

8:00 am - 5:00 pm

Poster --- Friday, October 23, 2015

4th floor

<p><b>Session P1B1.</b> <b>Elasticity Imaging Methods</b></p> <p><i>Chair: Hendrik Hansen</i> <i>Radboud University Medical Center</i></p>	<p><b>P1B1-8</b> Spatial Variance Induced by Tissue Compression in Ultrasound Shear Wave Imaging</p> <p>Hideki Yoshikawa<sup>1</sup>, Teruyuki Sonoyama<sup>2</sup>, Noriaki Inoue<sup>3</sup>, Ken-ichi Kawabata<sup>1</sup> <sup>1</sup>Hitachi, Ltd., Tokyo, Japan, <sup>2</sup>Engineering R&amp;D Department 1, Hitachi Aloka Medical, Ltd., Tokyo, Japan</p>	<p><b>P1B2-4</b> Ultrasound-enhanced extravasation of dual-modality multifunctional nanodroplets</p> <p>Yujin Zong<sup>1</sup>, Xinru Zou<sup>1</sup>, Rongrong Wang<sup>1</sup>, Yi Feng<sup>1</sup>, Xuan Du<sup>1</sup>, Mingxi Wan<sup>1</sup> <sup>1</sup>The Key Laboratory of Biomedical Information Engineering of Ministry of Education, Xi'an Jiaotong University, Xi'an, Shaanxi, China, People's Republic of</p>	<p><b>P1B3-4</b> Effects of coherent compounding on Pulse Wave Imaging (PWI) in phantoms and <i>in vivo</i></p> <p>Iason Zacharias Apostolakis<sup>1</sup>, Ronny Li<sup>1</sup>, Matthew McGarry<sup>1</sup>, Ethan Bunting<sup>1</sup>, Elisa Konofagou<sup>1,2</sup> <sup>1</sup>Biomedical Engineering, Columbia University, New York, New York, USA, <sup>2</sup>Radiology, Columbia University, New York, New York, USA</p>	<p><b>P1B4-4</b> Copolymer-in-oil phantoms for photoacoustic imaging</p> <p>Luciana Cabrelli<sup>1</sup>, Diego Sampaio<sup>1</sup>, Joao Uliana<sup>1</sup>, Alessandro Deana<sup>2</sup>, Antonio Carneiro<sup>1</sup>, <b>Theo Pavan<sup>1</sup></b> <sup>1</sup>Department of Physics, University of Sao Paulo, Ribeirão Preto, Brazil, <sup>2</sup>Department of Biophotonics, Universidade Nove de Julho, Sao Paulo, Brazil</p>
<p><b>P1B1-1</b> Regularized, Weighted Temporal Multiresolution Speckle Tracking of Small Displacements in Ultrasound</p> <p>Peter Hollender<sup>1</sup>, Vignesh Vudatha<sup>1</sup>, Gregg Trahey<sup>1,2</sup> <sup>1</sup>Biomedical Engineering, Duke University, Durham, North Carolina, USA, <sup>2</sup>Radiology, Duke University Medical Center, Durham, North Carolina, USA</p>	<p><b>P1B1-9</b> A reliability index of shear wave speed measurement for shear wave elastography</p> <p>Kiwan Choi<sup>1</sup>, Junho Park<sup>1</sup>, Donggoen Kong<sup>1</sup>, Hyoung-Ki Lee<sup>1</sup> <sup>1</sup>Ultrasound R&amp;D Group, Samsung Electronics, Seoul, Korea, Republic of</p>	<p><b>P1B2-5</b> Evaluation the potential of the hair growth enhancements with ultrasound-mediated minoxidil loaded microbubbles cavitation</p> <p>AI-ho Liao<sup>1</sup>, Ying-jui Lu<sup>1</sup> <sup>1</sup>National Taiwan University of Science and Technology, Taiwan</p>	<p><b>P1B3-5</b> Atlas-based mosaicing of 3D transeophageal echocardiography images of the left atrium</p> <p>Harriët W. Mulder<sup>1</sup>, Josien P.W. Pluim<sup>1</sup>, Ben Ren<sup>2</sup>, Alexander Haak<sup>3</sup>, Max A. Viergever<sup>1</sup>, Johan G. Bosch<sup>3</sup>, Marijn van Stralen<sup>1</sup> <sup>1</sup>Imaging Division, UMC Utrecht, Utrecht, Netherlands, <sup>2</sup>Cardiology, Erasmus MC Rotterdam, Rotterdam, Netherlands, <sup>3</sup>Biomedical Engineering, Erasmus MC Rotterdam, Rotterdam, Netherlands</p>	<p><b>P1B4-5</b> NIR Photoacoustic Spectroscopy for Continuous Non-Invasive Glucose Monitoring</p> <p>Praful Pai<sup>1</sup>, Pradyut Sanki<sup>1</sup>, Arijit De<sup>1</sup>, Swapna Banerjee<sup>1</sup> <sup>1</sup>Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, India</p>
<p><b>P1B1-2</b> On-Axis Radiation-Force-based quantitative stiffness estimation with a Bayesian displacement estimator</p> <p>Kristy Walsh<sup>1</sup>, Douglas Dumont<sup>1</sup>, Mark Palmeri<sup>2</sup>, Brett Byram<sup>1</sup> <sup>1</sup>Biomedical Engineering, Vanderbilt University, Nashville, TN, USA, <sup>2</sup>Biomedical Engineering, Duke University, Durham, NC, USA</p>	<p><b>P1B1-10</b> Pixel-based ultrasound image reconstruction: impact of grid size on signal frequency content</p> <p>Mahdi Bayat<sup>1</sup>, Alireza Nabavizadeh<sup>1,2</sup>, Azra Alizad<sup>1,2</sup>, <b>Mostafa Fatemi<sup>1</sup></b> <sup>1</sup>Physiology and Biomedical Engineering, Mayo Clinic, Rochester, MN, USA, <sup>2</sup>Biomedical Informatics and Computational Biology, University of Minnesota, Rochester, MN, USA, <sup>3</sup>Department of Internal Medicine, Mayo Clinic, Rochester, MN, USA</p>	<p><b>P1B2-6</b> Quantification of endothelial <math>\alpha\beta 3</math> expression with high frequency ultrasound and targeted microbubbles: in vitro and in vivo studies</p> <p>Verya Daeichin<sup>1</sup>, Ilya Skachkov<sup>1</sup>, Judith C. Sluimer<sup>2</sup>, Johan G. Bosch<sup>1</sup>, Klazina Kooiman<sup>1</sup>, Andrew Needles<sup>3</sup>, Ben Janssen<sup>1</sup>, Mat J.A.P. Daemen<sup>4</sup>, Antonius van der Steen<sup>1,6</sup>, Nico de Jong<sup>1,6</sup> <sup>1</sup>Thoraxcenter Biomedical Engineering, Erasmus MC, Rotterdam, Netherlands, <sup>2</sup>Pathology, CARIM, Maastricht University, Netherlands, <sup>3</sup>FUJIFILM VisualSonics, Inc., Canada, <sup>4</sup>Pharmacology, CARIM, Maastricht University, Netherlands, <sup>5</sup>Pathology, AMC, Netherlands, <sup>6</sup>Technical University Delft, Netherlands</p>	<p><b>P1B3-6</b> Estimation of Flow Mediated Vasodilatation of the radial artery</p> <p>Andrzej Nowicki<sup>1</sup>, Robert Olszewski<sup>2</sup>, Wojciech Secomski<sup>1</sup>, Marcin Lewandowski<sup>1</sup>, Michal Byra<sup>1</sup> <sup>1</sup>Ultrasound, Institute of Fundamental Technological Research, Warsaw, Poland, <sup>2</sup>Cardiology and Internal Medicine, Military Institute of Medicine, Warsaw, Poland</p>	<p><b>P1B4-6</b> In Vivo Assessment of Protease Activity in Colorectal Cancer by Using Activatable Molecular Photoacoustic Imaging</p> <p>Cheng LIU<sup>1</sup>, Qijin HE<sup>1</sup>, Yaoheng YANG<sup>1</sup>, Zhihai QIU<sup>1</sup>, Yongmin HUANG<sup>1</sup>, Thomas Ming-Hung LEE<sup>1</sup>, Lei SUN<sup>1</sup> <sup>1</sup>Interdisciplinary Division of Biomedical Engineering, Faculty of Engineering, The Hong Kong Polytechnic University, HONG KONG, China, People's Republic of</p>
