

8:00 am - 5:00 pm

Poster --- Saturday, October 24, 2015

4th floor

<p><b>Session P1C1.</b> <b>MEL: Clinical Application of Elasticity Imaging</b></p> <p><b>Chair: Hiroshi Kanai</b> Tohoku University</p>	<p><b>Session P1C2.</b> <b>MCA: Contrast Applications</b></p> <p><b>Chair: Hairong Zheng</b> Shenzhen Institutes of Advanced Technology</p>	<p><b>P1C2-8</b> Optical Observation of Microbubble Behaviors to Modulated Acoustic Radiation Force in Large Vessels</p> <p>Shiyang Wang<sup>1</sup>, Claudia Y Wang<sup>1</sup>, Alexander L Klibanov<sup>1,2</sup>, John A Hossack<sup>1</sup>, F William Mauldin Jr<sup>1</sup> <sup>1</sup>Biomedical Engineering, University of Virginia, Charlottesville, Virginia, USA, <sup>2</sup>Division of Cardiovascular Medicine, University of Virginia, Charlottesville, Virginia, USA</p>	<p><b>P1C3-7</b> Sparse Constrained Born Inversion for Breast Cancer Detection</p> <p>Ana Ramirez<sup>1</sup>, Koen W. A. van Dongen<sup>2</sup> <sup>1</sup>Department of Electrical, Electronics and Telecommunications Engineering, Universidad Industrial de Santander, Bucaramanga, Colombia, <sup>2</sup>Department of Imaging Physics, Delft University of Technology, Delft, Netherlands</p>	<p><b>P1C4-3</b> CW-Doppler focal plane array imaging for deep intra-corporeal vascular mapping; feasibility study with 1:1 focused projection to single pixel receiver and phase continuous Fresnel lens</p> <p>Seiji Matsumoto<sup>1</sup>, Yasuhito Takeuchi<sup>1</sup>, Hidehiro Kakizaki<sup>1</sup> <sup>1</sup>Renal and Urologic Surgery, Asahikawa Medical University, Asahikawa, Japan</p>
<p><b>P1C1-1</b> VisR Ultrasound Evaluation of Dystrophic Muscle Degeneration in a Dog Cross-Section and Comparison to Histology and MRI</p> <p>Mallory Selzo<sup>1</sup>, Joe Kornegay<sup>2</sup>, Amanda Bettis<sup>2</sup>, Eric Snook<sup>2</sup>, Martin Styner<sup>2,4</sup>, Jiahui Wang<sup>5</sup>, Caterina Gallippi<sup>1,6</sup> <sup>1</sup>Biomedical Engineering, UNC Chapel Hill, USA, <sup>2</sup>Veterinary Integrative Biosciences, Texas A&amp;M University, USA, <sup>3</sup>Psychiatry, UNC Chapel Hill, USA, <sup>4</sup>Computer Science, UNC Chapel Hill, USA, <sup>5</sup>Physiatry, UNC Chapel Hill, USA, <sup>6</sup>Radiology, UNC Chapel Hill, USA</p>	<p><b>P1C2-1</b> Imaging of the Dispersion Coefficient of Ultrasound Contrast Agents by Wiener System Identification for Prostate Cancer Localization</p> <p>Ruud van Sloun<sup>1</sup>, Libertario Demi<sup>1</sup>, Hessel Wijkstra<sup>1,2</sup>, Massimo Mischi<sup>1</sup> <sup>1</sup>Electrical Engineering, Eindhoven University of Technology, Eindhoven, Netherlands, <sup>2</sup>Academic Medical Center Amsterdam, Netherlands</p>	<p><b>Session P1C3.</b> <b>MIM: Medical Imaging</b></p> <p><b>Chair: Kai Thomenius</b> GE Corporate R&amp;D</p>	<p><b>P1C3-8</b> Monitoring imaging of lesions induced by high intensity focused ultrasound based on a matching pursuit method</p> <p>Weidong Song<sup>1</sup>, Siyuan zhang<sup>1</sup>, Minxi Wan<sup>1</sup>, Jin Wan<sup>1</sup> <sup>1</sup>Department of Biomedical Engineering, School of Life Science and Technology, Xi'an Jiaotong University, China, People's Republic of</p>	<p><b>P1C4-4</b> Volumetric Synthetic Aperture Ultrasound Imaging with Row-Column Addressed 2-D Arrays Using Spatial Matched Filter Beamforming</p> <p>Hamed Bouzari<sup>1</sup>, Morten Fischer Rasmussen<sup>1</sup>, Matthias Bo Stuart<sup>1</sup>, Svetoslav Ivanov Nikolov<sup>2</sup>, Jørgen Arendt Jensen<sup>1</sup> <sup>1</sup>Technical University of Denmark, Lyngby, Denmark, <sup>2</sup>BK Medical ApS, Herlev, Denmark</p>
<p><b>P1C1-2</b> Elasticity mapping of abdominal organs using Harmonic Motion Imaging</p> <p>Thomas Payen<sup>1</sup>, Carmine Palermo<sup>2</sup>, Steve Sastra<sup>2</sup>, Hong Chen<sup>1</sup>, Yang Han<sup>1</sup>, Kenneth Olive<sup>2</sup>, Elisa Konofagou<sup>1,3</sup> <sup>1</sup>Biomedical Engineering, Columbia University, New York, NY, USA, <sup>2</sup>Herbert Irving Comprehensive Cancer Center, Columbia University, USA, <sup>3</sup>Department of Radiology, Columbia University, USA</p>	<p><b>P1C2-2</b> Investigation of Membrane and Uptake Kinetics in Sonoporation Using a Giant Unilamellar Vesicle Cell Model</p> <p>Ruen Shan Leow<sup>1</sup>, Wenjing Zhong<sup>1</sup>, Alexander L. Klibanov<sup>2</sup>, Alfred C. H. Yu<sup>1</sup> <sup>1</sup>Medical Engineering Program, University of Hong Kong, Pokfulam, Hong Kong, <sup>2</sup>Division of Cardiovascular Medicine, University of Virginia, Charlottesville, Virginia, USA</p>	<p><b>P1C3-1</b> Spatial mapping of electromechanical properties in bone measured through acoustically stimulated electromagnetic response</p> <p>Kakeru Watanabe<sup>1</sup>, Shuntaro Hamazumi<sup>1</sup>, Hisato Yamada<sup>1</sup>, Kenji Ikushima<sup>1</sup>, Yoshitsugu Kojima<sup>2</sup>, Nobuo Niimi<sup>2</sup>, Yoshihiro Hagiwara<sup>3</sup> <sup>1</sup>Department of Applied Physics, Tokyo University of Agriculture and Technology, Koganei, Japan, <sup>2</sup>Nippon Sigma Co. Ltd., Tokyo, Japan, <sup>3</sup>Department of Orthopaedic Surgery, Tohoku University School of Medicine, Sendai, Japan</p>	<p><b>P1C3-9</b> Adaptive learning of tissue reflectivity statistics and its application for blind deconvolution of medical ultrasound scans</p> <p>Oleg Michailovich<sup>1</sup>, Yogesh Rathi<sup>2</sup> <sup>1</sup>Electrical and Computer Engineering, University of Waterloo, Waterloo, Ontario, Canada, <sup>2</sup>Harvard Medical School, USA</p>	<p><b>P1C4-5</b> An Optimized Plane Wave Synthetic Focusing Imaging for High-Resolution Convex Array Imaging</p> <p>Sua Bae<sup>1</sup>, Pilsu Kim<sup>1</sup>, Jeeun Kang<sup>1</sup>, Tai-kyong Song<sup>1</sup> <sup>1</sup>Department of Electronic Engineering, Sogang University, Seoul, Korea, Republic of</p>
<p><b>P1C1-3</b> New Inverse problem for visco-elastic characterization of fatty liver using Vibration Controlled Transient Elastography</p> <p>Jean-pierre Remenieras<sup>1</sup>, Cecile Bastard<sup>2</sup>, Veronique Mietté<sup>2</sup>, Jean-marc Perarnau<sup>3</sup>, Frederic Patat<sup>1,3</sup> <sup>1</sup>Equipe 5, UMR INSERM U930 University of Tours, Tours, France, <sup>2</sup>Echosens, Paris, France, <sup>3</sup>INSERM CIC IT 1415, Tours, France</p>	<p><b>P1C2-3</b> Feasibility of in vivo contrast-enhanced ultrasound imaging of the renal cortex during hemorrhagic shock</p> <p>Tom van Rooij<sup>1</sup>, Alexandre Lima<sup>2</sup>, Verya Daeichin<sup>1</sup>, Patricia A.C. Specht<sup>3</sup>, Bulent Ergin<sup>4</sup>, Yasin Ince<sup>2,4</sup>, Nico de Jong<sup>1,5</sup>, Can Ince<sup>2,4</sup>, Klazina Kooiman<sup>1</sup> <sup>1</sup>Department of Biomedical Engineering, Thorax Center, Erasmus MC, Rotterdam, Netherlands, <sup>2</sup>Department of Intensive Care Adults, Erasmus MC, Rotterdam, Netherlands, <sup>3</sup>Laboratory of Experimental Anesthesiology, Department of Anesthesiology, Erasmus MC, Netherlands, <sup>4</sup>Department of Translational Physiology, Academic Medical Center, Amsterdam, Netherlands, <sup>5</sup>Laboratory of Acoustical Wavefield Imaging, Faculty of Applied Sciences, Technical University Delft, Delft, Netherlands</p>	<p><b>P1C3-2</b> Assessment of Scoliosis Using 3D Ultrasound Volume Projection Imaging with Automatic Detection of Spine Curvature</p> <p>Guang-Qun Zhou<sup>1</sup>, Yong-Ping Zheng<sup>1</sup> <sup>1</sup>The Hong Kong Polytechnic University, Hong Kong</p>	<p><b>P1C3-10</b> 3D Contrast Ultrasound Dispersion Imaging by Mutual Information for Prostate Cancer Localization</p> <p>Stefan Schalk<sup>1</sup>, Libertario Demi<sup>1</sup>, Martijn Smeenge<sup>2</sup>, Jean de la Rosette<sup>2</sup>, Pintong Huang<sup>3</sup>, Hessel Wijkstra<sup>1,2</sup> <sup>1</sup>Biomedical Diagnostics, Eindhoven University of Technology, Eindhoven, Netherlands, <sup>2</sup>Dept. of Urology, AMC University Hospital, Amsterdam, Netherlands, <sup>3</sup>Dept. of Ultrasound, Zhejiang University School of Medicine, Zhejiang, China, People's Republic of</p>	<p><b>P1C4-6</b> Synthetic Aperture Sequential Beamforming for Phased Array Imaging</p> <p>Deep Bera<sup>1</sup>, Johan G. Bosch<sup>1</sup>, Nico de Jong<sup>1</sup>, Hendrik J. Vos<sup>1</sup> <sup>1</sup>Erasmus MC, Rotterdam, Netherlands</p>

