

2009 IEEE International Ultrasonics Symposium

**Rome, Italy
20-23 September 2009**

Pages 1-910



**IEEE Catalog Number: CFP09ULT-PRT
ISBN: 978-1-4244-4389-5**

TABLE OF CONTENTS

Intravascular Ultrasound Detection and Delivery of Molecularly Targeted Microbubbles for Gene Delivery	1
<i>Linsey C. Phillips, Alexander L. Klibanov, Brian R. Wamhoff, John A. Hossack</i>	
Nanoparticle-Loaded Perfluorocarbon Droplets for Imaging and Therapy	5
<i>Naomi Matsuura, Ross Williams, Ivan Gorelikov, Joydeep Chaudhuri, John Rowlands, Kullervo Hynynen, Stuart Foster, Peter Burns, Nikita Resnik</i>	
Radiation Force-Enhanced Targeted Imaging and Near Real-Time Molecular Imaging Using a Dual-Frequency High-Resolution Transducer: In-Vitro and In-Vivo Results	9
<i>Ryan Gessner, Marc Lukacs, Mike Lee, James Tsuruta, F. Stuart Foster, Paul A. Dayton</i>	
Sonoporation of Endothelial Cells with CD31-Targeted Microbubbles at Low Acoustic Pressures	13
<i>Klazina Kooiman, Miranda Foppen-Hartevelde, Nico De Jong</i>	
Ultrasound-Mediated Endothelial Cell Permeability Changes with Targeted Contrast Agents	16
<i>Pavlos Anastasiadis, John S. Allen</i>	
Evaluation of Subharmonic Emission from Encapsulated Microbubbles as an Indicator for Sonoporation of Cell Monolayers	19
<i>K. Hensel, R. Haagen, G. Schmitz, A. Maghnouj, S. A. Hahn</i>	
Observations of Bubble-Vessel Interactions in Ultrasound Fields	23
<i>Hong Chen, John C. Kuczewicz, Wayne Kreider, Andrew A. Brayman, Michael R. Bailey, Thomas J. Matula</i>	
Ultrasound-Based Imaging of Nanoparticles: From Molecular and Cellular Imaging to Therapy Guidance	27
<i>S. Mallidi, B. Wang, M. Mehrmohammadi, M. Qu, Y. -S. Chen, P. Joshi, S. Kim, K. A. Homan, A. B. Karpouk, R. W. Smalling, K. Sokolov, S. Y. Emelianov</i>	
Acoustic Microscopy - Beyond High Resolution Imaging	37
<i>Yoshifumi Saijo</i>	
Acoustic Nonlinearity Parameter of Tissue on Echo Mode: Review and Evaluation of the Different Approaches for B/A Imaging	41
<i>F. Varray, M. Pasovic, Christian Cachard, Piero Tortoli, Olivier Basset</i>	
Three-Dimensional High-Frequency Characterization of Excised Human Lymph Nodes	45
<i>Jonathan Mamou, Alain Coron, Masaki Hata, Junji Machi, Eugene Yanagihara, Pascal Laugier, Ernest J. Feleppa</i>	
Quantifying Ultrasonic Properties of Cells During Apoptosis Using Time Resolved Acoustic Microscopy	49
<i>Eric M. Strohm, Michael C. Kolios</i>	
High-Resolution Ultrasonic Monitoring of Cellular Differentiation in an Ex Vivo Produced Oral Mucosal Equivalent (EVPOME)	53
<i>F. Winterroth, S. J. Hollister, K. W. Hollman, S. E. Feinberg, J. B. Fowlkes, S. Kuo, K. Izumi</i>	
Energy Based Adaptive Focusing: Optimal Ultrasonic Focusing Using Radiation Force Magnetic Resonance Guidance	57
<i>Benoit Larrat, Mathieu Pernot, Gabriel Montaldo, Mathias Fink, Mickael Tanter</i>	
In-Vivo Treatment of Rabbit VX2 Tumor by Miniaturized Image-Ablate Ultrasound Arrays	61
<i>T. Douglas Mast, Peter G. Barthe, Inder Raj S. Makin, Michael H. Slayton, Chandra Priya Karunakaran, Mark T. Burgess, Amel Alqadah, Joseph F. Buell, Steven M. Rudich</i>	
Concurrent ARFI Imaging and HIFU Ablation Using a Diagnostic Transducer Array and Ultrasound System with Custom Beam Sequences	65
<i>Kristin Frinkley Bing, Veronica M. Rotemberg, Mark L. Palmeri, Kathryn R. Nightingale</i>	
Scanned-Beam Assisted Mild Tumor Heating Using a Dual-Functional Ultrasound Linear Array	69
<i>Chun-Yen Lai, Dustin E. Kruse, Charles F. Caskey, Douglas N. Stephens, Patrick L. Sutcliffe, Katherine W. Ferrara</i>	
Non-Invasive Commintion of Renal Calculi Using Pulsed Cavitational Ultrasound Therapy- Histotripsy	73
<i>Alexander Duryea, Adam Maxwell, William Roberts, Zhen Xu, Timothy Hall, Charles Cain</i>	
Arrest of Tumor Growth and Reduction of Tumor Size in Vivo by Combination of Ultrasound and Intravascular Microbubbles	77
<i>Chien Ting Chin, Balasundar I. Raju, Talent Shevchenko, Alexander L. Klibanov</i>	
The Role of Compressional Pressure in the Formation of Dense Bubble Clouds in Histotripsy	81
<i>Adam D. Maxwell, Tzu-Yin Wang, Charles A. Cain, J. Brian Fowlkes, Zhen Xu, Oleg A. Sapozhnikov, Michael R. Bailey</i>	
Ultrasound-Inducible Fluorescent Particles for Internal Tattooing	85
<i>O. Couture, N. Pannacci, A. Babataheri, P. Tabeling, M. Fink, M. Tanter, Vincent Servois</i>	
Investigating the Effects of Pulsed Low Intensity Ultrasound and Microbubbles in Mouse Tumors	89
<i>David E. Goertz, Raffi Karshafian, Kullervo Hynynen</i>	
Enhancement of Ultrasonic Heating with Microbubbles and Their Localization in Target Tissue	93
<i>Shin-Ichiro Umemura, Shin Yoshizawa, Yoichiro Matsumoto, Kazuaki Sasaki, Rei Asami, Ken-Ichi Kawabata</i>	
Ultrasonic Delivery of a Chemotherapeutic Agent Using Acoustic Droplet Vaporization (ADV)	101
<i>Mario L. Fabiilli, Ian E. Sebastian, Kevin J. Haworth, Oliver D. Kripfgans, Paul. L Carson, J. Brian Fowlkes</i>	
Controlled Cavitation for Controlled Release	104
<i>Steven Wrenn, Stephen Dicker, Eleanor Small, Micha Mleczko</i>	
Orthogonal Unipolar Golay Codes for Multispectral Photoacoustic Coded Excitation Imaging	108
<i>Martin P. Mienkina, Annika Eder, Georg Schmitz, Claus-Stefan Friedrich, Nils C. Gerhardt, Martin R. Hofmann</i>	
Contrast Enhancement in Photoacoustic Imaging	112
<i>Sheng-Wen Huang, Janet F. Eary, Lingyun Huang, Matthew O'Donnell, Congxian Jia</i>	

Free-Hand 3D Optoacoustic Imaging of Vasculature	116
<i>Marc Fournelle, Holger Hewener, Christian Gunther, Heinrich Fonfara, Hans-Joachim Welsch, Robert Lemor</i>	
