Break

10:30-11:15: Session 7: Numerical Simulations

10:30-10:45: Marta Zattoni1,2, Andrea Resca Cacciari1, Mathias Peirlinck2, Patrick Segers1, Annette Caenen1,3 "**Integrating in vitro and in silico Approaches for Natural Shear Wave Elastography in the Left Ventricle to Model Valve Closure**"
1Ghent University, Department of Electronics and Information Systems, Ghent, Belgium
2Delft University of Technology, Department of BioMechanical Engineering, The Netherlands
3KU Leuven, Department of Cardiovascular Sciences, Leuven, Belgium

10:45-11:00: Sarah Vandenbulcke1, Christoffer Olsson1, Thomas Christian Gasser2, Lisa Prahl Wittberg2, Rodrigo Moreno1 "**Modelling MR Elastography to Assess the Impact of Microstructural Variation on Brain Tissue Mechanics**"

1KTH Royal Institute of Technology, Department of Biomedical Engineering and Health Systems, Stockholm, Sweden

2KTH Royal Institute of Technology, Department of Engineering Mechanics, Stockholm, Sweden

11:00-11:15: José Cortés1, Inas H Faris1, Guillermo Rus1, Jorge Torres2, "**Viscoelastic EXplicit Elastography (VEXEL): Shear Wave Simulation Platform for Fractional Models**"

1Department of Structural Mechanics, University of Granada, Granada, Spain

2LabTAU, INSERM, Centre Léon Berard, Université Claude Bernard Lyon 1, Lyon, France

11:15-12:30: Session 8: Clinical, Animal & Miscellaneous

11:15-11:30: Carolina Dominguez Aleixo, Tom Meyer, Salomé Jacques, Thomas Elgeti, "**Ultrasound Elastography for the Assessment of Aortic Stiffness: Preliminary Findings**"

Department of Radiology, Charité – Universitätsmedizin Berlin, Germany

11:30-11:45: Ginger Schmidt1,2, Eric Zou2, Brett E. Bouma1,2, Néstor Uribe-Patarroyo1,2, "**Towards Intravascular Elasticity Measurements via a Catheter with Asynchronous Optical Coherence Elastography**"

1Harvard Medical School and Massachusetts General Hospital, Wellman Center for Photomedicine, Boston, USA

2Massachusetts Institute of Technology, Institute for Medical Engineering and Science, Cambridge, USA

11:45-12:00: Szymon Tamborski1,2, Marta K. Skrok1,2, Matt S. Hepburn1,2,3 4, Mateusz Maniewski5,6, Marek Zdrenka6, Adam Kowalewski 6,7, Łukasz Szylberg 4,5, and Brendan F. Kennedy1,2,3, 4 "**Wide-field Quantitative micro-Elastography for the Study of Human Prostate Tissue**"

1Institute of Physics, Nicolaus Copernicus University in Toruń, Toruń, Poland
2Institute of Advanced Studies, Nicolaus Copernicus University in Toruń, Toruń, Poland
3School of Engineering, University of Western Australia, Perth, Australia
4Harry Perkins Institute of Medical Research, University of Western Australia, Perth, Australia
5Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Bydgoszcz, Poland
6Oncology Centre Prof. Franciszek Łukaszczyk Memorial Hospital, Bydgoszcz, Poland
7Faculty of Medicine, Bydgoszcz University of Science and Technology, Bydgoszcz, Poland

12:00-12:15: Enrique González-Mateo1, Vitaliy Atamaniuk2, Noé Jiménez1, "**A Phase-based Volumetric Elastography Approach for Ultrasound and MR**"

1Instituto de Instrumentación para Imagen Molecular (i3M), CSIC - Universitat Politècnica de València, València, Spain

2Department of Physics and Medical Engineering, Faculty of Mathematics and Applied Physics, Rzeszów University of Technology, Rzeszów, Poland

12:15-12:30: Aude Loumeaud1,2, Chrystelle Po1, Aurore de Cauwer1, John R Hawse3, Daniel George1, Jonathan Vappou1, Philippe Pouletaut2, Sophie Guérin4, Franck Delaunay4, Michèle Teboul4, Sabine F Bensamoun2, Simon Chatelin1 , "**An Innovative Magnetic Resonance Elastography Setup to Characterize Klf10-dependent Skeletal Muscle Alterations in a Novel Murine Model**"