<p><b>P1C1-4</b> An acoustical generator to induce low amplitude shear waves in the human brain</p> <p>Emmanuel Nicolas<sup>1</sup>, Samuel Callé<sup>1</sup>, <b>Jean-Pierre Remenieras<sup>1</sup></b>  <sup>1</sup>INSERM U930 - Tours University, TOURS, France</p>	<p><b>P1C2-4</b> Molecular Ultrasound Assessment of Colorectal Tumor Angiogenesis with Endoglin-targeted Contrast Microbubbles</p> <p><b>Cheng LIU<sup>1</sup></b>, Yaoheng YANG<sup>1</sup>, Zhihai QIU<sup>1</sup>, Yongmin HUANG<sup>1</sup>, Fei YAN<sup>2</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, <sup>2</sup>Paul C. Lauterbur Research Center for Biomedical Imaging, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China, People's Republic of</p>	<p><b>P1C3-3</b> Automatic Detection and Measurement of Fetal Femur Length using a Portable Ultrasound Device</p> <p><b>Naiad Hossain Khan<sup>1</sup></b>, Eva Tegnander<sup>2,3</sup>, Johan Morten Dreier<sup>2</sup>, Sturla Eik-Nes<sup>2,3</sup>, Hans Torp<sup>1</sup>, Gabriel Kiss<sup>1</sup>  <sup>1</sup>ISB, MI Lab and Department of Circulation and Medical Imaging, NTNU, Trondheim, Norway, <sup>2</sup>National Center for Fetal Medicine (NCFM), St. Olavs Hospital, Trondheim, Norway, <sup>3</sup>Department of Laboratory Medicine, Children's and Women's Health (LBK), NTNU, Trondheim, Norway</p>	<p><b>P1C3-11</b> Functional Transcranial Doppler and Cerebral Lateralization during Two Visuospatial Tasks</p> <p>Benjamin Hage<sup>1</sup>, Mohammed Alwatban<sup>1</sup>, Erin Barney<sup>1</sup>, Mark Mills<sup>2</sup>, Michael Dodd<sup>2</sup>, Edward Truemper<sup>3</sup>, <b>Gregory Bashford<sup>1</sup></b>  <sup>1</sup>Department of Biological Systems Engineering, University of Nebraska-Lincoln, Lincoln, NE, USA, <sup>2</sup>Department of Psychology, University of Nebraska-Lincoln, NE, USA, <sup>3</sup>Department of Pediatric Intensive Care, Children's Hospital &amp; Medical Center, Omaha, NE, USA</p>	<p><b>P1C4-7</b> A New Synthetic Aperture Imaging Method Using Virtual Elements on Both Transmit and Receive</p> <p><b>MooHo Bae<sup>1</sup></b>, Nam Ouk Kim<sup>1</sup>, Moon Jeong Kang<sup>1</sup>, Sung-Jae Kwon<sup>2</sup>  <sup>1</sup>Hallym University, Chuncheon, Korea, Republic of, <sup>2</sup>Daejin University, Korea, Republic of</p>
<p><b>P1C1-5</b> An Arrayed-Range-Gate Data Acquisition for Spatial Distribution Analysis of Myocardial Tissue Vibration from Stenosis in Coronary Doppler Vibrometry</p> <p><b>Daecheon Lee<sup>1</sup></b>, Sungjoo Yoo<sup>2</sup>, Dong-Bin Kim<sup>3</sup>  <sup>1</sup>Department of Electrical Engineering, Pohang University of Science and Technology, Pohang, Korea, Republic of, <sup>2</sup>Department of Computer Science and Engineering, Seoul National University, Seoul, Korea, Republic of, <sup>3</sup>Division of Cardiology, College of Medicine, The Catholic University of Korea, Seoul, Korea, Republic of</p>	<p><b>P1C2-5</b> Evaluation of Accuracy of Bolus and Burst Method for Quantitative Ultrasound Perfusion Analysis with Various Arterial Input Function Models</p> <p><b>Martin Mezl<sup>1,2</sup></b>, Radovan Jirik<sup>1,3</sup>, Karel Soucek<sup>4,5</sup>, Radim Kolar<sup>1,2</sup>  <sup>1</sup>Center for Biomedical Engineering, International Clinical Research Center, St. Anne's University Hospital Brno, Brno, Czech Republic, <sup>2</sup>Department of Biomedical Engineering, Brno University of Technology, Brno, Czech Republic, <sup>3</sup>Institute of Scientific Instruments of the ASCR, v. v. i., Brno, Czech Republic, <sup>4</sup>Department of Cytokinetics, Institute of Biophysics, Academy of Sciences of the Czech Republic, v.v.i., Brno, Czech Republic, <sup>5</sup>Center of Biomolecular and Cellular Engineering, International Clinical Research Center, St. Anne's University Hospital Brno, Brno, Czech Republic</p>	<p><b>P1C3-4</b> 3D printed phantom for high frequency ultrasound imaging</p> <p><b>Jean-Rene Jaquet<sup>1</sup></b>, Frederic Ossant<sup>1,2</sup>, franck Levassort<sup>1</sup>, Jean-Marc Gregoire<sup>1</sup>  <sup>1</sup>Université François-Rabelais de Tours, Inserm, Imagerie et Cerveau UMR U930, Tours, France, <sup>2</sup>CHRU de Tours, Tours, France, <sup>3</sup>Université François-Rabelais de Tours, GREMAN, UMR 7347 CNRS, Tours, France</p>	<p><b>Session P1C4.</b>  <b>MBB: Beamforming II</b></p> <p><b>Chair: Mingxi Wan</b>  Xi'an Jiaotong University</p>	<p><b>P1C4-8</b> Phase Aberration Correction with Adaptive Curve Fitting for Medical Ultrasound Imaging</p> <p><b>Yeokyong YOON<sup>1</sup></b>, Jinbum Kang<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>P1C1-6</b> How Calcifications Affect Shear Wave Speed Estimations? An Experimental Study</p> <p><b>Adriana Gregory<sup>1</sup></b>, Mahdi Bayat<sup>1</sup>, Max Denis<sup>1</sup>, Qiang Bo<sup>1</sup>, Mohammad Mehrmohammadi<sup>1,2</sup>, Mostafa Fatemi<sup>1</sup>, Azra Alizad<sup>1</sup>  <sup>1</sup>Physiology and Biomedical Engineering, Mayo Clinic College of Medicine, Rochester, Minnesota, USA, <sup>2</sup>Biomedical Engineering, Wayne State University, Detroit, Michigan, USA</p>	<p><b>P1C2-6</b> An ImageJ plugin for the sizing and counting of microbubbles</p> <p><b>Charles SENNOGA<sup>1</sup></b>, Emma Kanbar<sup>1</sup>, Ayache Bouakaz<sup>1</sup>  <sup>1</sup>Inserm U930, Université François-Rabelais de Tours, France</p>	<p><b>P1C3-5</b> Mobile 3D augmented reality system for ultrasound applications</p> <p><b>Gabriel Kiss<sup>1</sup></b>, Cameron Lowell Palmer<sup>1</sup>, Bjørn Olav Haugen<sup>1</sup>, Eva Tegnander<sup>2,3</sup>, Sturla H. Eik-Nes<sup>2,3</sup>, Hans Torp<sup>1</sup>  <sup>1</sup>Department of Circulation and Medical Imaging and MI Lab, Norwegian University of Science and Technology, Trondheim, Norway, <sup>2</sup>National Center for Fetal Medicine, St. Olavs Hospital, Trondheim, Norway, <sup>3</sup>Department of Laboratory Medicine, Children's and Women's Health, Norwegian University of Science and Technology, Trondheim, Norway</p>	<p><b>P1C4-1</b> Ex vivo evaluation of an eye-adapted beamforming for axial B-scans using a 20 MHz linear array</p> <p><b>Tony Matéo<sup>1</sup></b>, Yassine Mofid<sup>1</sup>, Frédéric Ossant<sup>1,2</sup>  <sup>1</sup>Imagerie et Ultrasons, UMR Inserm U930 - Université François Rabelais de Tours, Tours, France, <sup>2</sup>CHRU de Tours, Tours, France</p>	<p><b>P1C4-9</b> Multi-focus tissue harmonic images obtained with parallel transmit beamforming by means of orthogonal frequency division multiplexing</p> <p><b>Libertario Demi<sup>1</sup></b>, Gabriele Giannini<sup>2</sup>, Alessandro Ramalli<sup>2</sup>, Piero Tortoli<sup>2</sup>, Massimo Mischi<sup>1</sup>  <sup>1</sup>Biomedical Diagnostics Lab., Eindhoven University of Technology, Eindhoven, Netherlands, <sup>2</sup>Information Engineering Dept, Università degli Studi di Firenze, Firenze, Italy</p>
<p><b>P1C1-7</b> Evaluating Hepatic Fibrosis in Rat Liver by using Ultrasound Elastography: Comparison between Model-dependent and Model-independent Approaches</p> <p>Haoming Lin<sup>1</sup>, Xinyu Zhang<sup>1</sup>, <b>Xin Chen<sup>1</sup></b>, Yuanyuan Shen<sup>1</sup>, Xianfen Diao<sup>1</sup>, Chien Ting Chin<sup>1</sup>, Yi Zheng<sup>2</sup>, Yanrong Guo<sup>1</sup>, Tianfu Wang<sup>1</sup>, Siping Chen<sup>1</sup>  <sup>1</sup>Shenzhen University, Shenzhen, China, People's Republic of, <sup>2</sup>St. Cloud State University, St. Cloud, MN 56301, USA</p>	<p><b>P1C2-7</b> The evaluation system for measuring sensitivity of microbubbles to target molecules using a quartz crystal microbalance</p> <p><b>Yasuhiro Yokoi<sup>1</sup></b>, Kenji Yoshida<sup>2</sup>, Ryosuke Shimoya<sup>1</sup>, Yoshiaki Watanabe<sup>1</sup>  <sup>1</sup>Doshisha University, Japan, <sup>2</sup>Chiba University, Japan</p>	<p><b>P1C3-6</b> Feasibility of uterine speckle tracking for improved embryo implantation</p> <p><b>Massimo Mischi<sup>1</sup></b>, Nienke Kuijsters<sup>1,2</sup>, Chiara Rabotti<sup>1</sup>, Benedictus Schoot<sup>2</sup>  <sup>1</sup>Eindhoven University of Technology, Netherlands, <sup>2</sup>Catharina Ziekenhuis Eindhoven, Netherlands</p>	<p><b>P1C4-2</b> Synthetic transmit beam steering for spatial compounding applications using continuous transmit focusing</p> <p><b>David Napolitano<sup>1</sup></b>, Robert Steins<sup>1</sup>, Al Gee<sup>1</sup>, Ting-Lan Ji<sup>2</sup>, Ching-Hua Chou<sup>1</sup>, Glen McLaughlin<sup>1</sup>  <sup>1</sup>Advanced Technology, Zonare Medical Systems, Mountain View, California, USA, <sup>2</sup>Mindray, Mountain View, California, USA</p>	<p><b>P1C4-10</b> Low-complexity adaptive beamforming using autocorrelation-based generalized coherence factor</p> <p>Yong-Qi Xing<sup>1</sup>, <b>Shue-Han Jiang<sup>1</sup></b>, Gency Jeng<sup>2</sup>, Che-Chou Shen<sup>1</sup>  <sup>1</sup>Electrical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, <sup>2</sup>S-Sharp Corporation, Taiwan</p>