<p><b>P1B1-3</b> Crawling Waves Shear Wave Speed Estimation using Null Space Pursuit and AM-FM demodulation</p> <p>Renán Rojas<sup>1</sup>, Juvenal Ormachea<sup>2</sup>, Kevin Parker<sup>2</sup>, <b>Benjamin Castañeda<sup>1</sup></b> <sup>1</sup>Departamento de Ingeniería, Sección Electricidad y Electrónica, Pontificia Universidad Católica del Perú, Lima, Peru, <sup>2</sup>Department of Electrical &amp; Computer Engineering, University of Rochester, Rochester, New York, USA</p>	<p><b>P1B1-11</b> A Shear Wave Propagation Tracking Method Based on Modal Assurance Criterion in Acoustic Radiation Force Impulse Imaging</p> <p>Yang Jiao<sup>1</sup>, Jie Xu<sup>1</sup>, Yongjia Xiang<sup>1</sup>, Tianming Gu<sup>1</sup>, Yaoyao Cui<sup>1</sup> <sup>1</sup>Suzhou Institute of Biomedical Engineering and Technology, CAS, Suzhou, Jiangsu, China, People's Republic of</p>	<p><b>P1B2-7</b> Subharmonic Threshold for Chirp Excitations of High Frequency Contrast Agents</p> <p>John Allen<sup>1</sup>, Rintaro Hayashi<sup>1</sup>, Parag Chitnis<sup>2</sup>, Jonathan Mamou<sup>3</sup>, Jeffrey Ketterling<sup>3</sup> <sup>1</sup>Mechanical Engineering, University of Hawaii, Honolulu, Hawaii, USA, <sup>2</sup>Department of Bioengineering, George Mason University, Fairfax, Virginia, USA, <sup>3</sup>Riverside Research Institute, New York City, New York, USA</p>	<p><b>P1B3-7</b> Electromechanical Eave Imaging of atrial tachycardia and myocardial infarct in vivo: a feasibility study</p> <p>Alexandre Costet<sup>1</sup>, Ethan Bunting<sup>2</sup>, Elaine Wan<sup>3</sup>, Elisa Konofagou<sup>2,4</sup> <sup>1</sup>Biomedical Engineering, Columbia University, New York, New York, USA, <sup>2</sup>Biomedical Engineering, Columbia University, New York, NY, USA, <sup>3</sup>Medicine Cardiology, Columbia University Medical Center, New York, New York, USA, <sup>4</sup>Radiology, Columbia University, New York, NY, USA</p>	<p><b>P1B4-7</b> Optical-resolution photoacoustic endoscope</p> <p>Ruimin Chen<sup>1</sup>, Joon-Mo Yang<sup>2</sup>, Chiye Li<sup>2</sup>, Bin Rao<sup>2</sup>, Junjie Yao<sup>2</sup>, Cheng-Hung Yeh<sup>2</sup>, Amos Danielli<sup>2</sup>, Konstantin Maslov<sup>2</sup>, K. Kirk Shung<sup>1</sup>, Qifa Zhou<sup>1</sup>, Lihong V. Wang<sup>2</sup> <sup>1</sup>Ultrasonic Transducer Resource Center, Department of Biomedical Engineering, University of Southern California, Los Angeles, California, USA, <sup>2</sup>Optical Imaging Laboratory, Department of Biomedical Engineering, Washington University in St. Louis, St. Louis, Missouri, USA</p>

<p><b>P1B1-4</b> Near Field Shear Wave Elasticity Imaging with High Frequency Single Element Transducers</p> <p>Nien-Ching Ho<sup>1</sup>, Pai-Chi Li<sup>2</sup>  <sup>1</sup>Biomedical Electronics and Bioinformatics, National Taiwan University, Taipei, Taiwan, <sup>2</sup>Electrical Engineering, National Taiwan University, Taipei, Taiwan, Taiwan</p>	<p><b>Session P1B2.</b>  <b>MCA: Microbubbles and Nanodroplets</b></p> <p><i>Chair: Lori Bridal</i>  Univ. Pierre and Marie Curie</p>	<p><b>Session P1B3.</b>  <b>MIM: Cardiovascular Imaging and Mechanics</b></p> <p><i>Chair: Richard Lopata</i>  Technical University Eindhoven</p>	<p><b>Session P1B4.</b>  <b>MPA: Photoacoustics</b></p> <p><i>Chair: Richard Lopata</i>  Technical University Eindhoven</p>	<p><b>P1B4-8</b> Low power continuous wave photoacoustic microscope for bioimaging applications</p> <p>Sathiyamoorthy Krishnan<sup>1</sup>, Michael Kolios<sup>1</sup>  <sup>1</sup>Department of physics, Ryerson university, Toronto, Ontario, Canada</p>
<p><b>P1B1-5</b> Effects of Aberration in Crawling Wave Sonoelastography</p> <p>Gabriela Torres<sup>1</sup>, Kevin Parker<sup>2</sup>, Roberto Lavarello<sup>1</sup>, Benjamin Castaneda<sup>1</sup>  <sup>1</sup>Electrical Engineering, Pontificia Universidad Catolica del Peru, Lima, Lima, Peru, <sup>2</sup>Electrical and Computer Engineering, University of Rochester, Rochester, USA</p>	<p><b>P1B2-1</b> Cosolvent-infused precursor bubbles and droplets for production of ultra-small, ultrasound-activatable, nanoscale perfluorocarbon agents</p> <p>Minseok Seo<sup>1</sup>, Siqi Zhu<sup>1</sup>, Ross Williams<sup>1</sup>, Naomi Matsuura<sup>2</sup>  <sup>1</sup>Sunnybrook Research Institute, Canada, <sup>2</sup>University of Toronto, Canada</p>	<p><b>P1B3-1</b> Full-cycle left ventricular segmentation and tracking in 3D echocardiography using active appearance models</p> <p>Marijn van Stralen<sup>1</sup>, Alexander Haak<sup>2</sup>, Esther Leung<sup>3</sup>, Gerard van Burken<sup>2</sup>, Clemens Bosch<sup>1</sup>, Johan Bosch<sup>2</sup>  <sup>1</sup>Imaging Division, UMC Utrecht, Utrecht, Netherlands, <sup>2</sup>Biomedical Engineering, Erasmus MC Rotterdam, Rotterdam, Netherlands, <sup>3</sup>Albert Schweitzer Hospital, Dordrecht, Netherlands</p>	<p><b>P1B4-1</b> Optimizing Simultaneous Multispectral Emission Photoacoustics</p> <p>Martin F Beckmann<sup>1</sup>, Hans-Martin Schwab<sup>1</sup>, Georg Schmitz<sup>1</sup>  <sup>1</sup>Chair for Medical Engineering, Ruhr-Universität Bochum, Bochum, Germany</p>	<p><b>P1B4-9</b> Optical and Acoustic Observation of Photodisruption in Two Liquid Perfluorocarbons Induced by Nanosecond Laser</p> <p>Yi Feng<sup>1</sup>, Dui Qin<sup>1</sup>, Yujing Zong<sup>1</sup>, Mingxi Wan<sup>1</sup>  <sup>1</sup>The Key Laboratory of Biomedical Information Engineering of Ministry of Education, Department of Biomedical Engineering, School of Life Science and Technology, Xi'an Jiaotong University, Xi'an, Shaanxi, China, People's Republic of</p>
<p><b>P1B1-6</b> Acoustic particle palpation – a feasibility study on a novel stress source for elasticity imaging</p> <p>Hasan Koruk<sup>1,2</sup>, Ahmed El Ghamrawy<sup>1</sup>, Mengxing Tang<sup>1</sup>, James Choi<sup>1</sup>  <sup>1</sup>Department of Bioengineering, Imperial College London, London, United Kingdom, <sup>2</sup>Mechanical Engineering Department, MEF University, Istanbul, Turkey</p>	<p><b>P1B2-2</b> Influence of the surrounding media on the acoustic behavior of gas vesicle nanostructures at high ultrasound frequencies</p> <p>Emmanuel Cherin<sup>1</sup>, Raymond W. Bourdeau<sup>2</sup>, Melissa Yin<sup>1</sup>, Mikhail G. Shapiro<sup>2</sup>, F. Stuart Foster<sup>1</sup>  <sup>1</sup>Imaging Research, Sunnybrook Research Institute, Toronto, Ontario, Canada, <sup>2</sup>Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, California, USA</p>	<p><b>P1B3-2</b> Optimization-based speckle tracking algorithm for LV strain estimation</p> <p>Hanan Khamis<sup>1</sup>, Nahum Smirin<sup>1</sup>, Zvi Friedman<sup>2</sup>, Dan Adam<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, Technion-Israel Institute of Technology, Haifa, Israel, <sup>2</sup>GE Ultrasound, Tirat Hacarmel, Israel</p>	<p><b>P1B4-2</b> Dual-modal photoacoustic ocular imaging</p> <p>Changhui Li<sup>1</sup>, Ning Wu<sup>2</sup>, Xiaoyi Zhu<sup>2</sup>  <sup>1</sup>Biomedical Engineering, Peking University, China, People's Republic of, <sup>2</sup>Peking University, China, People's Republic of</p>	<p><b>P1B4-10</b> X-ray acoustic imaging for external beam radiation therapy dosimetry using a commercial ultrasound scanner</p> <p>Diego Sampaio<sup>1</sup>, Joao Uliana<sup>1</sup>, Juliana Pavoni<sup>1</sup>, Leandro Borges<sup>2</sup>, Antonio Carneiro<sup>1</sup>, Theo Pavan<sup>1</sup>  <sup>1</sup>Department of Physics, University of Sao Paulo, Ribeirão Preto, Brazil, <sup>2</sup>Radiotherapy Service, University of Sao Paulo, Ribeirão Preto, Brazil</p>