1University of Strasbourg, CNRS, Inserm, ICube, Strasbourg, France

2Université de technologie de Compiègne, CNRS, BMBI, Compiègne, France

3Mayo Clinic, Department of Biochemistry and Molecular Biology, Rochester, Minnesota, USA

4Université Côte d'Azur, CNRS, Inserm, Institut de Biologie Valrose, Nice, France

12:30-13:30: Lunch Break

13:30-14:30: Session 9: Magnetic Resonance Methods II

13:30-13:45: Tiffany Bakir Ageron1, Pilar Sango-Solanas1, Kevin Tse Ve Koon1, Olivier Beuf1, "**Optimal Control MR Elastography in a Murine Model of Hepatic Iron Overload: Preliminary Results**"

1INSA Lyon, Université Lyon 1, CNRS, Inserm, Lyon, FRANCE

13:45-14:00: Shengyuan Ma1,2,3, Fuhua Yan4, Guang-Zhong Yang1,2,3, Yuan Feng1,2,3, "**Seeing Prestress Distribution through MR Elastography**"

1School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China

2Institute of Medical Robotics, Shanghai Jiao Tong University, Shanghai, China

3National Engineering Research Center of Advanced Magnetic Resonance Technologies for Diagnosis and Therapy (NERC-AMRT), Shanghai Jiao Tong University, Shanghai, China

4Department of Radiology, Ruijin Hospital affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China

14:00-14:15: Owen White1,2, Joshua Shur1, Sheima Farag1, Nicolò Battisti1, Matthew Foxton1, Erica Scurr1, Georgina Hopkinson1, Jeff Bamber2, Emma Harris2, Simon P. Robinson2, Ralph Sinkus3, Dow-Mu Koh1,2, Jessica M. Winfield1,2, "**MR-Elastography for Patients with Pseudocirrhosis - a Pilot Comparison with Healthy Volunteers**"

1The Royal Marsden NHS Foundation Trust, London, UK

2Division of Radiotherapy and Imaging, The Institute of Cancer Research, London, UK

3National Institute for Health and Medical Research (INSERM), Paris, France

14:15-14:30: Kasper Klausen1, J. Martemyanova1,2, V. M. Skulberg1, L. Zhang1, I. Sjaastad1, E. Espe1,2, "**Self-gating with Compressed Sensing Enables Free-breathing, ECG-free, Time-efficient Cardiac MR Elastography in Rats**"

1Institute for Experimental Medical Research, Oslo University Hospital and University of Oslo, Norway

2Department of Physics, University of Oslo, Oslo, Norway

14:30-15:30: Afternoon Coffee Break + Poster session

15:30-16:30: Session 10: Optical Methods II

15:30-15:45: Ashutosh Khaswal1, Hadi Mahmodi1, Thomas Cox2,3, and Irina Kabakova1, "**Mechanical Phenotyping of Triple Negative Breast Cancer using Brillouin Microscopy and a Microtester Compression Technique**"

1School of Mathematical and Physical Sciences (MaPS), UTS Sydney, NSW, Australia

2Garvan Institute of Medical Research, Sydney, NSW, Australia

3School of Clinical Medicine, St Vincent's Clinical Campus, UNSW Sydney, NSW, Australia

15:45-16:00: Malaury Devissi1, Sibylle Grégoire1, Victor Delattre1, Charles-André Philip1,2, Samantha Ballesta3, Isabelle Ray-Coquard4, Alpha Diallo5, Charlotte Rivière6,7, Axelle Brulport1, Stefan Catheline1 "**Mechanical Characterization of Endometrial Patients-Derived Tumor Organoids Using Optical micro-Elastography**"

1Université Claude Bernard Lyon 1, Centre Léon Bérard, INSERM U1032, LabTAU, Lyon, France

2Department of Gynaecology and Obstetrics, HFME, University Hospital, HCL, UCBL, Lyon, France

33DONCO platform, CRCL, UCBL, Lyon, France

4Medical Oncology Department, Gynecology Section, CLB, Lyon, France

5Microfabrication platform, CRCL, UCBL, Lyon, France

6Institut Lumière Matière (ILM), UCBL, CNRS UMR5306, Lyon, France

7Institut Convergence Plascan, CRCL, INSERM U1052-CNRS UMR5286, UCBL, Lyon, France.