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<p><b>P1C4-11 Study of Phase Aberration on Coherent Plane Wave Compounding</b></p> <p>Chang-Lin Hu<sup>1,2</sup>, Meng-Lin Li<sup>1,3</sup>  <sup>1</sup>Dept. of Electrical Engineering, National Tsing Hua University, Hsinchu, Taiwan, <sup>2</sup>Industrial Technology Research Institute, Taiwan, <sup>3</sup>Institute of Photonics Technologies, National Tsing Hua University, Taiwan</p>	<p><b>P1C5-7 Histotripsy Produced by Hundreds of Microsecond Focused Ultrasound Pulses in Gels and Tissue ex vivo</b></p> <p>Yubo Guan<sup>1</sup>, Mingzhu Lu<sup>1</sup>, Yujiao Li<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>P1C6-5 Numerical Analysis of Fast and Slow Waves Backscattered from Various Depths in Cancellous Bone</b></p> <p>Atsushi Hosokawa<sup>1</sup>  <sup>1</sup>Department of Electrical and Computer Engineering, National Institute of Technology, Akashi College, Akashi, Japan</p>	<p><b>Session P1C7.</b>  <b>MSD: Novel Hardware for Ultrasound Research</b></p> <p>Chair: Andrzej Nowicki          Institute of Fundamental Technological Research</p>	<p><b>P1C7-8 A portable dual-mode ultrasound platform with multi-rail voltage power supply for adaptive diagnostic imaging and therapy sequence programming</b></p> <p>Gary Yi Hou<sup>1</sup>, Bob Uvacek<sup>1</sup>, Richard Tobias<sup>1</sup>  <sup>1</sup>Cephasonics, Santa Clara, California, USA</p>
<p><b>Session P1C5.</b>  <b>MTH: In Vitro and In Vivo Therapeutics</b></p> <p>Chair: Nobuki Kudo          Hokkaido University</p>	<p><b>P1C5-8 Motion-triggered Lesion Formation with Close-loop Control in Rats Liver In Vivo</b></p> <p>Dalong Liu<sup>1</sup>, Emad Ebbini<sup>1</sup>  <sup>1</sup>Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, USA</p>	<p><b>P1C6-6 An anisotropic bi-layered model to estimate cortical bone properties from guided-wave measurements</b></p> <p>Nicolas Bochud<sup>1</sup>, Jean-Gabriel Minonzio<sup>1</sup>, Quentin Vallet<sup>1</sup>, Pascal Laugier<sup>1</sup>  <sup>1</sup>Laboratoire d'Imagerie Biomedicale, Sorbonne Universités, UPMC Univ Paris 06, INSERM, CNRS, Paris, France</p>	<p><b>P1C7-1 FPGA Implementation of Low-Power 3D Ultrasound Beamformer</b></p> <p>Richard Sampson<sup>1</sup>, Ming Yang<sup>2</sup>, Siyuan Wei<sup>2</sup>, Rungroj Jintamethasawat<sup>3</sup>, Brian Fowlkes<sup>3</sup>, Oliver Kripfgans<sup>3</sup>, Chaitali Chakrabarti<sup>2</sup>, Thomas F. Wensich<sup>1</sup>  <sup>1</sup>Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI - Michigan, USA, <sup>2</sup>School of Electrical, Computer, and Energy Engineering, Arizona State University, Tempe, Arizona, USA, <sup>3</sup>Department of Radiology, University of Michigan, Ann Arbor, MI - Michigan, USA</p>	<p><b>P1C7-9 Mobile ultrafast ultrasound imaging system based on smartphone and tablet devices</b></p> <p>Holger Hewener<sup>1</sup>, Steffen Tretbar<sup>1</sup>  <sup>1</sup>Ultrasound, Fraunhofer IBMT, Sankt Ingbert, Germany</p>
<p><b>P1C5-1 Ultrasound stimulation of carotid baroreceptors: initial canine results</b></p> <p>Jesse Yen<sup>1</sup>, Mike Partsch<sup>2</sup>, Yu Chen<sup>1</sup>, Alejandro Covalin<sup>3</sup>  <sup>1</sup>University of Southern California, Los Angeles, CA, USA, <sup>2</sup>Accelemed, San Francisco, CA, USA, <sup>3</sup>Aridtek, CA, USA</p>	<p><b>P1C5-9 Sonogenetics Non-invasive Brain Stimulation: Examination of thermal effect of ultrasound</b></p> <p>Lili Niu<sup>1</sup>, Long Meng<sup>1</sup>, Fei Li<sup>1</sup>, Fei Yan<sup>1</sup>, Ming Qian<sup>1</sup>, Yang Xiao<sup>1</sup>, Hairong Zheng<sup>1</sup>  <sup>1</sup>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China, People's Republic of</p>	<p><b>P1C6-7 Combined Estimation of Thickness and Velocities of cortical shell using reflected waves: Study on bone phantoms and samples</b></p> <p>Jerzy Litniewski<sup>1</sup>, Yuriy Tasinkevych<sup>1</sup>, Jerzy Podhajecki<sup>1</sup>, Katarzyna Falinska<sup>1</sup>  <sup>1</sup>Institute of Fundamental Technological Research, Poland</p>	<p><b>P1C7-2 A FPGA-Based Multi-Channel Analog Front-End Device for High-Frequency Ultrasound Plane Wave Imaging System</b></p> <p>Po-Yang Lee<sup>1</sup>, Hao-Li Liu<sup>2</sup>, Chih-Chung Huang<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, Taiwan, <sup>2</sup>Department of Electrical Engineering, Chang Gung University, Taiwan</p>	<p><b>P1C7-10 Real Time Imaging System using a 12-MHz Forward Looking Catheter with Single Chip CMUT-on-CMOS Array</b></p> <p>Coskun Tekes<sup>1</sup>, Thomas M. Carpenter<sup>1</sup>, Toby Xu<sup>1</sup>, Sebastian Bette<sup>2</sup>, Uwe Schnakenberg<sup>2</sup>, David Cowell<sup>3</sup>, Steven Freear<sup>3</sup>, Ozgur Kocaturk<sup>4</sup>, Robert J. Lederman<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, <sup>2</sup>Institute of Materials in Electrical Engineering, RWTH Aachen University, Aachen, Germany, <sup>3</sup>School of Electronic and Electrical Engineering, University of Leeds, Leeds, United Kingdom, <sup>4</sup>Division of Intramural Research, National Institute of Health, Bethesda, Maryland, USA</p>
<p><b>P1C5-2 Pulsed high-intensity focused ultrasound exposure decreases shear wave speed of rabbit's Achilles tendons</b></p> <p>Chia-Lun Yeh<sup>1</sup>, Pa-Chi Li<sup>1</sup>, Po-Ling Kuo<sup>2,3</sup>  <sup>1</sup>Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University, Taipei, Taiwan, <sup>2</sup>Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan, <sup>3</sup>Department of Rehabilitation, National Taiwan University Hospital, Taipei, Taiwan</p>	<p><b>Session P1C6.</b>  <b>MTC: Bone</b></p> <p>Chair: Mami Matsukawa          Doshisha University</p>	<p><b>P1C6-8 Clinical study of multisite axial transmission measurements in postmenopausal women using optimized first arriving signal velocity measurements</b></p> <p>Johannes Schneider<sup>1</sup>, Jean-Gabriel Minonzio<sup>2</sup>, Timo Zippelius<sup>3</sup>, Peter Varga<sup>1</sup>, Patrick Strube<sup>4</sup>, Pascal Laugier<sup>2</sup>, Kay Raum<sup>1</sup>  <sup>1</sup>BCRT, Charité Universitätsmedizin Berlin, Berlin, Germany, <sup>2</sup>Laboratoire d'Imagerie Biomedicale, Université Pierre et Marie Curie, Paris, France, <sup>3</sup>CMSC, Charité Universitätsmedizin Berlin, Germany, <sup>4</sup>CMSC, Charité Universitätsmedizin Berlin, Berlin, Germany</p>	<p><b>P1C7-3 A FPGA-based Wearable Ultrasound Device for Monitoring Obstructive Sleep Apnea Syndrome</b></p> <p>Chi-Kai Weng<sup>1</sup>, Jeng-Wen Chen<sup>2</sup>, Chih-Chung Huang<sup>1</sup>  <sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, Taiwan, <sup>2</sup>Department of Otolaryngology Head and Neck Surgery, Cardinal Tien Hospital, Taiwan</p>	<p><b>P1C7-11 Characterization of the STHV748 integrated pulser for generating push sequences</b></p> <p>Mateusz Walczak<sup>1</sup>, Beata Witek<sup>1</sup>, Marcin Lewandowski<sup>1</sup>  <sup>1</sup>Institute of Fundamental Technological Research, Polish Academy of Sciences, Poland</p>