High Resolution Optoacoustic Detection of Nanoparticles on Living Cells	120
<i>W. Bost, Y. Kohl, F. Stracke, M. Fournelle, R. Lemor</i>	
Temperature Dependence of Shear Modulus in Ex Vivo Muscle Assessed by Ultrasound	124
<i>E. Sapin, J. L. Gennisson, M. Pernot, M. Fink, M. Tanter</i>	
Complex Shear Modulus of Thermally-Damaged Liver	127
<i>Marko Orescanin, Muqem A. Qayyum, Kathleen S. Toohey, Michael F. Insana</i>	
In Vivo Ultrasound Electrode Displacement Strain Imaging	131
<i>Nicholas Rubert, Shyam Bharat, Ryan Dewall, Anita Andreano, Christopher Brace, Jingfeng Jiang, Lisa Sampson, James A. Zagzebski, Fred Lee Jr., Tomy Varghese</i>	
Comparison of Different Compression Methods for Ultrasound Elastography in Order to Detect HIFU Ablations in the Liver: Preliminary In Vivo Results.	135
<i>Jeremy Chenot, David Melodelima, Hubert Parmentier, Remi Souchon, Jean-Yves Chapelon</i>	
Real-Time Ultrasound Elasticity Imaging for Liver RF Ablation Assessment: Preliminary Ex Vivo and in Vivo Animal Studies	139
<i>Hua Xie, Anna T. Fernandez, Unmin Bae, Sheng Xu, Jochen Kruecker, John Karanian, Alberto Chiesa, William F. Pritchard, Bradford J. Wood</i>	
Elastic Modulus Imaging (EMI) for Visualizing Thermal Ablation Zone: Initial Experience in a Porcine Model	143
<i>Jingfeng Jiang, Chris Brace, Anita Andreano, Ryan Dewall, Nick Rubert, Ted Fisher, Tomy Varghese, Fred Lee, Timothy J. Hall</i>	
Clinical Value of Two Compounding Techniques for IVUS Palpography	147
<i>Mikhail G. Danilouchkine, Frits Mastik, Antonius F. W. Van Der Steen</i>	
Quantitative Imaging of Myocardium Elasticity Using Supersonic Shear Imaging	151
<i>Mathieu Couade, Mathieu Pernot, Mickael Tanter, Emmanuel Messas, Alain Bel, Maguette Ba, Albert-Alain Hagège, Mathias Fink</i>	
3D Elasticity Imaging on an Open-Chest Dog Heart	155
<i>Congxian Jia, Theodore J. Kolias, Jonathan M. Rubin, Ping Yan, Albert J. Sinusas, Donald P. Dione, James S. Duncan, Qifeng Wei, Karl Thiele, Lingyun Huang, Sheng-Wen Huang, Matthew O'Donnell</i>	
High Quality Non-Invasive Full 2D Strain Tensor Imaging Using a Beam Steered Linear Array Ultrasound Transducer	159
<i>Hendrik H. G. Hansen, Richard G. P. Lopata, Tim Idzenga, Chris L. De Korte</i>	
Acoustic Radiation Force Impulse Imaging of Cardiovascular Tissue	163
<i>Gregg E. Trahey, Jeremy J. Dahl, Stephen J. Hsu, Douglas M. Dumont, Richard R. Bouchard, Stephanie A. Eyerly, Patrick D. Wolf</i>	
Robust Hepatic Shear Modulus Reconstruction Using Acoustic Radiation Force and RANSAC	169
<i>Michael H. Wang, Mark L. Palmer, Veronica M. Rotemberg, Ned C. Rouze, Kathryn R. Nightingale</i>	
Adaptive Radiation Force Ultrasound for Monitoring Hemostasis in Whole Blood	173
<i>F. William Mauldin Jr., Francesco Viola, Xiefan Lin-Schmidt, Michael B. Lawrence, William F. Walker</i>	
Estimation of Mechanical Properties of Arteries and Soft Tubes Using Shear Wave Speeds	177
<i>Miguel Bernal, Matthew W. Urban, James F. Greenleaf</i>	
Image Reconstruction from Shear Wave Modulated Ultrasound Echo Data	181
<i>Stephen McAleavey</i>	
Estimation of Skin Elasticity by Measuring Surface Wave Velocity Under Impulse Stimulus Using Compact Optical Sensors	185
<i>Bo Qiang, Xiaoming Zhang, James Greenleaf</i>	
GPU-Based Reconstruction and Display for 4D Ultrasound Data	189
<i>Ahmed F. Elnokrashy, Ahmed A. Elmalky, Tamer M. Hosny, Marwan Abd Ellah, Alaa Megawer, Abobakr Elsebai, Abou-Bakr M. Youssef, Yasser M. Kadah</i>	
Accurate Assessment of Middle Ear Effusion by Monitoring Ultrasound Reflections from a Tympanic Membrane	193
<i>Junho Song, Kullervo Hynynen</i>	
Real-Time Imaging with the Sonic Window: A Pocket-Sized, C-Scan, Medical Ultrasound Device	196
<i>Michael I. Fuller, Kevin Owen, Travis N. Blalock, John A. Hossack, William F. Walker</i>	
Fiber Optic Broadband Ultrasonic Probe for Virtual Biopsy: Technological Solutions	200
<i>E. Biagi, S. Cerbai, L. Masotti, L. Belsito, A. Roncaglia, G. Masetti, N. Speciale</i>	
MR Guidance, Monitoring and Control of Brain HIFU Therapy in Small Animals: In Vivo Demonstration in Rats at 7T	204
<i>B. Larrat, M. Pernot, E. Dervishi, A. Souilah, D. Seilhean, Y. Marie, A. L. Boch, J. F. Aubry, M. Fink, M. Tanter</i>	
Cavitational Anti-Tumor Effects with Phase-Change Nano Droplet and Ultrasound	208
<i>Ken-Ichi Kawabata, Rei Asami, Takashi Azuma, Hideki Yoshikawa, Shin-Ichiro Umemura</i>	
Active Protection in Pulsed Cavitational Ultrasound Therapy (Histotripsy)	212
<i>Tzu-Yin Wang, Zhen Xu, Timothy L. Hall, J. Brian Fowlkes, William W. Roberts, Charles A. Cain</i>	
Nonlinear Derating Method for High Intensity Focused Ultrasound (HIFU) Fields	216
<i>O. V. Bessonova, V. A. Khokhlova, M. S. Canney, M. R. Bailey, L. A. Crum</i>	
In-Vivo Study of Non-Invasive Thrombolysis by Histotripsy in a Porcine Model	220
<i>Adam D. Maxwell, Gabe Owens, Hitinder S. Gurm, Charles A. Cain, Zhen Xu</i>	
In Vivo Thermal Ablation of Liver Tumors in Rabbits Using a HIFU Toroidal Transducer	224
<i>David Melodelima, William A. N'Djin, Amélie Battais, Sabrina Chesnais, Michel Rivoire, Jean-Yves Chapelon</i>	
Non-Invasive Fetal Sheep Surgery Using Histotripsy: Feasibility Study in the Sheep Model	228
<i>Yohan Kim, Carlen G. Fifer, Sarah K. Gelehrter, Jennifer Williams, Jimmy C. Lu, Charles A. Cain, Zhen Xu</i>	
Harmonic Motion Imaging For Focused Ultrasound (HMIFU): Initial In Vivo Results	232
<i>Caroline Maleke, Elisa E. Konofagou</i>	

Imaging the Auditory System: A New Application of High-Frequency Ultrasound	236
<i>Zahra Torbatian, Rob Adamson, Rene Van Wijhe, Ronald Pennings, Manohar Bance, Jeremy Brown</i>	