16:00-16:15: Elijah Van Houten1, Samuel Kurtz2, Bertrand Wattrisse3, Jean-Christophe Dupré4, Pascal Doumalin4, "**Optical Scanning Tomography Elastography: First Experiences with a Novel Elastography Method**"

1Université de Strasbourg, CNRS, INSERM, ICube,Strasbourg, France
2Université Grenoble Alpes, ISTerre, Grenoble, France
3Université de Montpellier, CNRS, LMGC, Montpellier, France
4Université de Poitiers, PPRIME, Poitiers, France

16:15-16:30: Kirill Larin1, Amandeep Singh1, Achuth Nair1, Zhihui She2, Manmohan Singh1, Alexander W. Schill1, Salavat Aglyamov1, Nimesh Patel2, "**Quantifying Corneal Biomechanical Alterations in Primate Models of Glaucoma and Form-Deprivation Myopia Using Optical Coherence Elastography**"

1Department of Biomedical Engineering, University of Houston, Houston, TX, USA

2College of Optometry, University of Houston, Houston, TX, USA

16:30-17:30: Session 11: Ultrasound Methods II

16:30-16:45: Gerald Lee1, Oleg A Sapozhnikov2,3, Minho Song2,4, Gilles Thomas2, Pavel B. Rosnitskiy2,3, George R. Schade5, Ivan M. Pelivanov1, Tatiana D. Khokhlova2,4 , "**HIFU-based Elasticity Mapping for Prostate Ablation Treatment**"

1University of Washington, Seattle, Department of Bioengineering, Seattle, Washington, USA

2University of Washington, Applied Physics Lab, Center for Industrial and Medical Ultrasound, Seattle, Washington, USA

3M.V. Lomonosov Moscow State University, Physics Department, Moscow, Russia

4University of Washington, Division of Gastroenterology, Seattle, Washington, USA

5University of Washington, Department of Urology, Seattle, Washington, USA

16:45-17:00: Ricardo J. Andrade1, Mar Secorún1, Eva Sierra-Silvestre2, Antoine Nordez1, Jean-Luc Gennisson3, "**In vivo Quantification of Tensile Elasticity and Anisotropy of Human Peripheral Nerves using Angle-resolved Ultrasound Shear Wave Elastography**"

1Nantes Université, MIP, Nantes, France

2Nuffield Department of Clinical Neuroscience, University of Oxford, Oxford, UK

3BioMaps, University Paris-Saclay, CEA, CNRS UMR 9011, Inserm UMR 1281, Orsay, France

17:00-17:15: Paul Spiesecke1,2, Mareike Wolff3, Jakob Jordan1, Thomas Fischer1, Ingolf Sack1, Tom Meyer1, "**Multiparametric Ultrasound Time-Harmonic Elastography for Characterization of Focal Liver Lesions**"

1Charité - Universitätsmedizin Berlin, Department of Radiology, Berlin, Germany

2Berlin Institute of Health at Charité - Universitätsmedizin Berlin, BIH, Berlin, Germany

3Charité -Universitätsmedizin Berlin, Department of Pediatric Oncology and Hematology, Berlin, Germany

17:15-17:30: Cagla Ozsoy1, Christina Proestaki1, Johanna Tonko2, Mengxing Tang2, Elisa Konofagou1,3,4 "**Non-Invasive Electromechanical Wave Velocity Mapping for Functional Substrate Characterization in Ischemic and Non-Ischemic Cardiomyopathy**"

1Dept. of Biomedical Engineering, Columbia University Irving Medical Center, New York, NY, USA

2National Heart & Lung Institute, Imperial College London, London, UK

3Radiology, Columbia University, New York, NY, USA

4Dept. of Neurosurgery, Columbia University Irving Medical Center, New York, NY, USA

18:30-21:30: Networking Dinner at Eisengießerei Westwerk (Karl-Heine-Straße 93b, 04229 Leipzig - bus transfer)

September 25th, 2026

08:00-08:10 Announcements for Day 3

08:10-08:50: Keynote Talk 2 - Elijah Van Houten, **"MR Elastography of the Poro-Viscoelastic Brain"**