<p><b>P1C5-3</b> Optically Transparent and Acoustically Scattering Bovine Serum Albumin Gel Phantoms for Therapeutic Ultrasound Dosimetry</p> <p>Rei Asami<sup>1</sup>, Takashi Maruoka<sup>1</sup>, Kenichi Kawabata<sup>1</sup> <sup>1</sup>Hitachi, Ltd, Japan</p>	<p><b>P1C6-1</b> Noninvasive Bone Assessment Using Ultrasound Radiation Force</p> <p>Max Denis<sup>1</sup>, Mostafa Fatemi<sup>1</sup>, Azra Alizad<sup>1,2</sup> <sup>1</sup>Department of Physiology and Biomedical Engineering, Mayo College of Medicine, Rochester, MN, USA, <sup>2</sup>Department of Internal Medicine, Mayo College of Medicine, Rochester, MN, USA</p>	<p><b>P1C6-9</b> Hypersonic wave velocity in drying collagen film with AGE crosslinks</p> <p>Yuki Imoto<sup>1</sup>, Shinji Takayanagi<sup>1</sup>, Mitsuru Saito<sup>2</sup>, Keishi Marumo<sup>2</sup>, Mami Matsukawa<sup>1</sup> <sup>1</sup>Wave Electronics Research Center, Doshisha University, Kyotanabe Kyoto, Japan, <sup>2</sup>Department of Orthopaedic Surgery, Jikei University School of Medicine, Tokyo, Japan</p>	<p><b>P1C7-4</b> HD-PULSE: High channel Density Programmable Ultrasound System based on consumer Electronics</p> <p>Alejandra Ortega<sup>1</sup>, David Lines<sup>2</sup>, João Pedrosa<sup>1</sup>, Bidisha Chakraborty<sup>1</sup>, Hans Gasser<sup>2</sup>, Jan D'hooge<sup>1</sup> <sup>1</sup>Department of Cardiovascular Sciences, KU Leuven, Leuven, Belgium, <sup>2</sup>Diagnostic Sonar Ltd., Livingston, United Kingdom</p>	<p><b>Session P2C1. Microfluidics</b></p> <p>Chair: David Greve Carnegie Mellon University</p>
<p><b>P1C5-4</b> Ex-vivo Perfused Swine Kidney Simulating in FUS Therapy</p> <p>Jiaqiu Wang<sup>1</sup>, Xu Xiao<sup>1</sup>, Robyn Duncan<sup>2</sup>, Helen McLeod<sup>3</sup>, Benjamin Cox<sup>4</sup>, Andreas Melzer<sup>1</sup> <sup>1</sup>Institute for Medical Science and Technology, University of Dundee, Dundee, United Kingdom, <sup>2</sup>Centre for Anatomy and Human Identification, University of Dundee, Dundee, United Kingdom, <sup>3</sup>Division of Cardiovascular &amp; Diabetes Medicine, University of Dundee, Dundee, United Kingdom, <sup>4</sup>Division of Imaging &amp; Technology, University of Dundee, Dundee, United Kingdom</p>	<p><b>P1C6-2</b> High-frequency backscatter measurements reveals large basic multicellular units in in cortical bone</p> <p>Adeline Bourgnon<sup>1</sup>, Kay Raum<sup>1</sup> <sup>1</sup>Charité-Universitätsmedizin Berlin, Germany</p>	<p><b>P1C6-10</b> Ultrasound radiation from bone transducer in the MHz range</p> <p>Sayaka Matsukawa<sup>1</sup>, Hiroko Tsuneda<sup>1</sup>, Isao Mano<sup>1</sup>, Katsunori Mizuno<sup>2</sup>, Takahiko Yanagitani<sup>3</sup>, Shinji Takayanagi<sup>1</sup>, Mami Matsukawa<sup>1</sup> <sup>1</sup>Doshisha University, Japan, <sup>2</sup>University of Tokyo, Japan, <sup>3</sup>Waseda University, Japan</p>	<p><b>P1C7-5</b> Smartphone-based Portable Ultrasound Imaging System: Prototype Implementation and Evaluation</p> <p>Sewoong Ahn<sup>1</sup>, Jeeun Kang<sup>1</sup>, Pilsu Kim<sup>1</sup>, Gunho Lee<sup>1</sup>, Eunji Jung<sup>1</sup>, Woojin Jung<sup>1</sup>, Minsuk Park<sup>1</sup>, Tai-kyong Song<sup>1</sup> <sup>1</sup>Department of Electronic Engineering, Sogang University, Seoul, Korea, Republic of</p>	<p><b>P2C1-1</b> Measurement of Very Low Concentration of Microparticles in Fluid by Single Particle Detection using Acoustic Radiation Force Induced Particle Motion</p> <p>John Lee<sup>1</sup>, Javier Jimenez<sup>2</sup>, Ian R. Butterworth<sup>2</sup>, Carlos Castro-González<sup>2</sup>, Shiva K. Shukla<sup>3</sup>, Berta Marti-Fuster<sup>2</sup>, Luis Elvira<sup>2</sup>, Duane S. Boning<sup>1</sup>, Brian W. Anthony<sup>1</sup> <sup>1</sup>Massachusetts Institute of Technology, Cambridge, MA, USA, <sup>2</sup>Madrid-MIT M+ Vision Consortium, Massachusetts Institute of Technology, Cambridge, MA, USA, <sup>3</sup>Instituto de Tecnologías Físicas y de la Información (CSIC), Madrid, Spain</p>