In Situ Measurements of Attenuation Coefficient for Evaluating the Hardness of Cataract Lens by a High Frequency Ultrasonic Needle Transducer	240
<i>Chih-Chung Huang, Ruimin Chen, Po-Hsiang Tsui, Qifa Zhou, Mark S. Humayun, K. Kirk Shung</i>	
Spectral Analysis of Ultrasound Backscatter for Characterization of HIFU Lesions in Cardiac Tissue with High-Frequency Imaging	244
<i>R. E. Kumon, Y. Zhou, K. Yang, C. X. Deng</i>	
Focussed Ultrasound for Early Detection of Tooth Decay	248
<i>David A. Hughes, John M. Girkin, Simon Poland, Chris Longbottom, Sandy Cochran</i>	
Characterization of Viscoelastic Properties of Ultrasound Contrast Agents	251
<i>Moreschi Hélène, Novell Anthony, Callé Samuel, Defontaine Marielle, Bouakaz Ayache</i>	
Quantification of the Microvascular Blood Flow of the Ovine Corpus Luteum with Contrast Ultrasound	255
<i>Costas Strouthos, Marios Lambaskis, Vassilis Sboros, Joan Docherty, Alan McNeilly, Michalakis Averkiou</i>	
Assessing Breast Cancer Response to Bevacizumab Using Contrast-Enhanced Ultrasound: Initial Results Using a Murine Model	259
<i>Kenneth Hoyt, Jason M. Warram, Heidi Umphrey, Lin Belt, Sharon Samuel, Karri Folks, Cecil Stockard, Mark Lockhart, Michelle L. Robbin, William Grizzle, Kurt R. Zinn</i>	
Compression-Only Behavior and Subharmonic Scattering of Phospholipid-Shell Microbubbles	263
<i>Peter Frinking, Emmanuel Gaud, Marcel Arditi</i>	
Experimental Verification of an Image Calibration Method in Ultrasound Contrast Agent Imaging Using a Perfusion Flow Phantom	267
<i>Daniel C. Finfer, Meng-Xing Tang, Robert J. Eckersley</i>	
High-frequency Ultrasound Imaging of Size-isolated Microbubbles in Mice	271
<i>Shashank Sirsi, Jameel Feshitan, Mark Borden, Shunichi Homma</i>	
High-Resolution, High-Contrast Ultrasound Imaging Using a Prototype Dual-Frequency Transducer	275
<i>Ryan Gessner, Marc Lukacs, Mike Lee, F. Stuart Foster, Paul A. Dayton</i>	
Nonlinear Contrast Agent Imaging with a Linear Array Based Micro-Ultrasound System	279
<i>A. Needles, J. Mehi, M. Arditi, E. Gaud, P. Frinking, N. Rognin, D. Hirson, F. S. Foster</i>	
Prostate Cancer Localization by Contrast-Ultrasound Diffusion Imaging	283
<i>M. Mischi, M. P. J. Kuenen, H. Wijkstra, A. J. Hendriks, H. H. M. Korsten</i>	
Contrast Improvement by Combining Pulse Inversion with EMD and EEMD	287
<i>Ai-Ho Liao, Che-Chou Shen, Pai-Chi Li</i>	
A Novel Technique for Measuring Ultrasound Backscatter from Single Micron-Sized Objects	291
<i>Omar Falou, Min Rui, Ahmed El-Kaffas, J. Carl Kumaradas, Michael C. Kolios</i>	
Estimating Scatterer Properties in Rat Fibroadenomas Using Various Mathematical Form Factors	294
<i>Zachary T. Hafez, Lauren A. Wirtzfeld, Andrew Battles, Rita J. Miller, Sandhya Sarwate, Michael L. Oelze, Timothy J. Hall, William D. O'Brien Jr.</i>	
Intrinsic Differences in Ultrasonic Backscatter Properties Between the Left and Right Ventricles of Fetal Hearts	297
<i>Mark R. Holland, Allyson A. Gibson, Joseph J. Hoffman, James G. Miller, Achiau Ludomirsky, Gautam K. Singh</i>	
In Vivo Ultrasound Characterization of Red Blood Cell Aggregation Using the Structure Factor Size and Attenuation Estimator	301
<i>Emilie Franceschini, Francois T. H. Yu, Francois Destrempe, Guy Cloutier</i>	
Implementation of Scatterer Size Imaging on an Ultrasonic Breast Tomography Scanner	305
<i>Roberto J. Lavarello, Michael L. Oelze, Michael Berggren, Steven Johnson, Marko Orescanin, Rebecca Yapp</i>	
Analysis of Human Fibroadenomas Using Three-Dimensional Impedance Maps	309
<i>Alexander Dapore, Michael R. King, Josephine Harter, Sandhya Sarwate, Michael L. Oelze, James A. Zagzebski, Minh N. Do, Timothy J. Hall, William D. O'Brien Jr.</i>	
A Comparison Between Methods for Automatic Quantification of Global Left Ventricular Function	313
<i>Daniel Barbosa, Gabriel Kiss, Piet Claus, Krasimira Hristova, Brage Amundsen, Dirk Loeckx, Frederik Orderud, Hans Torp, Jan D'Hooge</i>	
Methods for Measurements of the Longitudinal Movement and the Shear-Induced Longitudinal Elastic Modulus of the Arterial Wall	317
<i>Tobias Nilsson, Stefano Ricci, Åsa Rydén Ahlgren, Tomas Jansson, Kjell Lindström, Piero Tortoli, Hans W. Persson, Magnus Cinthio</i>	
MR-Guided Ultrasonic Brain Therapy : High Frequency Approach	321
<i>J. F. Aubry, L. Marsac, M. Pernot, M. Tanter, B. Robert, Y. Martin, C. Cohen-Bacrie, J. Souquet, M. Fink</i>	
Functional Imaging of the Rat Brain with Micro-Ultrasound	325
<i>John Sun, Liis Lindvere, Adrienne Dorr, Martijn Van Raaij, Bojana Stefanovic, Stuart Foster</i>	
Natural Brain Tissue Pulsatility Measurement : A Pilot Study in Older Depressed Patients	329
<i>M. Elkateb Hachemi, T. Desmidt, F. Patat, V. Camus, J. P. Cottier, J. P. Remenieras</i>	
Ultrasound Current Source Density Imaging of a Time-Varying Current Field in a Multielectrode Nerve Chamber	333
<i>Ragnar Olafsson, Qian Li, Zhaohui Wang, Pier Ingram, Russell S. Witte</i>	
Adaptive Receive and Transmit Apodization for Synthetic Aperture Ultrasound Imaging	337
<i>Iben Kraglund Høfort, Andreas Austeng, Johan-Fredrik Synnevag, Sverre Holm, Fredrik Gran, Jørgen Arendt Jensen</i>	
Grating-Lobes Reduction by Application of Phase Coherence Factors	341
<i>J. Camacho, M. Parrilla, C. Fritsch</i>	
A Tunable Analog Delay Element for High-Frequency Dynamic Beamforming	345
<i>Gokce Gurun, Alper Sisman, Jaime Zahorian, Sarp Satir, Mustafa Karaman, Paul Hasler, Levent Degertekin</i>	

Contrast Enhancement of Adaptive Ultrasound Imaging Using Eigenspace-Based Minimum Variance Beamforming	349
<i>Babak Mohammadzadeh Asl, Ali Mahloojifar</i>	