<p><b>P1B1-7</b> Novel imaging method of continuous shear wave by ultrasonic color flow imaging</p> <p>Yoshiki Yamakoshi<sup>1</sup>, Atsushi Yamamoto<sup>2</sup>, Yasushi Yuminaka<sup>1</sup>, Naoki Sunaguchi<sup>1</sup>  <sup>1</sup>Grad. School of Science and Technology, Gunma University, Kiryu, Japan, <sup>2</sup>Department of Orthopaedic Surgery, Graduate School of Medicine, Gunma University, Maebashi, Japan</p>	<p><b>P1B2-3</b> Nonlinear Acoustic Properties Characterization of Nano Size Gas Vesicles</p> <p>Yaoheng Yang<sup>1</sup>, Yongmin Huang<sup>1</sup>, Zhihai Qiu<sup>1</sup>, Cheng Liu<sup>1</sup>, Jiyan Dai<sup>2</sup>, Lei Sun<sup>1</sup>  <sup>1</sup>Interdisciplinary Division of Biomedical Engineering, The Hong Kong Polytechnic University, Hong Kong, <sup>2</sup>Department of Applied Physics, The Hong Kong Polytechnic University, Hong Kong</p>	<p><b>P1B3-3</b> Tracking quality in plane-wave versus conventional cardiac ultrasound: a preliminary evaluation in-silico based on a state of the art simulation pipeline</p> <p>Martino Alessandrini<sup>1</sup>, Brecht Heyde<sup>1</sup>, Ling Tong<sup>1,2</sup>, Olivier Bernard<sup>3</sup>, Jan D'hooge<sup>1</sup>  <sup>1</sup>Cardiovascular Imaging and Dynamics, KU Leuven, Leuven, Belgium, <sup>2</sup>Center for Biomedical Imaging Research, Dept. of Biomedical Engineering, Tsinghua University, China, People's Republic of, <sup>3</sup>CNRS UMR 5220; INSERM U1044; Université Lyon 1; INSA Lyon, Lyon, France</p>	<p><b>P1B4-3</b> Photoacoustic imaging of human inflammatory arthritis</p> <p>Xueding Wang<sup>1</sup>, Janggun Jo<sup>2</sup>, Guan Xu<sup>3</sup>, Sheeja Francis<sup>3</sup>, April Marquardt<sup>3</sup>, Jie Yuan<sup>4</sup>, Gandikota Girish<sup>3</sup>  <sup>1</sup>Biomedical Engineering, University of Michigan, Ann Arbor, Michigan, USA, <sup>2</sup>Radiology, University of Michigan, USA, <sup>3</sup>University of Michigan, USA, <sup>4</sup>Nanjing University, USA</p>	<p><b>Session P1B5.</b>  <b>MTH: Ultrasound-Mediated Agent Delivery</b></p> <p><i>Chair: John Hossack</i>  Univ. of Virginia</p>

8:00 am - 5:00 pm

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<p><b>P1B5-1</b> PET and fluorescence imaging demonstrate nanoparticle delivery and accumulation in a mouse breast tumor model using microbubbles-mediated ultrasound treatment</p> <p><b>Josquin Foiret<sup>1</sup></b>, Hua Zhang<sup>1</sup>, Lisa M. Mahakian<sup>1</sup>, Sara M. Tam<sup>1</sup>, Jai Woong Seo<sup>1</sup>, Katherine W. Ferrara<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, University of California, Davis, USA</p>	<p><b>Session P1B6.</b>  <b>MTC: Soft Tissue Characterization</b></p> <p><b>Chair: Lori Bridal</b>  Univ. Pierre and Marie Curie</p>	<p><b>P1B6-8</b> Feasibility of acoustic evaluation of thermal lesions at bone-soft tissue interface of an ex vivo bovine bone exposed to high-intensity focused ultrasound</p> <p><b>Siyuan Zhang<sup>1</sup></b>, Zhiwei Cui<sup>1</sup>, Lei Zhang<sup>1</sup>, Xingguang Zhu<sup>1</sup>, Tianqi Xu<sup>1</sup>, Supin Wang<sup>1</sup>, Mingxi Wan<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, Xi'an Jiaotong University, Xi'an, China, People's Republic of</p>	<p><b>Session P1B7.</b>  <b>MBF: Flow Estimation Strategies: From 1D to 3D</b></p> <p><b>Chair: Jørgen Jensen</b>  Technical University of Denmark</p>	<p><b>P1B7-8</b> In-vivo High Dynamic Range Vector Flow Imaging</p> <p><b>Carlos Armando Villagómez Hoyos<sup>1</sup></b>, Matthias Bo Stuart<sup>1</sup>, Jørgen Arendt Jensen<sup>1</sup>  <sup>1</sup>Technical University of Denmark, Denmark</p>
<p><b>P1B5-2</b> Feasibility of Ultrasound Assisted Drug Delivery (UADD) via Noninvasive High Frequency Intense Therapy Ultrasound</p> <p><b>Michael Slayton<sup>1</sup></b>, Paul Jaeger<sup>2</sup>  <sup>1</sup>Guided Therapy Systems, Mesa, AZ, USA, <sup>2</sup>Ardent Sound, Inc., Mesa, AZ, USA</p>	<p><b>P1B6-1</b> Evaluation of ultrasound B-mode images of liver fibrosis using fibrotic probability image based on multi-Rayleigh model</p> <p><b>Shohei Mori<sup>1</sup></b>, Shinnosuke Hirata<sup>1</sup>, Tadashi Yamaguchi<sup>2</sup>, Hiroyuki Hachiya<sup>1</sup>  <sup>1</sup>Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Chiba University, Chiba, Japan</p>	<p><b>P1B6-9</b> High-Resolution Strain and Strain Rate Imaging of Adult Zebrafish Myocardium</p> <p><b>Chen Ho-Chiang<sup>1</sup></b>, Chih-Chung Huang<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, Taiwan</p>	<p><b>P1B7-1</b> Real-time pulse compression in multigate spectral Doppler imaging</p> <p><b>Alessandro Ramalli<sup>1</sup></b>, Alessandro Dallai<sup>1</sup>, Enrico Boni<sup>1</sup>, Francesco Guidi<sup>1</sup>, Stefano Ricci<sup>1</sup>, Piero Tortoli<sup>1</sup>  <sup>1</sup>Information Engineering Department, University of Florence, Firenze, Italy</p>	<p><b>P1B7-9</b> 3-D Vector Flow Estimation with Row-Column Addressed Arrays</p> <p><b>Simon Holbek<sup>1</sup></b>, Thomas Lehrmann Christiansen<sup>2</sup>, Morten Fischer Rasmussen<sup>1</sup>, Matthias Bo Stuart<sup>1</sup>, Erik Vilain Thomsen<sup>2</sup>, Jørgen Arendt Jensen<sup>1</sup>  <sup>1</sup>Department of Electrical Engineering, Technical University of Denmark, Lyngby, Denmark, <sup>2</sup>Department of Micro- and Nanotechnology, Technical University of Denmark, Lyngby, Denmark</p>
<p><b>P1B5-3</b> Efficient generation of reactive oxygen species sonochemically generated by cavitation bubbles</p> <p><b>Jun Yasuda<sup>1</sup></b>, Shin Yoshizawa<sup>1</sup>, Shin-ichiro Umemura<sup>2</sup>  <sup>1</sup>Department of Communications Engineering, Tohoku Univ., Sendai, Japan, <sup>2</sup>Department of Biomedical Engineering, Tohoku Univ., Sendai, Japan</p>	<p><b>P1B6-2</b> Backscatter coefficient estimation from human thyroids in vivo</p> <p>Tony Cueva<sup>1</sup>, Julien Rouyer<sup>1</sup>, Alberto Portal<sup>2</sup>, Tamy Yamamoto<sup>2</sup>, <b>Roberto Lavarello<sup>1</sup></b>  <sup>1</sup>Departamento de Ingeniería, Pontificia Universidad Católica del Perú, San Miguel, Lima, Peru, <sup>2</sup>Departamento de Radiología, Clínica Centenario Peruano Japonesa, Pueblo Libre, Lima, Peru</p>	<p><b>P1B6-10</b> Relation between Speed of Sound Measured by Using Ultrasound and Magnetic Resonance Images and Elasticity in Tissue-Engineered Cartilage</p> <p><b>Naotaka Nitta<sup>1</sup></b>, Masaki