<p><b>P1C5-5</b> Neuronavigation-Guided Focused Ultrasound-Induced Blood-Brain Barrier Opening: Feasibility When Considering The Human Skull</p> <p>Meng-Yen Tsai<sup>1</sup>, Po-Chun Chu<sup>1</sup>, Hong-Li Wang<sup>2</sup>, Hao-Li Liu<sup>1</sup> <sup>1</sup>Department of Electrical Engineering, Chang Gung University, Tao-Yuan, Taiwan, <sup>2</sup>School of Information and Electronic Engineering, Zhejiang Gongshang University, Hangzhou, China, People's Republic of</p>	<p><b>P1C6-3</b> Sensitivity analysis of leaky-Lamb modes to the thickness and material properties of cortical bone with soft tissue: a semi-analytical finite-element (SAFE) based simulation study</p> <p>Tho N.H.T. Tran<sup>1</sup>, Lawrence H. Le<sup>1,2</sup>, Vu-Hieu Nguyen<sup>3</sup>, Kim-Cuong T. Nguyen<sup>1,4</sup>, Mauricio D. Sacchi<sup>2</sup> <sup>1</sup>Department of Radiology and Diagnostic Imaging, University of Alberta, Canada, <sup>2</sup>Department of Physics, University of Alberta, Canada, <sup>3</sup>Laboratoire Modélisation et Simulation Multi Echelle UMR 8208 CNRS, Université Paris Est, France, <sup>4</sup>Department of Dentistry, University of Alberta, Canada</p>	<p><b>P1C6-11</b> An optimization method for pairing in-vivo guided wave measurements with theoretical Rayleigh-Lamb modes</p> <p>Nicolas Bochud<sup>1</sup>, Jean-Gabriel Minonzio<sup>1</sup>, Quentin Vallet<sup>1</sup>, Pascal Laugier<sup>1</sup> <sup>1</sup>Laboratoire d'Imagerie Biomedicale, Sorbonne Universités, UPMC Univ Paris 06, INSERM, CNRS, Paris, France</p>	<p><b>P1C7-6</b> A Cost-effective Portable Ultrasound Imaging System with Wireless Connection</p> <p>Heyuan Qiao<sup>1</sup>, Bingjing Zhao<sup>2</sup> <sup>1</sup>School of Medical Engineering, Hefei University of Technology, Hefei, Anhui, China, People's Republic of, <sup>2</sup>Anhui University, Hefei, Anhui, China, People's Republic of</p>	<p><b>P2C1-2</b> Investigation of surface-acoustic-wave atomization using Phase Doppler Anemometry</p> <p>Taiki Hiromoto<sup>1</sup>, Motoaki Hara<sup>1</sup>, Taku Kudo<sup>2</sup>, Hideaki Kobayashi<sup>2</sup>, Hiroki Kuwano<sup>1</sup> <sup>1</sup>Graduate school of Engineering, Tohoku University, Japan, <sup>2</sup>Institute of Fluid Science, Tohoku University, Japan</p>
<p><b>P1C5-6</b> Ultrasonic Monitoring of Cavitation Bubbles Induced by High-Intensity Focused Ultrasound in Gel Phantom Containing Thin Layer of Graphite Gel</p> <p>Kei Taguchi<sup>1</sup>, Ryo Takagi<sup>1</sup>, Jun Yasuda<sup>2</sup>, Shin Yoshizawa<sup>2</sup>, Shin-ichiro Umemura<sup>1</sup> <sup>1</sup>Biomedical Engineering, Tohoku University, Sendai, Japan, <sup>2</sup>Communication Engineering, Tohoku University, Sendai, Japan</p>	<p><b>P1C6-4</b> Axial Transmission Measurements in Cortical Bone: A Comparison between Linear Radon Transform and SVD-based Approaches</p> <p>Kailiang Xu<sup>1,2</sup>, Jean-Gabriel Minonzio<sup>2</sup>, Dean Ta<sup>1</sup>, Bo Hu<sup>1</sup>, Weiqi Wang<sup>1</sup>, Pascal Laugier<sup>2</sup> <sup>1</sup>Department of Electronic Engineering, Fudan University, Shanghai, China, People's Republic of, <sup>2</sup>Laboratoire d'Imagerie Biomedicale, UMR CNRS 7371 - INSERM U1146 - UPMC, Paris, France</p>	<p><b>P1C6-12</b> Identifying novel clinical surrogates to assess the strength of human bones: An ex vivo study.</p> <p>Quentin Vallet<sup>1</sup>, Jean-Gabriel Minonzio<sup>1</sup>, Nicolas Bochud<sup>1</sup>, Johann Bala<sup>2</sup>, François Duboef<sup>3</sup>, Rémy Gauthier<sup>1</sup>, Edison Zapata<sup>3,4</sup>, Hélène Follet<sup>3</sup>, David Mitton<sup>1</sup>, Pascal Laugier<sup>1</sup> <sup>1</sup>Laboratoire d'Imagerie Biomedicale, Sorbonne Universités, UPMC Univ Paris 06, INSERM, CNRS, Paris, France, <sup>2</sup>Laboratoire Vibrations Acoustique, INSA Lyon, Villeurbanne, France, <sup>3</sup>INSERM UMR 1033, Université de Lyon, Université Claude Bernard Lyon 1, Lyon, France, <sup>4</sup>IFSTAR, UMR_T9406, LBMC, Université de Lyon, Université Claude Bernard Lyon 1, Lyon, France</p>	<p><b>P1C7-7</b> Color Doppler Imaging on a Smartphone-based Portable US System: Preliminary Study</p> <p>Eunji Jeong<sup>1</sup>, Sua Bae<sup>1</sup>, Minsuk Park<sup>1</sup>, Woojin Jung<sup>1</sup>, Jeeun Kang<sup>1</sup>, Tai-kyong Song<sup>1</sup> <sup>1</sup>Department of Electronic Engineering, Sogang University, Korea, Republic of</p>	<p><b>P2C1-3</b> The Plate Acoustic Wave Sensor for Detection of Bacterial Cells in Liquid Phase</p> <p>Irina Borodina<sup>1</sup>, Boris Zaitsev<sup>1</sup>, Andrey Teplykh<sup>1</sup>, Alexander Shikhabudinov<sup>1</sup>, Iren Kuznetsova<sup>2</sup>, Olga Guliy<sup>3</sup>, Andrey Smirnov<sup>4</sup> <sup>1</sup>Saratov Branch, Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russian Federation, <sup>2</sup>Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russian Federation, <sup>3</sup>Institute of Biochemistry &amp; Physiology of Plants &amp; Microorganisms RAS, Russian Federation, <sup>4</sup>Saratov State University, Russian Federation</p>