Potential Mechanism for Vessel Invagination Caused by Bubble Oscillations	353
<i>Wayne Kreider, Hong Chen, Michael R. Bailey, Andrew A. Brayman, Thomas J. Matula</i>	
Applications of Low Intensity Pulsed Ultrasound for Functional Bone Tissue Engineering Using Adult Stem Cells	357
<i>Skylar Marvel, Stan Okrasinski, Susan H. Bernacki, Elizabeth Lobo, Paul A. Dayton</i>	
Ultrasound-Enhanced Osteogenesis of Human Mesenchymal Stem Cells Encapsulated in Collagen Meshwork	361
<i>Hades C. T. Wong, Mei-Yi Wong, Barbara P. Chan, Alfred C. H. Yu</i>	
The Growth of Osteoblasts Stimulated by Low Intensity Pulsed Ultrasounds of Different Exposure Durations	365
<i>Show-Huie Chen, Chun-Yi Chiu, Shyh-Hau Wang</i>	
Real-Time Calculation of a Limiting Form of the Renyi Entropy for Detection of Subtle Changes in Scattering Architecture	369
<i>M. S. Hughes, J. N. Marsh, J. M. Arbeit, R. W. Fuhrhop, K. D. Wallace, T. Thomas, J. Smith, K. Agyem, G. M. Lanza, S. A. Wickline, J. E. McCarthy, M. V. Wickerhauser</i>	
Shannon Entropy: A Specular Echo-Insensitive Imaging Metric Showing Myocardium Anisotropy	373
<i>Y. J. Cheng, J. N. Marsh, K. D. Wallace, L. Zhang, G. M. Lanza, S. A. Wickline, M. S. Hughes</i>	
A Model-Based Synthetic Aperture Image Reconstruction Technique for High-Frequency Ultrasound	377
<i>J. Opretzka, M. Vogt, H. Ermert</i>	
Dual Pulse Frequency Compounded Super Harmonic Imaging for Phased Array Transducers	381
<i>P. L. M. J. Van Neer, M. G. Danilouchkine, G. M. Matte, M. D. Verweij, N. De Jong</i>	
Evaluation of an Analytical Solution to the Burgers Equation Based on Volterra Series	385
<i>Martin Schiffner, Micha- Mieczko, Georg Schmitz</i>	
Effects of Nonlinearity on Propagation Through the Skull	389
<i>Gianmarco F. Pinton, Jean-Francois Aubry, Mickael Tanter, Mathias Fink</i>	
Broadband Ferroelectret Transducers	393
<i>G. M. Sessler, J. Hillenbrand</i>	
Ferroelectret Sensor Array for Characterization of Cavitation Effects in Ultrasonic Cleaning	398
<i>Jens Strobel, Stefan J. Rupitsch, Reinhard Lerch</i>	
CMOS-Compatible AlN Piezoelectric Micromachined Ultrasonic Transducers	402
<i>Stefon Shelton, Mei-Lin Chan, Hyunkyu Park, David Horsley, Bernhard Boser, Igor Izumina, Richard Przybyla, Tim Frey, Michael Judy, Kieran Nunan, Firas Sammoura, Ken Yang</i>	
Aperiodic and Deterministic 2D Phased Array Structures for Ultrasonic Imaging	406
<i>A. Tweedie, V. Murray, G. Hayward</i>	
Calibration of Acoustic Trapping Forces by Fluid Drag Forces	410
<i>Jungwoo Lee, Changyang Lee, K. Kirk Shung</i>	
Estimation of Material Parameters for Piezoelectric Actuators Using Electrical and Mechanical Quantities	414
<i>Stefan J. Rupitsch, Felix Wolf, Alexander Sutor, Reinhard Lerch</i>	
Parameter Sensitivity Study of a Field II Multilayer Transducer Model on a Convex Transducer	418
<i>David Bæk, Jørgen Arendt Jensen, Morten Willatzen</i>	
A 2D Ultrasonic Array Design Incorporating Hexagonal-Shaped Elements and Triangular-Cut Piezocomposite Substructure for NDE Applications	422
<i>J. Dziewierz, S. N. Ramadas, A. Gachagan, R. L. O'Leary, G. Hayward</i>	
Non-Linear Dynamic Response of CMUTs Population: Modeling and Characterization	426
<i>Nicolas S��n��gond, Franck Teston, Fr��d��ric Patat, Dominique Certon</i>	
Minimizing the Bottom Reflections in Ultrasonic CMUT Transducer Backing Using Low Profile Structuring	430
<i>Kamal Raj Chapagain, Arne R��nnekleiv</i>	
Acoustic Characteristics of CMUT with Rectangular Membranes Caused by Higher Order Modes	434
<i>Hiroki Tanaka, Shuntaro Machida, Kunio Hashiba, Takashi Kobayashi</i>	
Bandwidth, Power and Noise Considerations in Airborne CMUTs	438
<i>Muhammed N. Senlik, Selim Olcum, H. Koymen, Abdullah Atalar</i>	
Design Modeling of CMUT's for Medical Imaging	442
<i>Arne R��nnekleiv</i>	
A Robust Real-Time Speckle Tracking Algorithm for Ultrasonic Elasticity Imaging	451
<i>Jingfeng Jiang, Timothy Hall</i>	
BiPlane Ultrasound Strain Imaging During Induced Contraction of Skeletal Muscles	455
<i>R. G. P. Lopata, J. P. Van Dijk, M. M. Nillesen, S. Pillen, M. J. Zwartz, J. M. Thijssen, D. F. Stegeman, C. L. De Korte</i>	
Ultrasound-Based 2D Strain Estimation of the Carotid Artery: An In-Silico Feasibility Study	459
<i>Matilda Larsson, Florence Kremer, Piet Claus, Lars-��ke Brodin, Jan D'Hooge</i>	
Exploring the Nonlinear Elastic Behavior of Phantom Materials for Elastography	463
<i>Theo Z. Pavan, Antonio A. O. Carneiro, Ernest L. Madsen, Gary R. Frank, Timothy J. Hall</i>	
Real Time Ultrasound Elastography in Neurosurgery	467
<i>Christopher E. Uff, Leo Garcia, J��r��mie Fromageau, Neil Dorward, Jeffrey C. Bamber</i>	
3D in Vivo Brain Elasticity Mapping in Small Animals Using Ultrasound	471
<i>E. Mac��, I. Cohen, J. L. Gennisson, G. Montaldo, R. Miles, M. Fink, M. Tanter</i>	
Non-Invasive Localization and Quantification of Graded Ischemia Using Electromechanical Wave Imaging In Vivo	475
<i>Jean Provost, Wei-Ning Lee, Kana Fujikura, Elisa E. Konofagou</i>	
Quantitative Surface Wave Method for Measuring Local Viscoelasticity of Lungs	479
<i>X. Zhang, B. Qiang, M. W. Urban, R. Kinnick, R. Hubmayr, J. F. Greenleaf</i>	

Quantitative Shear Wave Imaging of Cell Culture Gels	483
<i>Marko Orescanin, Kathleen S. Toohey, Michael F. Insana</i>	
Shear Modulus Imaging by Spatially Modulated Ultrasound Radiation Force	487
<i>Stephen A. McAleavey</i>	
Measurements of Swine Renal Cortex Shear Elasticity and Viscosity with Shearwave Dispersion Ultrasound Vibrometry (SDUV)	491
<i>Carolina Amador, Matthew W. Urban, James F. Greenleaf, Lizette V. Warner</i>	