Misawa<sup>1</sup>, Koji Hyodo<sup>1</sup>, Yoshio Shirasaki<sup>1</sup>, Kazuhiko Hayashi<sup>1</sup>, Kazuhiro Homma<sup>1</sup>, Tomokazu Numano<sup>2</sup>  <sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan, <sup>2</sup>Tokyo Metropolitan University, Japan</p>	<p><b>P1B7-2</b> A robust spectral envelope detection algorithm for automated blood flow measurements</p> <p><b>Aditi Kathpalia<sup>1,2</sup></b>, Yücel Karabiyik<sup>2</sup>, Bente Simensen<sup>3</sup>, Eva Tegnander<sup>3,4</sup>, Sturla Eik-Nes<sup>3,4</sup>, Hans Torp<sup>2</sup>, Ingvald Kinn Ekroll<sup>2,5</sup>, Gabriel Kiss<sup>2</sup>  <sup>1</sup>School of Biomedical Engineering, Indian Institute of Technology (BHU), Varanasi, India, <sup>2</sup>Department of Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway, <sup>3</sup>National Center for Fetal Medicine (NCFM), St. Olavs Hospital, Trondheim, Norway, <sup>4</sup>Department of Laboratory Medicine, Children's and Women's Health (LBK), NTNU, Trondheim, Norway, <sup>5</sup>St. Olavs Hospital, Trondheim, Norway</p>	<p><b>P1B7-10</b> Velocity vector in three dimensions using a high-frame-rate dual-array setup</p> <p><b>Pieter Kruizinga<sup>1,2</sup></b>, Hendrik J Vos<sup>1,2</sup>, Johannes G Bosch<sup>1</sup>, Antonius FW van der Steen<sup>1,2</sup>, Nico de Jong<sup>1,2</sup>  <sup>1</sup>Thorax Center - Biomedical Engineering, Erasmus Medical Center, Rotterdam, Netherlands, <sup>2</sup>Faculty of Applied Sciences - Acoustical Wavefield Imaging, Delft University of Technology, Delft, Netherlands</p>
<p><b>P1B5-4</b> Uptake and Cellular Recovery Mechanisms in Microbubble-enhanced Ultrasound Delivery of Nanoparticles for Cancer Therapy</p> <p><b>Lee Terron<sup>1</sup></b>, Maria De Scirilli<sup>1,2</sup>, Julien Reboud<sup>1</sup>, Catherine Berry<sup>3</sup>, Helen Mulvana<sup>1</sup>  <sup>1</sup>School of Engineering, University of Glasgow, Glasgow, United Kingdom, <sup>2</sup>Department of Mechanical and Aerospace Engineering, Politecnico di Torino, Turin, Piedmont, Italy, <sup>3</sup>Centre for Cell Engineering, University of Glasgow, Glasgow, United Kingdom</p>	<p><b>P1B6-3</b> Correcting the influence of tissue attenuation on Nakagami distribution shape parameter estimation</p> <p><b>Michal Byra<sup>1</sup></b>, Andrzej Nowicki<sup>1</sup>, Hanna Piotrkowska-Wroblewska<sup>1</sup>, Katarzyna Dobruch-Sobczak<sup>1,2</sup>, Jerzy Litniewski<sup>1</sup>  <sup>1</sup>Ultrasound Department, Institute of Fundamental Technological Research PAS, Warsaw, Poland, <sup>2</sup>Maria Skłodowska-Curie Memorial Cancer Centre and Institute of Oncology, Poland</p>	<p><b>P1B6-11</b> Activation of Mechanosensitive Transcription Factors in murine C2C12 myoblasts by Focused Low-Intensity Pulsed Ultrasound (FLIPUS).</p> <p><b>Regina Puts<sup>1</sup></b>, Paul Rikeit<sup>2</sup>, Karen Ruschke<sup>2</sup>, Soyoung Hwang<sup>3</sup>, Petra Knaus<sup>1,2</sup>, Kay Raum<sup>1</sup>  <sup>1</sup>Berlin-Brandenburg School for Regenerative Therapies, Charité Universitaet Berlin, Berlin, Germany, <sup>2</sup>Biochemistry, Freie Universitaet Berlin, Berlin, Germany, <sup>3</sup>Department of Biotechnology, Technische Universitaet Berlin, Berlin, Germany</p>	<p><b>P1B7-3</b> Contrast-based Transient Flow Vector Distribution in Arterial Stenosis based on Plane Wave Bubble Wavelet Imaging and Modified Optical Flow Method</p> <p><b>Diya Wang<sup>1</sup></b>, Bowen Jing<sup>1</sup>, Jinjin Wan<sup>1</sup>, Yingjie Jia<sup>1</sup>, Yu Zhang<sup>1</sup>, Mingxi Wan<sup>1</sup>  <sup>1</sup>The Key Laboratory of Biomedical Information Engineering of Ministry of Education, Department of Biomedical Engineering, School of Life Science and Technology, Xi'an Jiaotong University, Xi'an, Shaanxi, China, People's Republic of</p>	<p><b>P1B7-11</b> 3D Ultrafast Vector Doppler Imaging for in vivo Complex Flow Quantification</p> <p><b>Mafalda Correia<sup>1</sup></b>, Jean Provost<sup>1</sup>, Mickaël Tanter<sup>1</sup>, Mathieu Pernot<sup>1</sup>  <sup>1</sup>Institut Langevin, ESPCI ParisTech, CNRS UMR 7587, INSERM U979, Université Paris 7, Paris, France</p>

<p><b>P1B5-5</b> Enhanced transdermal drug delivery with low frequency, low intensity (20 kHz, 100 mW/cm2) ultrasound exposure: In vivo feasibility study</p> <p>Gadi Cohen<sup>1</sup>, Hiba Natsheh<sup>1</sup>, Philip Lazarovici<sup>1</sup>, Elka Toutou<sup>1</sup>, Christopher Bawiec<sup>2</sup>, Youhan Sunny<sup>2</sup>, Melissa A. Lerman<sup>3</sup>, Michael Neidrauer<sup>2</sup>, Leonid Zubkov<sup>2</sup>, W. Andrew Berger<sup>4</sup>, <b>Peter A. Lewin</b><sup>2</sup></p> <p><sup>1</sup>Hebrew University Jerusalem, Israel, <sup>2</sup>Drexel University, USA, <sup>3</sup>Children's Hospital of Pennsylvania, USA, <sup>4</sup>University of Scranton, USA</p>	<p><b>P1B6-4</b> Variation of longitudinal strain along the arterial wall adjacent to the asymptomatic carotid plaque</p> <p><b>Spyretta Golemati</b><sup>1</sup>, Symeon Lehareas<sup>1</sup>, Aimilia Gastounioti<sup>2</sup>, Konstantina Nikita<sup>2</sup>, Achilles Chatzioannou<sup>1</sup>, Despina Perrea<sup>1</sup></p> <p><sup>1</sup>Medical School, National Kapodistrian University of Athens, Athens, Greece, <sup>2</sup>Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece</p>	<p><b>P1B6-12</b> The measurement of acoustic impedance of the cells cultured with five kinds of the fatty acid</p> <p><b>Kazuyo Ito</b><sup>1</sup>, Kenji Yoshida<sup>2</sup>, So Irie<sup>1</sup>, Jonathan Mamou<sup>3</sup>, Hitoshi Maruyama<sup>4</sup>, Tadashi Yamaguchi<sup>2</sup></p> <p><sup>1</sup>Graduate School of Engineering, Chiba University, Chiba, Japan, <sup>2</sup>Center for Frontier Medical Engineering, Chiba University, Chiba, Japan, <sup>3</sup>Lizzi Center for Biomedical Engineering, Riverside Research, New York, NY, USA, <sup>4</sup>Graduate School of Medicine, Chiba University, Chiba, Japan</p>	<p><b>P1B7-4</b> Robust blood velocity estimation using point-spread-function-based beamforming and multi-step speckle tracking</p> <p><b>Anne E.C.M. Saris</b><sup>1</sup>, Maartje M. Nillesen<sup>1</sup>, Stein Fekkes<sup>1</sup>, Hendrik H.G. Hansen<sup>1</sup>, Chris L. de Korte<sup>1</sup></p> <p><sup>1</sup>Medical UltraSound Imaging Center (MUSIC), Department of Radiology and Nuclear Medicine, Radboud university medical center, Nijmegen, Netherlands</p>	<p><b>P1B7-12</b> High frame rate 3D blood speckle tracking of intracardiac flows</p> <p><b>Morten Wigen</b><sup>1</sup>, Jakob Høgenes<sup>1</sup>, Joris van Cauwenberge<sup>2</sup>, Sten Roar Snare<sup>3</sup>, Patrick Segers<sup>2</sup>, Solveig Fadnes<sup>1</sup>, Abigail Swillens<sup>2</sup>, Lasse Løvstakken<sup>1</sup></p> <p><sup>1</sup>Norwegian University of Science and Technology, Norway, <sup>2</sup>Ghent University, Belgium, <sup>3</sup>University of Oslo, Norway</p>