University of Strasbourg, Strasbourg, France

08:50-09:10 Industrial Talk

09:10-10:10: Session 12: Optical Methods III

09:10-09:25: Matt S. Hepburn1,2, Nicolas Detrez3, Seweryn Morawiec2, Wolfgang Draxinger3,4, Marta K. Skrok2, Mateusz Maniewski5, Łukasz Szylberg5, Maciej Szkulmowski2, Ralf Brinkmann4,5, Robert Huber4,5, and Brendan F. Kennedy1,2, "**Recent Advances in High-speed Volumetric Optical Coherence Elastography: Full-field and Point-scanning Techniques**"

1University of Western Australia, BRITElab, School of Engineering, Perth, Australia

2Nicolaus Copernicus University in Toruń, Institute of Physics, Faculty of Physics, Astronomy and Informatics, Toruń, Poland

3Medizinisches Laserzentrum Lübeck GmbH, Biomedical Optics Group, Lübeck, Germany

4Universität zu Lübeck, Institut für Biomedizinische Optik, Lübeck, Germany

5Nicolaus Copernicus University in Toruń, Collegium Medicum in Bydgoszcz, Bydgoszcz, Poland

09:25-09:40: Jakob Jordan1, Frank Sauer1, Bao Long Hoang2, Jing Zeng1, Agnes Böhm2,3, Oliver Böhm1, Tom Meyer1, Ingolf Sack1, "**Resolving the Mechanics of the Tumor Boundary Using Optical Multifrequency Elastography in Colorectal Liver Metastasis**"

1Charité – Universitätsmedizin Berlin, Department of Radiology, Berlin, Germany

2Charité – Universitätsmedizin Berlin, Department of Surgery, Berlin, Germany

3Charité – Universitätsmedizin Berlin, Department of Vascular Surgery, Berlin, Germany

09:40: 09:55: Yasmine Safraou1,2, Wentao Liu1, Jakub Kochanowski1, Maxx Swoger1, Gordon Ruthel1, Robert Lebourdais3, Hadi Nia3, Adriana Salazar Coariti4, Kimani Toussaint4, Emma Elizabeth Furth1, Paul A. Janmey1, Rebecca G. Wells1, "**Solid Stress is a Marker of the Non-proliferative Cirrhotic Liver Disease**"

1University of Pennsylvania, Department of Bioengineering, Physiology, Pathobiology and Medicine, Philadelphia, USA

2Charité Universitätsmedizin Berlin, Department of Radiology, Berlin, Germany

3Boston University, Department of Biomedical Engineering, Boston, USA

4Brown University, Department of Biomedical Engineering and Medicine, Providence, USA

09:55-10:10: Agathe Marmin, Ehsan Malekshahi, Aswathy Vijay, Ivan (Vanya) Pelivanov, "**Reconstruction of All Three Elastic Moduli in Skin from Phase Velocities of Rayleigh Waves: Data Processing and Optimization Algorithms**"

Department of Bioengineering, University of Washington, Seattle, USA

10:10-10:40: Morning Coffee Break

10:40-11:40: Session 13: Ultrasound Methods III

10:40-10:55: Gilmer A. Flores Barrera1, Stefano E. Romero2, Benjamín Castañeda1, Kevin J. Parker1, "**Regime-Dependent Optimization of Shear Wave Generation in Harmonic Elastography**"

1Department of Biomedical Engineering, University of Rochester, Rochester, NY, USA

2Sección de Electricidad y Electrónica, Pontificia Universidad Católica del Perú, San Miguel, Lima, Peru

10:55-11:10: Arthur Begoc1,2, Nicolas Thillays2, Damien Bachasson2, Jean-Luc Gennisson1, "**Shear Wave Elastography For Quantifying the Mechanical Response of the Respiratory Muscles to Functional Electrical Stimulation**"

1BioMaps, Université Paris-Saclay, Inserm, CNRS, CEA, UMR 9011, Orsay, France

[2]Neurophysiologie Respiratoire Expérimentale et Clinique, Sorbonne Université, Inserm, UMRS1158 Paris, France

11:10-11:25: Saramu Abe1, Naoki Tano1, Shunichiro Tanigawa2, Tamami Abe3, Hidekatsu Kuroda3, Ren Koda4, Yoshiki Yamakoshi4, Naohisa Kamiyama2, Marie Tabaru1 , "**Reliability Assessment of Vibration-based Shear Wave Elastography Using Signal Energy**"

1Institute of Science Tokyo, Tokyo, Japan

2GE HealthCare Japan, Tokyo, Japan

3Iwate Medical University, Iwate, Japan

4Gunma University, Gunma, Japan

11:25-11:40: Piotr Kijanka, Ramin Almasi , "**Two-Point Model-Free Estimation of Shear Wave Attenuation in Ultrasound Elastography**"