8:00 am - 5:00 pm

Poster --- Saturday, October 24, 2015

4th floor

<p><b>P2C1-4 Particle Size of Non-Contact Atomization of Low Surface Tension Liquid by Powerful Aerial Ultrasonic.</b></p> <p>Arisa Endo<sup>1</sup>, Takuya Asami<sup>1</sup>, Takashi Ono<sup>1</sup>, Hikaru Miura<sup>1</sup>  <sup>1</sup>College of Science &amp; Technology, Nihon University, Tokyo, Japan</p>	<p><b>Session P2C3. Sensing and Energy Harvesting</b></p> <p><i>Chair: Pierre Khuri-Yakub Stanford University</i></p>	<p><b>P3C1-1 c-axis parallel polarity inverted multilayer ZnO film resonators fabricated by grazing ion beam assisted RF magnetron sputtering</b></p> <p>Takeshi Mori<sup>1</sup>, Takahiko Yanagitani<sup>2</sup>, Masashi Suzuki<sup>1</sup>  <sup>1</sup>Nagoya Institute of Technology, Japan, <sup>2</sup>Waseda University, Tokyo, Japan</p>	<p><b>P3C3-2 Study on Achievement of Simultaneous X, Y Movements and Theta Rotation Using Straight-Move Ultrasonic Vibrators</b></p> <p>Toshiaki Sakayachi<sup>1</sup>, Yusuke Nagira<sup>1</sup>, Mitsutaka Hikita<sup>1</sup>  <sup>1</sup>Department of GE, Kogakuin University, Tokyo, Japan</p>	<p><b>Session P5C2. Transducer for Imaging and Diagnosis</b></p> <p><i>Chair: Christine Démoré University of Dundee</i></p>
<p><b>Session P2C2. Transducers and Wave Generation</b></p> <p><i>Chair: Kentaro Nakamura Tokyo Institute of Technology</i></p>	<p><b>P2C3-1 Study on Movement Detection in Care Environment Using Precise Ultrasonic Distance Measurement at 40 kHz Installed in Sensor Network</b></p> <p>Yukari Kaneda<sup>1</sup>, Takeo Sato<sup>1</sup>, Mitsutaka Hikita<sup>1</sup>  <sup>1</sup>Department of GE, Kogakuin University, Tokyo, Japan</p>	<p><b>P3C1-2 Shear mode properties of c-axis parallel oriented Sc<sub>x</sub>Al<sub>1-x</sub>N films grown by RF bias sputtering</b></p> <p>Shinji Takayanagi<sup>1</sup>, Takahiko Yanagitani<sup>2</sup>, Mami Matsukawa<sup>1</sup>  <sup>1</sup>Doshisha University, Kyotanabe, Japan, <sup>2</sup>Waseda University, Tokyo, Japan</p>	<p><b>P3C3-3 An ultrasonic motor using transmission line and horn with oblique slits driven by a Langevin transducer.</b></p> <p>Takaaki Ishii<sup>1</sup>, Souichiro Takehana<sup>1</sup>, Tsuyoshi Shimizu<sup>1</sup>  <sup>1</sup>Mechatronics, University of Yamanashi, Kofu, Yamanashi, Japan</p>	<p><b>P5C2-1 Acoustic Characterisation of a PZT Matrix With Integrated Electronics for a 3D-TEE Probe</b></p> <p>Shreyas Raghunathan<sup>1</sup>, Chao Chen<sup>2</sup>, Maysam Shabanmoghlagh<sup>1</sup>, Zhao Chen<sup>2</sup>, Sandra Blaak<sup>3</sup>, Zili Yu<sup>2</sup>, Christian Prins<sup>3</sup>, Michiel Pertijs<sup>2</sup>, Johan Bosch<sup>4</sup>, Nico de Jong<sup>1,4</sup>, Martin Verweij<sup>1,4</sup>  <sup>1</sup>Lab of Acoustic Wavefield Imaging, Delft University of Technology, Netherlands, <sup>2</sup>Electronic Instrumentation Lab., Delft University of Technology, Netherlands, <sup>3</sup>Oldelft Ultrasound, Netherlands, <sup>4</sup>Dept. of Biomedical Engineering, Erasmus Medical Centre, Netherlands</p>
<p><b>P2C2-1 Study of ultrasonic machining using longitudinal and torsional vibration</b></p> <p>Takuya Asami<sup>1</sup>, Hikaru Miura<sup>1</sup>  <sup>1</sup>College of Science &amp; Technology, Nihon University, Chiyoda-ku, Tokyo, Japan</p>	<p><b>P2C3-2 Research on Improving the Sensitivity of SAW/GC Gas Sensors</b></p> <p>Jiuling Liu<sup>1</sup>, Minghua Liu<sup>1</sup>, Shitang He<sup>1</sup>  <sup>1</sup>Institute of Acoustics, Chinese Academy of Sciences, Beijing, China, People's Republic of</p>	<p><b>P3C1-3 Measurement of acoustic wave velocity and refractive index in thickness direction of c-axis oriented ScAlN films by Brillouin scattering</b></p> <p>Shota Tomita<sup>1</sup>, Takahiko Yanagitani<sup>2</sup>, Masashi Suzuki<sup>2</sup>, Hayato Ichihashi<sup>1</sup>, Shinji Takayanagi<sup>1</sup>, Mami Matsukawa<sup>1</sup>  <sup>1</sup>Doshisha University, Kyotanabe, Kyoto, Japan, <sup>2</sup>Waseda University, Okubo Shinjuku, Tokyo, Japan</p>	<p><b>P3C3-4 An ultrasonic motor using transmission line and spiral structure driven by a Langevin transducer.</b></p> <p>Takaaki Ishii<sup>1</sup>, Masaki Mochizuki<sup>1</sup>, Tsuyoshi Shimizu<sup>1</sup>  <sup>1</sup>Mechatronics, University of Yamanashi, Kofu, Yamanashi, Japan</p>	<p><b>P5C2-2 Dual frequency IVUS array for contrast enhanced intravascular ultrasound imaging</b></p> <p>Zhuochen Wang<sup>1</sup>, Wenbin Huang<sup>1</sup>, Karl Heath Martin<sup>2</sup>, Paul A. Dayton<sup>2</sup>, Xiaoning Jiang<sup>1</sup>  <sup>1</sup>North Carolina State University, USA, <sup>2</sup>University of North Carolina, USA</p>
<p><b>P2C2-2 ScAlN thin film transducers for ultrasonic microscopy in the VHF range</b></p> <p>Yusuke Korai<sup>1</sup>, Masashi Suzuki<sup>2</sup>, Takahiko Yanagitani<sup>2,3</sup>  <sup>1</sup>Hitachi, Ltd., Hitachi, Japan, <sup>2</sup>Nagoya Institute of Technology, Japan, <sup>3</sup>Waseda University, Japan</p>	<p><b>P2C3-3 Powering autonomous wireless sensors with miniaturized piezoelectric based energy harvesting devices for NDT applications</b></p> <p>Claire Bantignies<sup>1</sup>, Thien Hoang<sup>1</sup>, Hung Le Khanh<sup>1</sup>, Guillaume Ferin<sup>1</sup>, Etienne Flesch<sup>1</sup>, An Nguyen-Dinh<sup>1</sup>  <sup>1</sup>Advanced Research Dpt., VERMON, France</p>	<p><b>Session P3C2. Nonlinear Acoustics II</b></p> <p><i>Chair: John Larson Avago Technologies</i></p>	<p><b>P3C3-5 Precise Positioning Characteristics of Multi-Mode Ultrasonic Motor</b></p> <p>Masaya Takasaki<sup>1</sup>, Shuo Zhang<sup>1</sup>, Masayuki Hara<sup>1</sup>, Daisuke Yamaguchi<sup>1</sup>, Yuji Ishino<sup>1</sup>, Takeshi Mizuno<sup>1</sup>  <sup>1</sup>Dept. Mechanical Eng., Saitama University, Saitama, Japan</p>	<p><b>P5C2-3 A simulation frame work to optimize volumetric cardiac imaging on a multiplexed system</b></p> <p>Carolina Vallecilla<sup>1</sup>, Alejandra Ortega<sup>1</sup>, Martino Alessandrini<sup>1</sup>, Jan D'hooge<sup>1</sup>  <sup>1</sup>Cardiovascular Imaging and Dynamics, KU Leuven, Leuven, Belgium</p>