<p><b>P1B5-6</b> Echogenic liposome as a carrier of siRNA for sonoporation: an alternative microbubble for sonoporation</p> <p><b>Jingam Park</b><sup>1</sup>, Donghee Park<sup>2</sup>, Unchul Shin<sup>1</sup>, Jungwoo Son<sup>1</sup>, Jinho Kim<sup>1</sup>, Ohrum Cha<sup>1</sup>, Yunsun Lee<sup>1</sup>, Sangwoo Lee<sup>1</sup>, Chul-woo Kim<sup>2</sup>, Jongbum Seo<sup>1</sup></p> <p><sup>1</sup>Department of Biomedical engineering, Univ. Yonsei, Wonju, Gangwon, Korea, Republic of, <sup>2</sup>Seoul National University College of Medicine, Korea, Republic of</p>	<p><b>P1B6-5</b> Assessment of Transmural Myocardial Orientation Using Nakagami Imaging in a Phased Array Configuration</p> <p><b>Xue Yu</b><sup>1</sup>, Wei-Ning Lee<sup>1,2</sup></p> <p><sup>1</sup>Electrical and Electronic Engineering, University of Hong Kong, Hong Kong, <sup>2</sup>Medical Engineering Programme, University of Hong Kong, Hong Kong</p>	<p><b>P1B6-13</b> Correction of scatterer-diameter and acoustic-concentration estimates in saturated high-frequency ultrasound signals acquired from cancerous human lymph nodes</p> <p><b>Kazuki Tamura</b><sup>1</sup>, Jonathan Mamou<sup>2</sup>, Alain Coron<sup>3</sup>, Kenji Yoshida<sup>4</sup>, Tadashi Yamaguchi<sup>4</sup>, Ernest Feleppa<sup>2</sup></p> <p><sup>1</sup>Graduate School of Engineering, Chiba University, Japan, <sup>2</sup>Lizzi Center for Biomedical Engineering, Riverside Research, USA, <sup>3</sup>Laboratoire UPMC Univ Paris 06, CNRS, INSERM, France, <sup>4</sup>Center for Frontier Medical Engineering, Chiba University, Japan</p>	<p><b>P1B7-5</b> Two Dimensional Blood Velocity Estimation Using High Frame Rate Echocardiography with Transverse Oscillation Approach</p> <p><b>Hiroki Takahashi</b><sup>1</sup>, Hideyuki Hasegawa<sup>1</sup></p> <p><sup>1</sup>Graduate School of Science and Engineering for Research, University of Toyama, Toyama-shi, Toyama, Japan</p>	<p><b>Session P1B8.</b> <b>MSD: Implementation of Novel Ultrasound Methods</b></p> <p><b>Chair:</b> Massimo Mischì Eindhoven University of Technology</p>
<p><b>P1B5-7</b> Passive delivery of liposomes with different sizes to the mouse brain after blood brain barrier opening induced by focused ultrasound with microbubbles</p> <p>Jinxuan Guo<sup>1</sup>, Gaoshu Chen<sup>1</sup>, Jian Chen<sup>2</sup>, Chien Ting Chin<sup>1</sup>, Yanyan Suo<sup>3</sup>, <b>Yuanyuan Shen</b><sup>1</sup></p> <p><sup>1</sup>Department of Biomedical Engineering, Shenzhen University, Shenzhen, Guang Dong, China, People's Republic of, <sup>2</sup>School of pharmacy, Shanghai Jiaotong University, Shanghai, China, People's Republic of, <sup>3</sup>Shenzhen Entry-Exit Inspection and Quarantine Bureau, Shenzhen, China, People's Republic of</p>	<p><b>P1B6-6</b> Experimental estimation of effective scatterer diameters from physical phantoms using autoregressive spectral analysis</p> <p><b>Julius Diestra</b><sup>1</sup>, Roberto Lavarello<sup>1</sup></p> <p><sup>1</sup>Departamento de Ingeniería, Pontificia Universidad Católica del Perú, San Miguel, Lima, Peru</p>	<p><b>P1B6-14</b> A New Tissue-mimicking Material for Phantoms</p> <p><b>Kazuishi Sato</b><sup>1</sup>, Tomoji Yoshida<sup>1</sup>, Toshio Kondo<sup>1</sup>, Masahiko Taniguchi<sup>2</sup>, Kazuhiro Yasukawa<sup>2</sup></p> <p><sup>1</sup>Tokushima Bunri University, Sanuki, Kagawa, Japan, <sup>2</sup>Takiron Co., Ltd., Kobe, Japan</p>	<p><b>P1B7-6</b> High Frame Rate Vector Velocity Estimation using Plane Waves and Transverse Oscillation</p> <p><b>Jonas Jensen</b><sup>1</sup>, Matthias Bo Stuart<sup>1</sup>, Jørgen Arendt Jensen<sup>1</sup></p> <p><sup>1</sup>Dept. of Elect. Eng, Technical University of Denmark, Kgs. Lyngby, Denmark</p>	<p><b>P1B8-1</b> Real-time dynamic scheduling based adaptive ultrasound sequence programming for research and rapid prototyping</p> <p><b>Richard Tobias</b><sup>1</sup>, Gary Yi Hou<sup>1</sup>, Ashish Parikh<sup>1</sup></p> <p><sup>1</sup>Cephasonics, Santa Clara, California, USA</p>
<p><b>P1B5-8</b> The study of targeted delivery of microbubbles binding GDNF through the blood-brain barrier by MRI-guided focused ultrasound on treatment of addiction</p> <p><b>Feng Wang</b><sup>1</sup>, Xiaojian Jia<sup>2</sup>, Yu Shi<sup>3</sup>, Li Liu<sup>3</sup>, Azhen Hu<sup>1</sup>, Yun Chen<sup>3</sup></p> <p><sup>1</sup>Biomedical Research Institute, Shenzhen PKU-HKUST Medical Center, China, People's Republic of, <sup>2</sup>Biomedical Research Institute, Shenzhen PKU-HKUST Medical Center, China, People's Republic of, <sup>3</sup>Department of Ultrasound, Peking University Shenzhen Hospital, China, People's Republic of</p>	<p><b>P1B6-7</b> A Technique for Mapping Shear Wave Velocity and Attenuation from the Two-Dimensional Fourier Space</p> <p><b>Ivan Nenadic</b><sup>1</sup>, Bo Qiang<sup>1</sup>, Matthew Urban<sup>1</sup>, James Greenleaf<sup>1</sup></p> <p><sup>1</sup>Mayo Clinic, USA</p>	<p><b>P1B6-15</b> Differentiation of normal tissue and tissue lesions using statistical properties of backscattered ultrasound in breast</p> <p><b>Andrzej Nowicki</b><sup>1</sup>, Hanna Piotrkowska-Wroblewska<sup>1</sup>, Katarzyna Dobruch-Sobczak<sup>2</sup>, Jerzy Litniewski<sup>1</sup>, Barbara Gambin<sup>1</sup>, Michal Byra<sup>1</sup>, Eleonora Kruglenko<sup>1</sup></p> <p><sup>1</sup>Ultrasound, Institute of Fundamental Technological Research, Warsaw, Poland, <sup>2</sup>Maria Skłodowska-Curie Memorial, Cancer Center and Institute of Oncology, Warsaw, Poland</p>	<p><b>P1B7-7</b> Multi-angle imaging for robust vector Doppler and coherent compounding</p> <p><b>Ingvald Kinn Ekroll</b><sup>1,2</sup>, Jørgen Avdal<sup>1</sup>, Abigail Swillens<sup>2</sup>, Hans Torp<sup>1</sup>, Lasse Løvstakken<sup>1</sup></p> <p><sup>1</sup>Norwegian University of Science and Technology, Norway, <sup>2</sup>St Olav's Hospital, Norway, <sup>3</sup>Ghent University, Belgium</p>	<p><b>P1B8-2</b> Newton's Method based Self Calibration for a 3D Ultrasound Tomography System</p> <p><b>Wei Yap Tan</b><sup>1</sup>, Till Steiner<sup>2</sup>, Nicole Ruiter<sup>1</sup></p> <p><sup>1</sup>Institute for Data Processing and Electronics, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany, <sup>2</sup>Pepperl+Fuchs GmbH, Mannheim, Germany</p>

8:00 am - 5:00 pm		Poster --- Friday, October 23, 2015		4th floor