Radiation Dose Imaging with Ultrasound Shear-Wave Elastography and Radiation Sensitive Gels	495
<i>Remo A. Crescenti, Jeffrey C. Bamber, Nigel L. Bush, Steve Webb</i>	
Tangential Sound Field Oscillations for 2D Motion Estimation in Echocardiography	498
<i>H. Liebgott, Abderraouf Ben Salem, Adrian Basarab, Hang Gao, Piet Claus, Jan D'Hooge, Philippe Delachartre, D. Friboulet</i>	
3-D Motion Tracking Using Raw Data and a Matrix Array: Phantom and In Vivo Cardiac Studies	502
<i>Brett C. Byram, Greg Holley, Daniel Need, Doug M. Giannantonio, Gregg E. Trahey</i>	
Assessment of Regional Myocardial Function Using 3D Cardiac Strain Estimation: Comparison Against Conventional Echocardiographic Assessment	507
<i>Gabriel Kiss, Daniel Barbosa, Krasimira Hristova, Jonas Crosby, Fredrik Orderud, Piet Claus, Brage Amundsen, Dirk Loeckx, Jan D'Hooge, Hans G. Torp</i>	
Forward-Looking Volumetric Intracardiac Imaging Using a Fully Integrated CMUT Ring Array	511
<i>Amin Nikoozadeh, Ömer Oralkan, Mustafa Gencel, Jung Woo Choe, Douglas N. Stephens, Alan De La Rama, Peter Chen, Kai Thomenius, Aaron Dentinger, Douglas Wildes, Kalyanam Shivkumar, Aman Mahajan, Matthew O'Donnell, David Sahn, Pierre T. Khuri-Yakub</i>	
Ultrafast Imaging of the Heart Using Circular Wave Synthetic Imaging Using Phased and Curvilinear Arrays	515
<i>Mathieu Couade, Mathieu Pernot, Mickael Tanter, Emmanuel Messas, Alain Bel, Maguette Ba, Albert-Alain Hagège, Mathias Fink</i>	
Performance of Three-Dimensional Sonoelastography in Prostate Cancer Detection: A Comparison Between Ex Vivo and In Vivo Experiments	519
<i>B. Castaneda, K. Hoyt, K. Westesson, L. An, J. Yao, L. Baxter, J. Joseph, J. Strang, D. Rubens, K. Parker</i>	
Correlation Between SWEI and ARFI Image Findings in Ex Vivo Human Prostates	523
<i>Liang Zhai, John Madden, Vladimir Mouraviev, Thomas Polascik, Kathryn Nightingale</i>	
Prostate-Cancer Imaging Using Machine-Learning Classifiers: Potential Value for Guiding Biopsies, Targeting Therapy, and Monitoring Treatment	527
<i>Ernest J. Feleppa, Mark J. Rondeau, Paul Lee, Christopher R. Porter</i>	
Differentiation of Solid Benign and Malignant Breast Masses by Quantitative Analysis of Ultrasound Images	530
<i>Phoebe Harvey, Peter H. Arger, Emily F. Conant, Chandra M. Sehgal</i>	
Axial Shear Strain Imaging for Breast Mass Differentiation	534
<i>Haiyan Xu, Min Rao, Tomy Varghese, Sara Baker, Amy Sommer, Timothy J. Hall, Gale A. Sisney, Elizabeth S. Burnside</i>	
Determination of a Mean Sound Velocity in the Female Breast for Artifact Reduction in Full Angle Spatial Compounding	538
<i>Christian Hansen, Nils Hüttebräuker, Helmut Ermert, Markus Hollenhorst, Lothar Heuser, Gernot Schulte-Altedorneburg</i>	
Ultrasonic Characterization of Backscatter from Human Cancellous Bone with a Renyi Entropy Metric: Correlation with X-Ray Bone Mineral Density	542
<i>Kirk D. Wallace, Brent K Hoffmeister, Lewis J. Thomas Iv, Sue C. Kaste, Gregory M. Lanza, Samuel A. Wickline</i>	
Extracting Fast and Slow Wave Velocities and Attenuations from Experimental Measurements of Cancellous Bone Using Bayesian Probability Theory	546
<i>Christian C. Anderson, Michal Pakula, Mark R. Holland, G. Larry Bretthorst, Pascal Laugier, James G. Miller</i>	
Monitoring of Trabecular Bone Induced Microdamage Using a Nonlinear Wave-Coupling Technique	550
<i>Hélène Moreschi, Samuel Callé, Sandra Guerard, David Mitton, Guillaume Renaud, Marielle Defontaine</i>	
Model-Based Parameter Estimation in the Frequency Domain for Quantitative Ultrasound Measurements of Bone	554
<i>Stefanie Dencks, Georg Schmitz, Reinhard Barkmann, Claus C. Glüer</i>	
Time-Domain Model of the Ultrasonic Wave Propagation in an Inhomogeneous Anisotropic Viscoelastic Fluid/solid Multilayer Medium: Application to Cortical Bone	558
<i>G. Haïat, S. Naili, M. -B. Vu, Q. Grimal, M. Talmant, C. Desceliers, C. Soize</i>	
Noninvasive Wall Shear Stress Measurements in Human Carotid Artery Using Echo Particle Image Velocimetry: Initial Clinical Studies	562
<i>F. Zhang, A. J. Barker, P. E. Gates, W. D. Strain, J. Fulford, L. Mazzaro, A. C. Shore, N. G. Bellenger, C. Lanning, R. Shandas</i>	
Two-Dimensional Flow Velocity Estimation in the Carotid Bifurcation: A Study of Crossed-Beam Vector Doppler and Speckle Tracking Using Computational Fluid Dynamics	566
<i>Abigail Swillens, Patrick Segers, Lasse Lovstakken, Hans Torp</i>	
Volumetric Blood Flow Assessment Through Multigate Spectral Doppler	570
<i>S. Ricci, M. Cinthio, L. Francalanci, P. Tortoli</i>	
Impact of a Multi-Frequency Sequence of Measurements on First Arriving Signal Velocity on a Bone Plate Model	574
<i>Thiên-Ly Pham, Jean-Gabriel Minonzio, Maryline Talmant, Pascal Laugier</i>	
Measurement of Guided Mode Phase Velocities Using Multi-Emitters and Multi-Receivers Arrays in Contact and Transmission Matrix Analysis	578
<i>Jean-Gabriel Minonzio, Maryline Talmant, Pascal Laugier</i>	
3-D Ultrasound Guidance of Autonomous Surgical Robotics: Feasibility Studies	582
<i>Kaicheng Liang, Edward D. Light, Albert J. Rogers, Daniel Von Allmen, Stephen W. Smith</i>	
Needle Path Detection for Brachytherapy Dosimetry Based on Lateral Power Imaging and Template Matching	586
<i>Mehdi Moradi, Xu Wen, Ehsan Dehghan, Julio Lobo, William J. Morris, Septimiu E. Salcudean</i>	
Time of Flight and FMCW Catheter Localization	590
<i>Jay Mung, Sukgu Han, Fred Weaver, Jesse Yen</i>	

Line Filtering for Detection of Microtools in 3D Ultrasound Data	594
<i>Marian Uherick, Jan Kybic, Christian Cachard, Herve Liebgott</i>	