<p><b>P2C2-3 Source Location Techniques in Plate-like Structures based on Fiber Coupler Sensors</b></p> <p>Fengmei Li<sup>1</sup>, Yiyang Liu<sup>1</sup>, Linjie Wang<sup>1</sup>, Zhenyu Zhao<sup>1</sup>  <sup>1</sup><i>Xi'an jiaotong university, China, People's Republic of</i></p>	<p><b>P2C3-4 3D Ultrasound Palmprint recognition system based on a mechanically tilted linear probe</b></p> <p>Antonio Iula<sup>1</sup>, Donatella Nardiello<sup>1</sup>, Alessandro Ramalli<sup>2</sup>, Francesco Guidi<sup>2</sup>  <sup>1</sup><i>University of Basilicata, Potenza, Italy;</i> <sup>2</sup><i>University of Firenze, Italy</i></p>	<p><b>P3C2-1 Nonlinear elastic properties of the interface solid - granular unconsolidated media</b></p> <p>Natalia Shirgina<sup>1</sup>, Aleksey Kokshaiskiy<sup>1</sup>, Alexandr Korobov<sup>1</sup>  <sup>1</sup><i>Department of Physics, M.V. Lomonosov Moscow State University, Moscow, Russian Federation</i></p>	<p><b>P3C3-6 Research on a vibration induced low friction pneumatic actuator with radial-direction vibration mode</b></p> <p>Han Gao<sup>1</sup>, Jun Wang<sup>2</sup>, Marius Nabuurs<sup>2</sup>, Jun Qian<sup>2</sup>, Gang Bao<sup>1</sup>, Michaël De Volder<sup>2</sup>, Dominiek Reynaerts<sup>2</sup>  <sup>1</sup><i>Harbin Institute of Technology, China, People's Republic of;</i> <sup>2</sup><i>Katholieke Universiteit Leuven, Belgium</i></p>	<p><b>P5C2-4 Press-focused 226MHz Ultrahigh Frequency Ultrasound Transducer for Programmable Particle Manipulation</b></p> <p>Ming Qian<sup>1</sup>, Ying Li<sup>2</sup>, Qifa Zhou<sup>2</sup>, K. Kirk Shung<sup>2</sup>, Hairong Zheng<sup>1</sup>  <sup>1</sup><i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China, People's Republic of;</i> <sup>2</sup><i>NIH Ultrasonic Transducer Resource Center and Department of Biomedical Engineering, University of Southern California, USA</i></p>
<p><b>P2C2-4 Research on ultrasonic detection method of fuel tank leakage</b></p> <p>Hua Xue<sup>1</sup>, Di Wu<sup>1</sup>, Yongping Teng<sup>1</sup>, Yaping Wang<sup>1</sup>, Zhenning Zhao<sup>1</sup>  <sup>1</sup><i>Beijingjiaotong University, China, People's Republic of</i></p>	<p><b>P2C3-5 A three-dimensional, wideband vibration energy harvester using magnetostrictive/piezoelectric composite transducer</b></p> <p>Jin Yang<sup>1</sup>, Qiangmo Yu<sup>2</sup>, Jiangxin Zhao<sup>2</sup>, Nian Zhao<sup>2</sup>, Yumei Wen<sup>2</sup>, Ping Li<sup>2</sup>  <sup>1</sup><i>Chongqing University, Shapingba, Chongqing, China, People's Republic of;</i> <sup>2</sup><i>Chongqing University, China, People's Republic of</i></p>	<p><b>P3C2-2 Influence of transmission-reception characteristics of ultrasound transducers on statistics of echoes from nonhomogeneous media</b></p> <p>Norbert Zolek<sup>1</sup>, Janusz Wojcik<sup>1</sup>, Marcin Lewandowski<sup>1</sup>  <sup>1</sup><i>Institute of Fundamental Technological Research, Warsaw, Poland</i></p>	<p><b>Session P5C1. Front-end and Integrated Electronics</b></p> <p><i>Chair: Christine Démoré University of Dundee</i></p>	<p><b>P5C2-5 The Effect of the Transducer Parameters on Spatial Resolution in Plane-Wave Imaging</b></p> <p>Zainab Alomari<sup>1,2</sup>, Sevan Harput<sup>2</sup>, Safeer Hyder<sup>2</sup>, Steven Freear<sup>2</sup>  <sup>1</sup><i>Electronics Engineering College, Mosul University, Mosul, Iraq;</i> <sup>2</sup><i>School of Electronic and Electrical Engineering, University of Leeds, Leeds, United Kingdom</i></p>
<p><b>P2C2-5 Ultrasonic phased array on the inner surface of circular stage for detecting the circumferential flaw in a pipe</b></p> <p>Zhongcun Guo<sup>1</sup>, Yitao Tan<sup>1</sup>, Fangfang Shi<sup>1</sup>, Bixing Zhang<sup>1</sup>, Junjie Gong<sup>1</sup>  <sup>1</sup><i>State Key Laboratory of Acoustics, Institute of Acoustics, Chinese Academy of Sciences, China, People's Republic of</i></p>	<p><b>P2C3-6 A Resonant Sensor for Liquid Density Measurement Based on a Piezoelectric Bimorph</b></p> <p>Nicola Lamberti<sup>1</sup>, Monica La Mura<sup>1</sup>, Valerio Apuzzo<sup>1</sup>, Pasquale D'Uva<sup>1</sup>, Alessandra Casella<sup>1</sup>, Giosuè Caliano<sup>2</sup>, Alessandro Stuart Savoia<sup>2</sup>  <sup>1</sup><i>DIIn, University of Salerno, Fisciano, Italy;</i> <sup>2</sup><i>Dept. of Engineering, University Roma Tre, Rome, Italy</i></p>	<p><b>Session P3C3. Ultrasonic Motors &amp; Actuators</b></p> <p><i>Chair: John Larson Avago Technologies</i></p>	<p><b>P5C1-1 A feasibility study for arbitrary waveform generator using on-off pulses and modified PWM waveforms in the front-end circuit integrated with 2D array transducer</b></p> <p>Bae-Hyung Kim<sup>1</sup>, Seungheun Lee<sup>1</sup>, Kangsik Kim<sup>1</sup>  <sup>1</sup><i>Ultrasound R&amp;D Group, Samsung Electronics Co., Ltd., Seoul, Korea, Republic of</i></p>	<p><b>P5C2-6 Fabrication and Characterisation of Miniature Parabolic Acoustic Lenses</b></p> <p>Erwin J Alles<sup>1</sup>, Daniil Nikitichev<sup>1</sup>, Adrien E Desjardins<sup>1</sup>  <sup>1</sup><i>Department of Medical Physics &amp; Biomedical Engineering, University College London, London, United Kingdom</i></p>
<p><b>P2C2-6 Flexible Ultrasonic Transducers for Transverse Horizontal Guided Waves in Structures</b></p> <p>Ching-Chung Yin<sup>1</sup>, Wei-Che Tsai<sup>1</sup>  <sup>1</sup><i>Department of Mechanical Engineering, National Chiao Tung University, Hsinchu, Taiwan</i></p>	<p><b>Session P3C1. Thin Films</b></p> <p><i>Chair: John Larson Avago Technologies</i></p>	<p><b>P3C3-1 Ultra femto-liter mist generation using surface acoustic wave device for sterilization and eradication in the atmosphere</b></p> <p>Tatsuya Sugiyama<sup>1</sup>, Takashi Kimura<sup>1</sup>, Jun Kondoh<sup>1</sup>  <sup>1</sup><i>Shizuoka University, Hamamatsu-shi, Japan</i></p>	<p><b>P5C1-2 Real time autofocusing hardware for ultrasonic imaging with interfaces</b></p> <p>Jorge F. Cruza<sup>1</sup>, Luis Medina-Valdes<sup>1</sup>, Carlos Fritsch<sup>1</sup>  <sup>1</sup><i>Ultrasonic Systems Group, Spanish National Research Council (CSIC), Madrid, Madrid, Spain</i></p>	<p><b>P5C2-7 Design of linear array transducer using inversion layer for ultrasound harmonic imaging</b></p> <p>Chan Yuk Park<sup>1</sup>, Jin Ho Sung<sup>1</sup>, Jong Seob Jeong<sup>1</sup>  <sup>1</sup><i>Medical Biotechnology, Dongguk University, Gyeonggi-do, Korea, Republic of</i></p>