<p><b>P1B8-3</b> A Study of the Driving Circuit for Array Transducer Considering the Impedance Properties</p> <p>Hayato JIMBO<sup>1</sup>, Kota GOTO<sup>1</sup>, Shin YOSHIZAWA<sup>1</sup>, Shinnichiro UMEMURA<sup>1</sup>  <sup>1</sup>Tohoku university, Sendai, Miyagi, Japan</p>	<p><b>Session P2B1.</b>  <b>Signal Processing NDE Methods</b></p> <p><i>Chair: Erdal Oruklu</i>          Illinois Institute of Technology</p>	<p><b>Session P2B2.</b>  <b>Wave Propagation Modeling</b></p> <p><i>Chair: Walter Arnold</i>          Saarland University</p>	<p><b>P3B1-2</b> Controllable generation of acoustical vortices with sparse sources</p> <p>Haixiang Zheng<sup>1</sup>, Qingyu Ma<sup>1</sup>, Dong Zhang<sup>2</sup>  <sup>1</sup>School of Physics and Technology, Nanjing Normal University, Nanjing, Jiangsu, China, People's Republic of, <sup>2</sup>Institute of Acoustics, Nanjing University, Nanjing, Jiangsu, China, People's Republic of</p>	<p><b>P3B2-5</b> Design and characterization of 3D printed phononic crystals for sub-MHz ultrasound manipulation</p> <p>Stefano Laureti<sup>1,2</sup>, Omololu Akanji<sup>1</sup>, Lee Davis<sup>1</sup>, Marco Ricci<sup>2</sup>, Simon Leigh<sup>1</sup>, David Hutchins<sup>1</sup>  <sup>1</sup>University of Warwick, United Kingdom, <sup>2</sup>Università degli studi di Perugia, Italy</p>
<p><b>P1B8-4</b> Method for Generating Cell Aggregates using Ultrasonic Standing Wave Trapping in a Disposable Capsule</p> <p>Yuta Kurashina<sup>1</sup>, Kenjiro Takemura<sup>1</sup>, Shogo Miyata<sup>1</sup>, James Friend<sup>2</sup>  <sup>1</sup>Mechanical Engineering, Keio University, Yokohama, Kanagawa, Japan, <sup>2</sup>Mechanical and Aerospace Engineering, University of California-San Diego, San Diego, California, USA</p>	<p><b>P2B1-1</b> A pulse compression procedure for the measurement and characterization of Non-linear systems based on Exponential Chirp signals.</p> <p>Pietro Burrascano<sup>1</sup>, Stefano Laureti<sup>1,2</sup>, David Hutchins<sup>2</sup>, Marco Ricci<sup>1</sup>, Luca Senni<sup>1</sup>  <sup>1</sup>Department of Engineering, Università degli studi di Perugia, Polo Scientifico Didattico di Terni, Italy, <sup>2</sup>University of Warwick, United Kingdom</p>	<p><b>P2B2-1</b> Acoustic Imaging of the Circular Wedge-like Acoustic Waveguides</p> <p>Tai-Ho Yu<sup>1</sup>  <sup>1</sup>National United University, Taiwan</p>	<p><b>P3B1-3</b> Transverse Manipulation of Microbubbles using Acoustic-Vortex Tweezers</p> <p>Wei Chen Lo<sup>1</sup>, Shih Tsung Kang<sup>1</sup>, Chih Kuang Yeh<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering and Environmental Sciences, National Tsing Hua University, Hsinchu, Taiwan</p>	<p><b>P3B2-6</b> Anchor loss reduction of quartz resonators utilizing phononic crystals</p> <p>Yung-Yu Chen<sup>1</sup>, Yan-Ruei Lin<sup>1</sup>, Tsung-Tsong Wu<sup>2</sup>, Shih-Yung Pao<sup>3</sup>  <sup>1</sup>Department of Mechanical Engineering, Tatung University, Taiwan, <sup>2</sup>Institute of Applied Mechanics, National Taiwan University, Taiwan, <sup>3</sup>TXC Corporation, Taiwan</p>
<p><b>P1B8-5</b> Cell manipulation by using natural vibration of a cell culture substrate</p> <p>Chikahiro Imashiro<sup>1</sup>, Yuta Kurashina<sup>1</sup>, Kenjiro Takemura<sup>1</sup>, Shogo Miyata<sup>1</sup>, Jun Komotori<sup>1</sup>  <sup>1</sup>Mechanical engineering, Keio University, Yokohama, Kanagawa, Japan</p>	<p><b>P2B1-2</b> Visualization of Defects in Steel Billet using Back Propagation of Scattered Waves</p> <p>Koichi Kakuma<sup>1</sup>, Koichi Mizutani<sup>2</sup>, Naoto Wakatsuki<sup>2</sup>  <sup>1</sup>College of Engineering Systems, School of Science and Engineering, University of Tsukuba, Tsukuba, Ibaraki, Japan, <sup>2</sup>Faculty of Engineering, Information and Systems, University of Tsukuba, Tsukuba, Ibaraki, Japan</p>	<p><b>P2B2-2</b> Hybrid MM-MOC-based Numerical Simulation of Acoustic Wave Propagation with Non-uniform Grid and Perfectly Matched Layer Absorbing Boundaries</p> <p>Yuta Matsumura<sup>1</sup>, Kan Okubo<sup>1</sup>, Norio Tagawa<sup>1</sup>, Takao Tsuchiya<sup>2</sup>, Takashi Ishizuka<sup>3</sup>  <sup>1</sup>Tokyo Metropolitan University, Japan, <sup>2</sup>Doshisha University, Japan, <sup>3</sup>Shimizu Corporation, Japan</p>	<p><b>P3B1-4</b> Spatial selective trapping of microparticles using a quasi-periodic phononic crystal plate</p> <p>Chen Wang<sup>1,2</sup>, Feiyan Cai<sup>2</sup>, Li Fei<sup>2</sup>, Long Meng<sup>2</sup>, Yan Kang<sup>1</sup>, Hairong Zheng<sup>2</sup>  <sup>1</sup>Sino-Dutch Biomedical and Information Engineering, Northeastern University, China, People's Republic of, <sup>2</sup>Shenzhen Institutes of Advanced Technology Chinese Academy of Sciences, China, People's Republic of</p>	<p><b>P3B2-7</b> Lowering diffraction of surface acoustic waves by phononic crystals</p> <p>Jia-Hong Sun<sup>1</sup>, Yuan-Hai Yu<sup>1</sup>  <sup>1</sup>Department of Mechanical Engineering, Chang Gung University, Tao-Yuan, Taiwan</p>
<p><b>P1B8-6</b> A Real-time Realization of the Automatic B-mode Image Optimization on a Smart Mobile Device for Point-of-Care Ultrasound Imaging</p> <p>JeeHoo Kim<sup>1</sup>, Kwanghyun Park<sup>1</sup>, Ilseob Song<sup>1</sup>, Yangmo Yoo<sup>1,2</sup>  <sup>1</sup>Electronic Engineering, Sogang University, Seoul, Korea, Republic of, <sup>2</sup>Interdisciplinary Program of Integrated Biotechnology, Sogang University, Korea, Republic of</p>	<p><b>P2B1-3</b> Feature extraction for robust impact damage classification of CFRP plates using ultrasonic signals</p> <p>Juan M. Soto<sup>1</sup>, Antonio M. Peinado<sup>1</sup>, Ángel M. Gómez<sup>1</sup>, Nicolas Bochud<sup>1</sup>  <sup>1</sup>Teoría de la Señal, Telemática y Comunicaciones, University of Granada, Granada, Spain</p>	<p><b>P2B2-3</b> Backward guided modes with double zero-group-velocity points in liquid-filled pipes</p> <p>Weijun Lin<sup>1</sup>, Hanyin Cui<sup>1</sup>  <sup>1</sup>State Key Laboratory of Acoustics, Institute of Acoustics Chinese Academy of Sciences, Beijing, China, China, People's Republic of</p>	<p><b>Session P3B2.</b>  <b>Phononics II</b></p> <p><i>Chair: Anne Bernassau</i>          Heriot-Watt University</p>	<p><b>Session P4B1.</b>  <b>Acoustic Simulation &amp; Modeling</b></p> <p><i>Chair: Karl Wagner</i>          TDK Corporation</p>