Evaluation of 3D Reconstructed Lower Limb Vessel Geometries with an Ultrasound Robotic Imaging System	598
<i>Marie-Ange Janvie, Gilles Soulez, Guy Cloutier</i>	
A Novel Integrated System of Sensor and Actuator for Droplets on Sensor Plate/matching Layer/piezoelectric Substrate Structure	602
<i>Jun Kondoh, Noriyuki Yasuda, Mitsunori Sugimoto</i>	
Nanoparticle Patterning in a Microfluidic Drop Induced by Surface Acoustic Waves.....	606
<i>Leslie Y. Yeo, James R. Friend, Haiyan Li</i>	
Inducing Rapid Fluid Flows in Microchannels with Surface Acoustic Waves.....	609
<i>Ming K. Tan, Leslie L. Yeo, James R. Friend</i>	
Development of an Ultrasonic Particle Trap Incorporating 3-Dimensional Geometric Features.....	613
<i>A. Hughes, J. Hill, R. Jones, T. Purchase, M. Hill, R. J. Boltryk, M. Gedge, P. Glynne-Jones</i>	
Interface Acoustic Wave Based Particle Manipulation in Microfluidic Channels.....	617
<i>V. Yantchev, J. Enlund, I. Katardjiev, S. Johansson, L. Johansson</i>	
EMAT's and Its Potential for Modern NDE – State of the Art and Latest Applications	621
<i>H. J. Salzburger</i>	
Ultrasonic Probes Simultaneously Producing One Longitudinal and Two Shear Waves and Their Potential Applications.....	629
<i>K. -T. Wu, C. -K. Jen, M. Kobayashi, L. Zhao</i>	
Railway Wheel-Tread Inspection by Ultrasonic Techniques	633
<i>Jose Brizuela, Alberto Ibanez, Carlos Fritsch</i>	
Measurement of Methanol Solutions Using Love Mode Liquid Sensor	637
<i>Yuan-Feng Chiang, Chia-Chi Sung, Cheng-Chiao Tu, Chih-Yung Huang, Ruyen Ro, Ruyue Lee, Sean Wu</i>	
Microbead Dynamics on Quartz Crystal Microbalance at Elevated Amplitudes	641
<i>S. K. Ghosh, V. P. Ostanin, A. A. Seshia</i>	
Acoustic Mode Behavior in Lateral Field Excited Sensors.....	645
<i>Jason M. McGann, Kristopher Sgambato, Donald F. McCann, John F. Vetelino, Christian Peters</i>	
Improved Substrate Selection for Lateral Field TSM Sensors.....	649
<i>Jeffrey C. Andle, Reichl Haskell, Maly Chap, Daniel Stevens</i>	
Pseudo-LFE Sensors with Different Electrode Configurations on X-Cut LiNbO₃	655
<i>Zhitian Zhang , Wenyan Wang, Tingfeng Ma, Chao Zhang, Guanping Feng</i>	
Transverse Flow Velocity Measurement Using a Single Circular Planar Transducer by Ultrasonic Doppler-Spectra	659
<i>Juei Igarashi, Naoto Wakatsuki, Koichi Mizutani</i>	
Liquid Level Torsional Ultrasonic Waveguide Sensor.....	663
<i>William K. Spratt, John F. Vetelino, Lawrence C. Lynnworth</i>	
Dynamic Response of Water Droplet Coated Silicon MEMS Resonators	669
<i>Angel T. -H. Lin, Jize Yan, Ashwin A. Seshia</i>	
Phase Shift Migration for Imaging Layered Materials and Objects Immersed in Water	673
<i>T. Olofsson, T. Stepinski</i>	
Acoustoelectronic Method for the Detection of Electrical and Mechanical Properties of Adhering Cell Cultures	677
<i>G. Guhr, R. Brünig, H. Schmidt, M. Weihnacht</i>	
Flexible Ultrasonic Transducers for Structural Health Monitoring of Pipes at High Temperatures	681
<i>J. -L. Shih, M. Kobayashi, C. -K. Jen</i>	
High-Resolution Acoustic Imaging Using Multi-Carrier Waveforms Synthesized by Genetic Algorithm	685
<i>Toshio Ito, Masanori Sugimoto, Hiromichi Hashizume</i>	
Three Dimensional Ultrasound Gestural Interface	690
<i>Riccardo Carotenuto, Radu Ionescu, Pietro Tripodi, Fabio Urbani</i>	
Adaptive 3D Ultrasonic Data Compression Using Distributed Processing Engines.....	694
<i>Christophe Desmouliers, Erdal Oruklu, Jafar Saniie</i>	
Anti-Collision Technique of SAW ID Tags at Unknown Temperature Using Integer Programming.....	698
<i>Maria Brandl, Stefan Schuster, Stefan Scheibhofer, Andreas Stelzer</i>	
Beamspace Transformation for Data Reduction Using Genetic Algorithms.....	702
<i>Minghui Li, Kwok Shun Ho, Gordon Hayward</i>	
Underwater Ultrasonic Ranging by Digital Signal Multiplexing with Hadamard Matrix	706
<i>Tadashi Ebihara, Kojiro Nishimiya, Koichi Mizutani, Naoto Wakatsuki, Keiichi Mizutani</i>	
A New Split-Spectrum Algorithm for Dispersive Materials Using Variable Bandwidth Filters.....	710
<i>Alberto Rodríguez, Luis Vergara</i>	
Ultra-Thin-Film AlN Contour-Mode Resonators for Sensing Applications.....	714
<i>Matteo Rinaldi, Chiara Zuniga, Gianluca Piazza</i>	
170 MHz Electrodeless Quartz-Crystal Microbalance for High Sensitive Biosensors	718
<i>Hirotsugu Ogi, Hironao Nagai, Yuji Fukunishi, Masahiko Hirao, Masayoshi Nishiyama</i>	
The Electromagnetic Fields Radiated from a Monolithic Spiral Coil Acoustic Transduction Sensor	721
<i>Donald F. McCann, John. F. Vetelino</i>	
Miniaturized Laser-Based Photoacoustic Sensor of Trace Gases.....	725
<i>A. V. Gorelik, A. L. Ulasevich, V. S. Starovoitov</i>	
Evolutionary Algorithms for Optimal Ferroelectret Arrays Design	729
<i>J. Villazón, A. Ibáñez, J. Camacho, J. Ealo</i>	

Optimization of Complex Shape Part Inspections with Phased Arrays	733
<i>Marco A. B. Andrade, Julio C. Adamowski, Alberto Ibáñez, Montserrat Parrilla, Carlos Fritsch</i>	
Ultrasonic Holography of 3D Objects	737
<i>Sergey A. Tsysar, Oleg A. Sapozhnikov</i>	
Perpendicular Fluid Flow Measurement with a Spatial Array of Ultrasonic Transducers	741
<i>James S. Hall</i>	
Energy Conversion Improvement in Ferroelectrics: Application to Energy Harvesting and Self-Powered Systems	745
<i>Daniel Guyomar, Mickael Lallart</i>	
Multi-Cantilever Piezoelectric MEMS Generator in Energy Harvesting	755
<i>S. C. Lin, B. S. Lee, W. J. Wu, C. K. Lee</i>	
Optimisation of a Piezoelectric System for Energy Harvesting from Traffic Vibrations	759
<i>Guoliang Ye, Jize Yan, Zi Jing Wong, Kenichi Soga, Ashwin Seshia</i>	