AGH University of Krakow, Department of Robotics and Mechatronics, Krakow, Poland

11:40-12:40: Lunch Break

12:40-13:20: Keynote Talk 3 - Brendan Kennedy

University of Western Australia, Perth, Australia

13:20-14:20: Session 14: Magnetic Resonance Methods III

13:20-13:35: Anne-Sophie van Schelt1, Donovan Tripp1, Omar Darwish2, Karl Kunze1,3, Shamsa Al Harthy1, Nader Metwalli4, Ahmed Gharib4, Claudia Prieto1, René Botnar1, Ralph Sinkus1,5, Radhouene Neji1, "**Single-Breathhold 3D MR Elastography in the Liver, with Simultaneous R2* and PDFF Mapping"**

1King's College London, School of Biomedical Engineering and Imaging Sciences, London, UK

2Siemens Healthcare, Erlangen, Germany

3Siemens Healthcare, Camberley, UK

4IDDK, Bethesda, MD, USA

5INSERM, LVTS, Paris, France

13:35-13:50: Weijie Zhao1, Lisa-Marie Skrip2, Heiko Tzschätzsch3, Tom Meyer1, Hossein S. Aghamiry1, Jürgen Braun1, Jing Guo1, Karl H. Hillebrandt2, Ingolf Sack1, "**Spatially Resolved Compact Tabletop Magnetic Resonance Elastography for Mapping Biomechanical Heterogeneity**"

1Charité - Universitätsmedizin Berlin, Department of Radiology, Berlin, Germany

2Charité - Universitätsmedizin Berlin, Department of Surgery, Berlin, Germany

3Charité - Universitätsmedizin Berlin, Institute of Medical Informatics, Berlin, Germany

13:50-14:05: Nicole Bens, Jeremiah Sanders, Jun Chen, Kay Pepin, Roger C. Grimm, Richard L. Ehman, Arvin Arani, Bhavika K. Patel , "**The Prognostic Characterization Of Breast Cancer Tissue Biomechanics With Magnetic Resonance Elastography**"

Mayo Clinic, Department of Radiology, Rochester MN/Phoenix AZ, USA

14:05-14:20: Simon Murk1, Frederik B. Laun1, Stefan Rampp1, Martin Vossiek2, Jakob Schattenfroh3, Jing Guo3, Ingolf Sack3, Arnd Doerfler1, Guillaume Flé1, "**Sensitivity of Multifrequency Brain MRE to Acute Caffeine Intake**"

1Uniklinik Erlangen, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

2Department of Microwaves and Photonics, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

3Department of Radiology, Charité - Universitätsmedizin Berlin, Berlin, Germany

14:20-15:00: Afternoon Coffee Break

15:00-16:00: Session 15: Tissue Properties and Models II

15:00-15:15: Ariana Cihan1, Patrick Segers1, Annette Caenen1,2, "**Analytical Investigation of Pressure-Stiffness Uncoupling during Shear Wave Elastography of Interstitially Pressurized Organs**"

1Ghent University, Department of Electronics and Information Systems, Ghent, Belgium

2KU Leuven, Department of Cardiovascular Sciences, Leuven, Belgium

15:15-15:30: Inas Faris1,2, Manuel Hurtado1,2, Daniel Martinez1,2, Antonio Callejas1,2, José Cortés1,2, Guillermo Rus1,2 , "**Shear Excitation Differentially Modulates 3D Tumour Spheroids**"

1The Hashemite University, Department of Allied Engineering Sciences, Zarqa, Jordan

2University of Granada, Department of Structural Mechanics, Granada, Spain

15:30-15:45: TBA

15:45-16:00: Marvin Doyley1, Nikhila Nyayapathi1, Katia Iliza1, Scott Gerber2, "**Longitudinal Shear Wave Elastography Monitors Response to Combined Radiation and Immunotherapy in a Murine Model of Pancreatic Ductal Adenocarcinoma**"

1Department of Electrical and Computer Engineering, University of Rochester, Rochester, NY, USA

2Department of Surgery, University of Rochester Medical Center, Rochester, NY, USA

16:00-16:45 Student Awards, Introduction of ITEC 2027, and Closing Ceremonie

16:45: End of Conference