<p><b>P1B8-7</b> Speed-up of acoustic simulation techniques for 2D sparse array optimization by simulated annealing</p> <p><b>Emmanuel Roux</b><sup>1,2</sup>, Alessandro Ramalli<sup>2</sup>, Piero Tortoli<sup>2</sup>, Christian Cachard<sup>1</sup>, Marc Robini<sup>1</sup>, Hervé Liebgott<sup>1</sup>  <sup>1</sup>CREATIS, Université de Lyon, CNRS UMR 5220, INSERM U1044, Université Claude Bernard Lyon 1, INSA-Lyon, Villeurbanne, France, <sup>2</sup>Ingenieria dell'informazione, Università degli studi di Firenze, Firenze, Italy</p>	<p><b>P2B1-4</b> Ultrasonic Chirplet Echo Parameter Estimation using Time-Frequency Distributions</p> <p>Pramod Govindan<sup>1</sup>, Alireza Kasaeifard<sup>1</sup>, <b>Jafar Saniie</b><sup>1</sup>  <sup>1</sup>Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, Illinois, USA</p>	<p><b>P2B2-4</b> An Optimized Guided Waves' Focus Method to Eliminate the Effect of Dispersion: Theoretical and Experimental Research</p> <p><b>FuLi Xie</b><sup>1</sup>, Shouguo Yan<sup>1</sup>, Mingfei Cai<sup>1</sup>, Han Dong<sup>1</sup>, Bixing Zhang<sup>1</sup>, Junjie Gong<sup>1</sup>  <sup>1</sup>State Key Laboratory of Acoustics, Institute of Acoustics, Chinese Academy of Sciences, Beijing, China, People's Republic of</p>	<p><b>P3B2-1</b> Coupling and quality factor estimation of pillar resonators on a surface</p> <p><b>Vincent Laude</b><sup>1</sup>, Lyes Djoumi<sup>1</sup>, Sarah Benchabane<sup>1</sup>  <sup>1</sup>FEMTO-ST / CNRS, Besancon, France</p>	<p><b>P4B1-1</b> Numerical-analytical calculation of the maximum excitation current of precision quartz resonators.</p> <p>Alaxandr Lepetaev<sup>1</sup>, <b>Anatoly Kosykh</b><sup>1</sup>  <sup>1</sup>Radioelectronic, Omsk State Technical University, Omsk, Russian Federation</p>
<p><b>P1B8-8</b> Development of an Acoustic Based Sensing System for Medical Ultrasound Image Simulator</p> <p><b>Bo-Heng Chen</b><sup>1</sup>, Kai-Sheng Heish<sup>2</sup>, Chih-Chung Huang<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, Taiwan, <sup>2</sup>Kaoshiung Chang Geng Memorial Hospital, Taiwan</p>	<p><b>P2B1-5</b> Sparse Deconvolution of Ultrasound NDE Echoes Accounting for Pulse Variance</p> <p>Ramazan Demirli<sup>1</sup>, Pramod Govindan<sup>2</sup>, <b>Jafar Saniie</b><sup>2</sup>  <sup>1</sup>Center for Advanced Communications, Villanova University, Villanova, Pennsylvania, USA, <sup>2</sup>Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, Illinois, USA</p>	<p><b>P2B2-5</b> Anomalous dispersion of Stoneley waves in fluid-filled boreholes</p> <p><b>WeiJun lin</b><sup>1</sup>, Hanyin Cui<sup>1</sup>  <sup>1</sup>State Key Laboratory of Acoustics, Institute of Acoustics Chinese Academy of Sciences, Beijing, China, China, People's Republic of</p>	<p><b>P3B2-2</b> Focalization of surface acoustic waves through a gradient index lens</p> <p><b>Bernard Bonello</b><sup>1</sup>, Jinfeng Zhao<sup>2</sup>, Olga Boyko<sup>2</sup>  <sup>1</sup>INSP, CNRS / Paris University, Paris, France, <sup>2</sup>INSP, Paris University, Paris, France</p>	<p><b>P4B1-2</b> Optimization of Modified Hanma-Hunsinger Cell Geometry for the Design of High Performance SAW Filters</p> <p><b>Pierre Dufile</b><sup>1</sup>, Pascal Ventura<sup>2</sup>, Frederic Hecht<sup>3</sup>  <sup>1</sup>Phonon Corp, Simsbury, CT, USA, <sup>2</sup>Laboratoire LEM3, Université de Lorraine, Metz, France, <sup>3</sup>Laboratoire Jacques Louis Lions, Université Pierre et Marie Curie, Paris, France, Metropolitan</p>
<p><b>P1B8-9</b> A New 2D Shear Wave Imaging System for Ultrasound Elastography</p> <p><b>Weibao Qiu</b><sup>1</sup>, Congzhi Wang<sup>1</sup>, Yang Xiao<sup>1</sup>, Ming Qian<sup>1</sup>, Hairong Zheng<sup>1</sup>  <sup>1</sup>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China, People's Republic of</p>	<p><b>P2B1-6</b> Singular spectrum analysis for trend extraction in ultrasonic backscattered echoes</p> <p>Yufeng Lu<sup>1</sup>, <b>Jafar Saniie</b><sup>2</sup>  <sup>1</sup>Electrical and Computer Engineering, Bradley University, Peoria, USA, <sup>2</sup>Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, USA</p>	<p><b>Session P3B1.</b>  <b>Acoustic Tweezers and Particle Manipulation II</b></p> <p><b>Chair: Anne Bernassau</b>  Heriot-Watt University</p>	<p><b>P3B2-3</b> Molecular dynamics simulation of nonlinear waves in granular media</p> <p><b>Jia Yang</b><sup>1</sup>, David Hutchins<sup>1</sup>, Lolu Akanji<sup>1</sup>, Peter Thomas<sup>1</sup>, Lee Davis<sup>1</sup>, Steven Freear<sup>2</sup>, Sevan Harput<sup>2</sup>, Nader Saffari<sup>3</sup>, Pierre Gelat<sup>3</sup>  <sup>1</sup>School of Engineering, The University of Warwick, Coventry, West Midlands, United Kingdom, <sup>2</sup>The University of Leeds, United Kingdom, <sup>3</sup>University College London, United Kingdom</p>	<p><b>P4B1-3</b> Temperature compensation of the AIN Lamb Wave Resonators utilizing the S1 mode</p> <p><b>Jie Zou</b><sup>1</sup>, Albert P. Pisano<sup>2</sup>  <sup>1</sup>Mechanical Engineering, University of California, Berkeley, CA, USA, <sup>2</sup>University of California, San Diego, CA, USA</p>
<p><b>P1B8-10</b> Assessment of the performance of an ultrasonic biopsy needle</p> <p><b>Andrew Mathieson</b><sup>1</sup>, Robert Wallace<sup>2</sup>, Rebecca Cleary<sup>1</sup>, Hamish Simpson<sup>2</sup>, Margaret Lucas<sup>1</sup>  <sup>1</sup>School of Engineering, University of Glasgow, United Kingdom, <sup>2</sup>School of Clinical Sciences, University of Edinburgh, United Kingdom</p>	<p><b>P2B1-7</b> Fast total focusing method for ultrasonic imaging</p> <p><b>Ewen Carcreff</b><sup>1</sup>, Dominique Braconnier<sup>1</sup>, Gavin Dao<sup>2</sup>  <sup>1</sup>The phased array company, West Chester, Ohio, USA, <sup>2</sup>AOS NDT, Cincinnati, Ohio, USA</p>	<p><b>P3B1-1</b> Tangential Streaming Analysis on Ultrasonically Levitated Droplet through the Boundary Layer Approximation with Moving Particle Semi-implicit and Distributed Point Source Method</p> <p><b>Yuji Wada</b><sup>1</sup>, Kohei Yuge<sup>1</sup>, Hiroki Tanaka<sup>2</sup>, Kentaro Nakamura<sup>2</sup>  <sup>1</sup>Faculty of Science and Technology, Seikei University, Musashino, Japan, <sup>2</sup>Precision and Intelligence Laboratory, Tokyo Institute of Technology, Yokohama, Japan</p>	<p><b>P3B2-4</b> Effect of periodic patterned ZnO sensing film on a CO SAW resonator sensor</p> <p><b>Tsung-Tsong Wu</b><sup>1</sup>, Jia-Wei Luo<sup>1</sup>, Lu-Chung Kuo<sup>1</sup>  <sup>1</sup>Institute of Applied Mechanics, National Taiwan University, Taiwan</p>	<p><b>P4B1-4</b> Thin Plate Model for Transverse Mode Analysis of Surface Acoustic Wave Devices</p> <p><b>Gongbin Tang</b><sup>1,2</sup>, Tao Han<sup>1</sup>, Jing Chen<sup>1</sup>, Tatsuya Omori<sup>2</sup>, Ken-ya Hashimoto<sup>2</sup>  <sup>1</sup>School of Electronic Information and Electrical Engineering, Shanghai Jiao Tong University, Shanghai, Shanghai, China, People's Republic of, <sup>2</sup>Graduate School of Engineering, Chiba University, Chiba, Chiba, Japan</p>



8:00 am - 5:00 pm		Poster --- Friday, October 23, 2015		4th floor