8:00 am - 5:00 pm

Poster --- Saturday, October 24, 2015

4th floor

**P5C2-8 Non-Elevation-Focused Probe (NEFP) Designed for Pure Plane-wave Ultrasound Imaging**

Congzhi Wang<sup>1</sup>, Ning Guo<sup>1</sup>, Yang Xiao<sup>1</sup>, Weibao Qiu<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

**P5C3-3 Study of Ultrasound Transducer Which Produces Second Harmonic Superimposed Signal**

Zulfadhli Zaini<sup>1</sup>, Hayato Jimbo<sup>1</sup>, Ryo Takagi<sup>1</sup>, Shin Yoshizawa<sup>1</sup>, Shin-ichiro Umemura<sup>1</sup>  
<sup>1</sup>Tohoku University, Japan

**P5C2-9 An Integrated Convex Ultrasound Endoscope for Digestive Tract Imaging**

Jue PENG<sup>1,2</sup>, Zhifei Qin<sup>1,2</sup>, Xiaojian PENG<sup>1,2</sup>, Tianfu WANG<sup>1,2</sup>, Siping CHEN<sup>1,2</sup>  
<sup>1</sup>Department of Biomedical Engineering, School of Medicine, Shenzhen University, National-Regional Key Technology Engineering Laboratory for Medical Ultrasound, Shenzhen, China, People's Republic of, <sup>2</sup>Department of Biomedical Engineering, School of Medicine, Shenzhen University, Guangdong Key Laboratory for Biomedical Measurements and Ultrasound Imaging, Shenzhen, China, People's Republic of

**P5C2-10 Fabrication and Performance of a Micro 50-MHz IVUS Transducer Based on a 1-3 Composite with Geometric Focusing**

Xiaohua Jian<sup>1</sup>, Zhile Han<sup>1</sup>, Weiwei Shao<sup>1</sup>, Zhangjian Li<sup>1</sup>, Yaoyao Cui<sup>1</sup>  
<sup>1</sup>Suzhou Institute of Biomedical Engineering and Technology, CAS, Suzhou, China, People's Republic of

**P5C2-11 Evaluation of piezo composite based omnidirectional single fibre transducers for 3D USCT**

Michael Zapf<sup>1</sup>, Kai Hohlfeld<sup>2</sup>, Gourav Shah<sup>1</sup>, Sylvia Gebhardt<sup>2</sup>, Hartmut Gemmeke<sup>1</sup>, Alexander Michaelis<sup>2,3</sup>, Nicole V. Rüter<sup>1</sup>  
<sup>1</sup>Institute for Data Processing and Electronics, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany, <sup>2</sup>Institute of Materials Science, TU Dresden, Dresden, Germany, <sup>3</sup>IKTS, Fraunhofer Institute, Dresden, Germany

<p><b>P5C2-12 Quantifying the effect of dicing on element vibration in ultrasound transducers</b></p> <p><b>Jovana Janjic</b><sup>1</sup>, Maysam Shabanimotlagh<sup>2</sup>, Martin D. Verweij<sup>1,2</sup>, Nico de Jong<sup>1,2</sup>, Gijs van Soest<sup>1</sup>, Antonius F.W. van der Steen<sup>1,2</sup>  <sup>1</sup>Dept. of Biomedical Engineering, Erasmus MC, Rotterdam, Netherlands, <sup>2</sup>Lab. of Acoustical Wavefield Imaging, Delft University of Technology, Delft, Netherlands</p>				
<p><b>Session P5C3.</b>  <b>Transducers for Therapy</b></p> <p><i>Chair:</i> <b>Christine Démoré</b>  University of Dundee</p>				
<p><b>P5C3-1 Design and fabrication of a novel three-row dual frequency ultrasound transducer for image-guided drug delivery</b></p> <p>Min Su<sup>1</sup>, Shu Xue<sup>1</sup>, Yongchuan Li<sup>1</sup>, Lili Niu<sup>1</sup>, Weibao Qiu<sup>1</sup>, Yang Xiao<sup>1</sup>, Congzhi Wang<sup>1</sup>, Hairong Zheng<sup>1</sup>, <b>Ming Qian</b><sup>1</sup>  <sup>1</sup>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China, People's Republic of</p>				
<p><b>P5C3-2 Sparse spherical HIFU arrays based on Fermat's Spiral</b></p> <p>Mario Ries<sup>1</sup>, Martijn de Greef<sup>1</sup>, <b>Pascal Ramaekers</b><sup>1</sup>, Chrit Moonen<sup>1</sup>  <sup>1</sup>Imaging Division, University Medical Center Utrecht, Netherlands</p>				