Sensing Physical Fluid Properties with CMUT Arrays	763
<i>Marcel Thranhardt, Peter-Christian Eccardt, Hubert Mooshofer, Peter Hauptmann, Levent Degertekin</i>	
Simultaneous Determination of Physical and Acoustical Properties of a Homogeneous Plate in Air	767
<i>Abdelhak El Mouhadi, Jean Duclos, Hugues Duflo</i>	
Determination of Plant Leaves Water Status Using Air-Coupled Ultrasounds	771
<i>Tomás Gómez Álvarez-Arenas, D. Sancho-Knapik, J. J. Peguero-Pina, E. Gil-Pelegrín</i>	
Highly Anisotropic Beam Patterns for a Pot-Like Ultrasonic Sensor with Penetrating Slots Configuration	775
<i>Chih-Chiang Cheng, Chia-Yu Lin, Wen-Jong Wu, Kuang-Chong Wu, Chih-Kung Lee</i>	
Adaptable Emission Airborne Spiking Sonar	779
<i>Fernando J. Alvarez, Roman Kuc, Teodoro Aguilera</i>	
Experimental Investigations of Ultrasonic Levitation in a Machine Tool Spindle System	783
<i>Su Zhao, Joerg Wallaschek</i>	
Investigation of SAW Atomization	787
<i>Aisha Qi, James R. Friend, Leslie Y. Yeo</i>	
Frequency Spectrum Spatially Resolved Acoustic Spectroscopy for Microstructure Imaging	791
<i>Wenqi Li, Steve D. Sharples, Matt Clark, Mike G. Somekh</i>	
Effects of Ultrasonic Capillary Dynamics and Pad Material on the Mechanics of Thermosonic Ball Bonding	795
<i>Yan Huang, Michael Mayer</i>	
Evaluation of Elastic Inhomogeneity in ZnO Crystal by Means of the Micro-LFB Ultrasonic Material Characterization System	799
<i>Jun-ichi Kushibiki, Yuji Ohashi, Mototaka Arakawa, Sho Yoshida, Noboru Sakagami</i>	
Rayleigh-Mode Spurious Analysis for Non-Flat SiO₂/Al/LiNbO₃ Structure by Using FEM/SDA	803
<i>H. Nakamura, R. Goto, K. Seo, H. Nakanishi, K. Hashimoto, M. Yamaguchi</i>	
CDMA and FSCW Surface Acoustic Wave Temperature Sensors for Wireless Operation at High Temperatures	807
<i>A. Canabal, P. M. Davulis, E. Dudzik, M. Pereira Da Cunha</i>	
Unraveling Interfacial Jetting Phenomena Induced by Focused Surface Acoustic Waves	811
<i>James Friend, Ming Tan, Leslie Yeo</i>	
Effect of Surface Acoustic Waves on Curing of Polyimide Films	815
<i>Ching-Chung Yin, I-Han Chang, Kang-Che Huang</i>	
Very Low Amplitude Ripple SAW Filter for Infrastructure Systems Using 41° Y-X Lithium Niobate: Full FEM/BEM Design Approach	819
<i>Stéphane Chamaly, Hoi Yan Fong, Xavier Perois, Markus Mayer</i>	
SAW Strain Sensitivity of Selected Rayleigh Wave Crystal Cuts	823
<i>Gudrun Bruckner, Gernot Stampf, Georg Franz, Rene Fachberger, Robert Hauser</i>	
Performance of SAW Ring Waveguide Resonator: 3D FEM and Experiments	827
<i>Sergey V. Biryukov, Hagen Schmidt, Manfred Wehnacht</i>	
Characterization of Electrode Material Parameters	831
<i>Ben Abbott, Alan Chen, Tim Daniel, Kevin Gamble, Julien Gratier, Taeho Kook, Natalya Naumenko</i>	
Improved SHSAW Transduction Efficiency Using Gratings and Uniform Electrode Guiding	835
<i>T. B. Pollard, M. Pereira Da Cunha</i>	
A Generic 2.0 X 2.5 mm² UMTS FBAR Duplexer Based on 8-Pole Near-Elliptic Filters	839
<i>P. Bradley, S. Ye, J. Kim, J. H. Kim, K. Wang, H. Ko, Y. Xie</i>	
A BAW-Enabled Low-Power 5X Frequency Multiplier	843
<i>Jagdish Pandey, Shailesh Rai, Brian Otis</i>	
Laterally Coupled Solidly Mounted BAW Resonators at 1.9 GHz	847
<i>Johanna Meltaus, Tuomas Pensala, Kimmo Kokkonen, Andre Jansman</i>	
A Study of Thin Film Bulk Acoustic Resonator Filters in Several Ten GHz Band	851
<i>Motoaki Hara, Tsuyoshi Yokoyama, Takeshi Sakashita, Masanori Ueda, Yoshio Satoh</i>	
IC-Compatible Power Oscillators Using Thin Film Plate Acoustic Resonators (FPA)	855
<i>I. Avramov, L. Arapan, I. Katardjiev, V. Strashilov, V. Yantchev</i>	
Temperature Compensated Solidly Mounted BAW Resonators with Thin SiO₂ Layers	859
<i>Mohamed Abd Allah, Jyrki Kaitila, Robert Thalhammer, Werner Weber, Doris Schmitt-Landsiedel</i>	
High Precision Signal Processing Algorithm to Evaluate the SAW Properties as a Function of Temperature	863
<i>Ismail Shrena, David Eisele, Leonhard Reind, Jochen Bardong</i>	
Improved Coupled Resonator Filter Performance Using Carbon-Doped Oxide Decoupling Layer	867
<i>S. R. Gilbert, P. Nikkel, T. Jamneala, R. Ruby, J. D. Larson III, R. Thalhammer</i>	
GPS and WiFi Single Ended to Differential CRF Filters Using SiOCH as a De-Coupling Layer	872
<i>Rich Ruby, S. R. Gilbert, A. Chien, T. Jamneala</i>	

Investigation on Nonlinear Distortion of Acoustic Devices for Radio-Frequency Applications and Its Suppression	876
<i>Masanori Ueda, Masafumi Iwaki, Tokihiro Nishihara, Yoshio Satoh, Ken-Ya Hashimoto</i>	
Unified Model for Bulk Acoustic Wave Resonators' Nonlinear Effects	880
<i>Eduard Rocas, Carlos Collado, James C. Booth, Enrique Iborra, Robert Aigner</i>	
Considerations on Measurement Setup for Second-Order Nonlinearity in Radio Frequency Bulk Acoustic Wave Duplexers	885
<i>Yiliu Wang, Florian Thalmayr, Nan Wu, Ken-Ya Hashimoto</i>	
Stacked Crystal Resonator: A Highly Linear BAW Device	889
<i>Martin Handtmann, Kabula Mutamba</i>	
High Performance Microwave Acoustic Components for Mobile Radios	893
<i>F. Maximilian Pitschi, Jurgen E. Kiwitt, Robert D. Koch, Bernhard Bader, Karl Wagner, Robert Weigel</i>	
Realization of Small and Low Profile Duplexer Using a CSSD Packaging Technology	903
<i>T. Nishizawa, G. Endo, M. Tajima, S. Ono, O. Kawachi</i>	
New SPUdT Cells Including Fingers and Gaps Wider Than a Quarter Wavelength	907
<i>G. Martin, H. Schmidt, S. V. Biryukov, B. Steiner, B. Wall</i>	
Saw Duplexer Design for WCDMA System	911
<i>Takashi Shiba, Osamu Hikino, Seima Kondo, Naoko Kamogawa</i>	
A Wideband Multi-Mode SAW Filter Employing Pitch Modulated IDTs on Cu-Grating/15° YX-LiNbO₃-Substrate Structure	915