<p><b>P4B1-5</b> Simulation of First Shear Horizontal Mode Plate Wave in LiNbO3 Showing 20 km/s Phase Velocity</p> <p>Michio Kadota<sup>1</sup>, Shuji Tanaka<sup>1</sup>, Tetsuya Kimura<sup>2</sup>  <sup>1</sup>Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan, <sup>2</sup>Telecommunication Devistion, Murata Manufacturing Co. Ltd., Yasu, Shiga, Japan</p>	<p><b>P5B1-1</b> Accurate performance evaluation of high frequency CMUT arrays using a nonlinear model</p> <p>Evren F. Arkan<sup>1</sup>, Sarp Satir<sup>1</sup>, F. Levent Degertekin<sup>1</sup>  <sup>1</sup>G.W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA</p>	<p><b>P5B1-9</b> Performance comparison of acoustic lens materials for Capacitive Micromachined Ultrasonic Transducers: simulation study</p> <p>Jin Ho Chang<sup>1,2</sup>, Sung Ho Kim<sup>1</sup>  <sup>1</sup>Interdisciplinary Program of Integrated Biotechnology, Sogang University, Seoul, Korea, Republic of, <sup>2</sup>Electronic Engineering, Sogang University, Seoul, Korea, Republic of</p>		
<p><b>Session P4B2.</b> <b>Sensors &amp; Applications II</b></p> <p><b>Chair:</b> Natalya Naumenko National University of Science and Technology</p>	<p><b>P5B1-2</b> Mutual Radiation Impedance for Modeling of Multi-Frequency CMUT Arrays</p> <p>Mohammad Maadi<sup>1</sup>, Ryan Chee<sup>1</sup>, Roger Zemp<sup>1</sup>  <sup>1</sup>Electrical and Computer Engineering, University of Alberta, Edmonton, Alberta, Canada</p>	<p><b>P5B1-10</b> Comparison of Simulation Models for Electrical Characteristics of CMUT</p> <p>Markus Klemm<sup>1</sup>, Anartz Unamuno<sup>1</sup>  <sup>1</sup>Fraunhofer IPMS, Germany</p>		
<p><b>P4B2-1</b> Measurement of vibrating frequency of a cantilever using low frequency impedance-loaded SAW sensor</p> <p>Hiromitsu Hamashima<sup>1</sup>, Jun Kondoh<sup>1</sup>  <sup>1</sup>Shizuoka University, Hamamatsu-shi, Japan</p>	<p><b>P5B1-3</b> Electrical Impedance Matching of CMUT Cells</p> <p>Mohammad Maadi<sup>1</sup>, Roger Zemp<sup>1</sup>  <sup>1</sup>Electrical and Computer Engineering, University of Alberta, Edmonton, Alberta, Canada</p>	<p><b>Session P5B2.</b> <b>Applications of CMUTs</b></p> <p><b>Chair:</b> Michael Fink Friedrich-Alexander-Universität Erlangen-Nuremberg</p>		
<p><b>P4B2-2</b> Continuous Temperature Monitoring Algorithm for SAW Sensors</p> <p>Mykhaylo Yudytskiy<sup>1,2</sup>, René Fachberger<sup>1</sup>  <sup>1</sup>sensideon GmbH, Wels, Austria, <sup>2</sup>Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz, Austria</p>	<p><b>P5B1-4</b> Nonlinear Model with Lumped Parameters for Asymmetric CMUTs</p> <p>Carlos Gerardo<sup>1</sup>, Edmond Cretu<sup>1</sup>, Robert Rohling<sup>1</sup>  <sup>1</sup>Electrical and Computer Engineering, University of British Columbia, Vancouver, British Columbia, Canada</p>	<p><b>P5B2-1</b> cMUT technology applied to galvanic isolation : theory and experiments</p> <p>Jacques Heller<sup>1</sup>, Audren Boulmé<sup>1</sup>, Daniel Alquier<sup>1</sup>, Sophie Ngo<sup>1</sup>, Marie Perroteau<sup>1</sup>, Dominique Certon<sup>1</sup>  <sup>1</sup>UMR CNRS 7347 - GREMAN, Université François Rabelais, TOURS, France</p>		

<p><b>P4B2-3 Sensitivity improvement of a room-temperature SAW methane sensor incorporating Cryptophane-A film</b></p> <p>Wen Wang<sup>1</sup>, Haoliang Hu<sup>1</sup>, <b>Shitang He</b><sup>1</sup>, Yong Pan<sup>2</sup>, Caihong Zhang<sup>3</sup>, Chuan Dong<sup>3</sup>  <sup>1</sup>Chinese Academy of Sciences, Institute of Acoustics, Beijing, China, People's Republic of, <sup>2</sup>Research Institute of Chemical Defense, China, People's Republic of, <sup>3</sup>Shanxi University, Shanxi, China, People's Republic of</p>	<p><b>P5B1-5 Efficient driving conditions of CMUT arrays for conventional and harmonic imaging</b></p> <p><b>Anders Lei</b><sup>1</sup>, Søren Elmin Diederichsen<sup>1</sup>, Matthias Bo Stuart<sup>2</sup>, Jørgen Arendt Jensen<sup>2</sup>, Erik Vilain Thomsen<sup>1</sup>  <sup>1</sup>Department of Micro- and Nanotechnology, Technical University of Denmark, Denmark, <sup>2</sup>Center for Fast Ultrasound Imaging, Department of Electrical Engineering, Technical University of Denmark, Denmark</p>	<p><b>P5B2-2 On-Chip Piezoelectric Polymer Ultrasonic Transceivers for Point-of-Care Testing</b></p> <p><b>Chien-Chong Hong</b><sup>1</sup>, Kuan-Wen Chen<sup>1</sup>  <sup>1</sup>Department of Power Mechanical Engineering, National Tsing Hua University, Hsinchu, Taiwan</p>		
<p><b>P4B2-4 Surface Acoustic Wave Accelerometer for High-G Applications</b></p> <p>Dmitry Lukyanov<sup>1</sup>, Sergey Shevchenko<sup>1</sup>, <b>Alexander Kukaev</b><sup>1</sup>, Khivrich Maria<sup>1</sup>  <sup>1</sup>Laser Measurement and Navigation Systems, St.Petersburg Electrotechnical University, St. Petersburg, Russian Federation</p>	<p><b>P5B1-6 Optimization of the Backside Structures with Wideband Reflectivity Reduction for a CMUT</b></p> <p><b>Akifumi Sako</b><sup>1</sup>, Hiroki Tanaka<sup>1,2</sup>, Yasuhiro Yoshimura<sup>2</sup>, Masahiro Sato<sup>1</sup>, Tatsuya Nagata<sup>1</sup>  <sup>1</sup>Hitachi Aloka Medical, Ltd., Japan, <sup>2</sup>Hitachi, Ltd., Japan</p>	<p><b>P5B2-3 CMUT for high sensitivity greenhouse gas sensing</b></p> <p><b>Dovydas Barauskas</b><sup>1</sup>, Donatas Pelenis<sup>1</sup>, Gvidas Sergalis<sup>1</sup>, Gailius Vanagas<sup>1</sup>, Marius Mikolajunas<sup>1</sup>, Darius Virzonis<sup>1</sup>, Jonas Baltrusaitis<sup>2</sup>  <sup>1</sup>Panevezys Faculty of Technologies and Business, Kaunas University of Technology, Panevezys, Lithuania, <sup>2</sup>Chemical and Biomolecular Engineering, Lehigh University, Bethlehem, USA</p>		
<p><b>P4B2-5 SAW force sensor based on reflective delay line quasi-mirror topology</b></p> <p>Ivan Ancev<sup>1</sup>, <b>Sergei Bogoslovsky</b><sup>1</sup>, Gennadiy Sapozhnikov<sup>1</sup>, Sergei Zhgoon<sup>2</sup>  <sup>1</sup>Joint Stock Company "NPP "Radar mms", Russian Federation, <sup>2</sup>National Research University Moscow Power Engineering Institute, Moscow, Russian Federation</p>	<p><b>P5B1-7 Nonlinear Lumped Modelling of Large-Scale CMUT TOBE Architectures</b></p> <p><b>Christopher Ceroici</b><sup>1</sup>, Ryan Chee<sup>1</sup>, Roger Zemp<sup>1</sup>  <sup>1</sup>Electrical &amp; Computer Engineering, University of Alberta, Edmonton, Canada</p>			
<p><b>Session P5B1. CMUT Modeling and Design</b></p> <p><b>Chair: Michael Fink</b>  Friedrich-Alexander-Universität Erlangen-Nuremberg</p>	<p><b>P5B1-8 Signal-to-Noise-Ratio Optimization For a CMUT based Medical Ultrasound Imaging System</b></p> <p><b>Reza Pakdaman Zangabad</b><sup>1</sup>, Ayhan Bozkurt<sup>2</sup>, Gökseven Yarahioğlu<sup>3</sup>  <sup>1</sup>Biomedical Engineering, Erasmus MC, Rotterdam, Netherlands, <sup>2</sup>Electronics Engineering, Sabanci University, Istanbul, Turkey, <sup>3</sup>Electronics Engineering, Ozyegin University, Istanbul, Turkey</p>			



