

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. Konofagou^{1,2,3} "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 Calis^{1,2,3}, Yanglei Wu⁴, Tom Meyer⁴, Patrick Segers², Pim Pullens^{1,2,3}, 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 Martemyanova^{1,2}, Kasper Grøndahl Klausen², Oliver Geier³, Kenneth O. Pedersen⁴, Mona-Elisabeth Rootwelt-Revheim^{4,5}, Einar Hopp⁴, Ivar Sjaastad^{1,5}, 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 Huber^{2,1}, Ralf Brinkmann^{1,2}, "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. Nair^{1,2}, Elijah Van Houten³, Sajad Ghazavi^{1,2}, Rania Goucha^{1,2}, Patrick Laplante⁴, Jean-François Cailhier^{4,5}, Guy Cloutier^{1,2,6}, "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 Ghazavi^{1,2}, Elijah Van Houten³, Hari S. Nair^{1,2}, Rania Goucha^{1,2}, Hugo Paulus^{4,5}, Nicolas Malaquin^{4,5}, Patrick Laplante^{4,5}, Jean-François Cailhier^{4,5}, Francis Rodier^{4,5,6}, Guy Cloutier^{1,2,6},

"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, "MR elastography of the poro-viscoelastic brain"

University of Erlangen, Germany

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

14:15-14:30: Héloïse Bustin^{1,2}, Tom Meyer², Jakob Jordan², Lars Walczak³, Heiko Tzschätzsch², Ingolf Sack², Anja Hennemuth^{1,2,3,4} "**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 Ludvig^{2,3}, Kenneth R. Shull², Eric J. Perreault^{2,3}, 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 Zikar¹, 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

17:30-19:00: Welcome aperitive

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 Industrial talk

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 Caenen^{1,3}, 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 Zattoni^{1,2}, Andrea Resca Cacciari¹, Mathias Peirlinck², Patrick Segers¹, Annette Caenen^{1,3} "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 Prahll 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 Schmidt^{1,2}, Eric Zou², Brett E. Bouma^{1,2}, Néstor Uribe-Patarroyo^{1,2}, "**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 Tamborski^{1,2}, Marta K. Skrok^{1,2}, Matt S. Hepburn^{1,2,3,4}, Mateusz Maniewski^{5,6}, Marek Zdenka⁶, Adam Kowalewski^{6,7}, Łukasz Szyłberg^{4,5}, and Brendan F. Kennedy^{1,2,3,4}

"**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 Loumeaud^{1,2}, 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 Ma^{1,2,3}, Fuhua Yan⁴, Guang-Zhong Yang^{1,2,3}, Yuan Feng^{1,2,3}, "**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 White^{1,2}, Joshua Shur¹, Sheima Farag¹, Nicolò Battisti¹, Matthew Foxton¹, Erica Scurr¹, Georgina Hopkinson¹, Jeff Bamber², Emma Harris², Simon P. Robinson², Ralph Sinkus³,

Dow-Mu Koh^{1,2}, Jessica M. Winfield^{1,2}, "**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. Martemyanova^{1,2}, V. M. Skulberg¹, L. Zhang¹, I. Sjaastad¹, E. Espe^{1,2}, "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 Cox^{2,3}, 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 Philip^{1,2}, Samantha Ballesta³, Isabelle Ray-Coquard⁴, Alpha Diallo⁵, Charlotte Rivière^{6,7}, 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 Watrisse³, Jean-Christophe Dupré⁴, Pascal Doumalin⁴, "Optical Scanning Tomography Elastography: Experiences with a Novel Elastography Method"

First

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 Sapozhnikov^{2,3}, Minh Song^{2,4}, Gilles Thomas², Pavel B. Rosnitskiy^{2,3}, George R. Schade⁵, Ivan M. Pelivanov¹, Tatiana D. Khokhlova^{2,4}, "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 Spiesecke^{1,2}, 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 Konofagou^{1,3,4} "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

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. Hepburn^{1,2}, Nicolas Detrez³, Seweryn Morawiec², Wolfgang Draxinger^{3,4}, Marta K. Skrok², Mateusz Maniewski⁵, Łukasz Szyłberg⁵, Maciej Szkulmowski², Ralf Brinkmann^{4,5}, Robert Huber^{4,5}, and Brendan F. Kennedy^{1,2}, "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 Böhm^{2,3}, 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 Safragu^{1,2}, 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 Begoc^{1,2}, 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

²Neurophysiologie 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 Kunze^{1,3}, Shamsa Al Harthy¹, Nader Metwalli⁴, Ahmed Gharib⁴, Claudia Prieto¹, René Botnar¹, Ralph Sinkus^{1,5}, 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 Caenen^{1,2}, "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 Faris^{1,2}, Manuel Hurtado^{1,2}, Daniel Martinez^{1,2}, Antonio Callejas^{1,2}, José Cortés^{1,2}, Guillermo Rus^{1,2}, "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: Zhenbang Wang¹, Jonah Boutin², Abbas Samani^{1,2,3}, "Flow-Based Ultrasound Elastography from Radio-Frequency Signals"

¹Department of Electrical and Computer Eng., Western University, London, Ontario, Canada

²School of Biomedical Engineering, Western University, London, Ontario, Canada

³Department of Medical Biophysics, Western University, London, Ontario, Canada

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