<i>Ken-Ya Hashimoto, Takashi Miyamoto, Ken-Ta Shimada, Tatsuya Omori, Masatsune Yamaguchi</i>	
Characterization of Surface Acoustic Wave Focusing by an Annular Interdigital Transducer	919
<i>Vincent Laude, Kimmo Kokkonen, Sarah Benchabane</i>	
An Acoustic Waveguide Using Doubly-Bonded Silicon/thinned PPT/silicon Structures for RF Applications	923
<i>F. Bassignot, E. Courjon, G. Ulliac, T. Laroche, J. Garcia, S. Queste, J. -P. Romand, S. Ballandras, R. Petit</i>	
Fabrication of GHz Range Oscillators Stabilized by Nano-Carbon-Diamond-Based Surface Acoustic Resonators	927
<i>Roland Salut, Céline Gesset, Samuel Saada, Ventsislav Yantchev, Badreddine Assouar, Fabien Bénédict, Philippe Bergonzo, Frank Omnes, Vincent Edon, Denis Rémiens, Omar Elmazria, Ilia Kartadjev, Sylvain Ballandras</i>	
Application of Photoimageable Epoxy as an Acoustic Absorber for IF Surface Wave Filter	931
<i>R. E. Chang, S. Combe, G. Grama</i>	
Surface Acoustic Wave Reflection Characteristics of Electrodes in ZnO/diamond Structures	936
<i>Ruyen Ro, Ruyue Lee, Yuan-Feng Chiang, Chia-Chi Sung, Sean Wu</i>	
Quasi-Periodic Surface Green's Dyad of a Piezoelectric Half-Space	940
<i>Carlos Jerez-Hanckes, Vincent Laude</i>	
Moving Towards an Ideal Frequency Response with Fibre-Optic Hydrophones	944
<i>P. Morris, A. Hurrell, P. Beard</i>	
Gelation Behavior and Properties of Lead Zirconate Titanate Gel-Cast Under an Electric Field	948
<i>Sedat Alkoy, M. Yunus Kaya</i>	
Fiber Optic Sagnac Interferometer for Characterizing Ultrasound Biomicroscopy Transducers	952
<i>Matthew A. Churgin, Mengyang Liu, Takashi Buma</i>	
High Temperature Guided Acoustic Wave Transducers Using Mechanical Gratings	956
<i>K. -T. Wu, W. -L. Liu, M. Kobayashi, C. -K. Jen, Y. Ono, M. Takeuchi</i>	
Electrical Properties of CuO Added-KNN Ceramics and 1-3 Piezocomposites	960
<i>Ebru Mensur Alkoy, Melih Papila</i>	
Characterization of CuInP₂S₆ Family Two Dimensional Crystals for Ultrasonic Transducers	964
<i>Vytautas Samulionis, Juras Banys, Yulian Vysochanskii</i>	
Progress Update on Relaxor Piezoelectric Single Crystals	968
<i>Jun Luo, Wesley Hackenberger, Shujun Zhang, Thomas R. Shrout</i>	
Crystal Growth and Improved Properties for Lead Indium Niobate-Lead Magnesium Niobate-Lead Titanate Ternary Piezoelectric Crystals	972
<i>Jian Tian, Pengdi Han, James F. Carroll, David A. Payne</i>	
Wafer Bonded Capacitive Micromachined Underwater Transducers	976
<i>Selim Olcum, Kagan Oguz, Muhammed N. Senlik, F. Yalçın Yamaner, Ayhan Bozkurt, Abdullah Atalar, Hayrettin Köymen</i>	
Challenges with Acoustic Backing of CMUT Arrays on Silicon with Integrated Electronics	980
<i>Sigrid Berg, Arne Rønnekleiv</i>	
2-D CMUT Wafer Bonded Imaging Arrays with a Row-Column Addressing Scheme	984
<i>Andrew S. Logan, Lawrence L. Wong, John T. W. Yeow</i>	
Evaluation of CMUT Annular Arrays for SL-IVUS	988
<i>Alper Sisman, Jaime Zahorian, Gökçe Gürün, Mustafa Karaman, Müjdat Balantekin, F. Levent Degertekin, Paul Hasler</i>	
An Area Hydrophone Based on CMUT Arrays	992
<i>P. Cristman, O. Oralkan, X. Zhuang, T. -J. Ma, S. Vaithilingam, T. Carver, I. Wygant, B. T. Khuri-Yakub</i>	
A Flexible Capacitive Micromachined Ultrasonic Transducer (CMUT) Array with Increased Effective Capacitance from Concave Bottom Electrodes for Ultrasonic Imaging Applications	996
<i>Ching-Hsiang Cheng, Chen Chao, Xiaomei Shi, Wallace W. F. Leung</i>	
Hybrid Dual Frequency Transducer and Scanhead for Micro-Ultrasound Imaging	1000
<i>Marc Lukacs, Mike Lee, Emmanuel Cherin, Jianhua Yin, Desmond Hirson, F. Stuart Foster, Ryan Gessner, Paul A. Dayton</i>	
New Ring Array Transducers for Real-Time 3D Intravascular Ultrasound	1004
<i>Edward D. Light, Victor Lieu, Stephen W. Smith</i>	
Real-Time Simultaneous Therapy and Imaging for Noninvasive HIFU Surgery of Prostate Tissue	1008
<i>Jong Seob Jeong, Jin Ho Chang, Jonathan Matthew Cannata, K. Kirk Shung</i>	

Dual-Mode Intracranial Catheters for Minimally-Invasive Neuro-Oncology: Feasibility Study	1012
<i>Carl D. Herickhoff, Edward D. Light, Patrick D. Wolf, Stephen W. Smith, Gerald A. Grant, Gavin W. Britz</i>	
Elastic Waves in a 3D Non Cohesive Granular Phononic Crystal with Rotating Particles	1016
<i>Aurélien Merkel, Vincent Tournat, Vitalyi Gusev</i>	
Elastic Band Gaps of Two-Dimensional Phononic Crystals Tunned by Material Parameters	1020
<i>Xiao-Zhou Zhou, Yue-Sheng Wang, Chuanzeng Zhang</i>	
Characterization of Evanescent Ultrasonic Waves in a Band Gap of a 1D Phononic Crystal	1024
<i>Maxime Bavencoffe, Bruno Morvan, Jean-Louis Izbicki, Anne-Christine Hladky-Hennion</i>	
Study of Plane Periodic Multilayered Viscoelastic Media: Experiment and Simulation	1028
<i>O. Lenoir, P. Maréchal</i>	
Real-Time Simulations and Experiments on Ultrahigh Frequency Surface Acoustic Waves in Micro-Structured Phononic Crystals	1032
<i>Istvan A. Veres, Dieter M. Profunser, Oliver B. Wright, Osamu Matsuda, Udo Lang</i>	
Laser Interferometers in Physical Acoustics	1036
<i>Kimmo Kokkonen</i>	
Heterodyne Laser-Doppler Interferometric Characterization of Contour-Mode Resonators Above 1 GHz	1044
<i>Hengky Chandralalim, Sunil A. Bhave, Ronald G. Polcawich, Jeff Pulskamp, Babak Pourat, Sebastian Boedecker, Christian Rembe</i>	
Measuring the Frequency Response of Photodetectors Used in Ultrasonic Applications by a Heterodyne System with Difference-Frequency Servo Control	1050
<i>Christian Koch</i>	
Novel Screw-Shaped Ultrasonic Motor to Obtain High Torque	1054
<i>Atsuyuki Suzuki, Kentaro Izumi, Jiromaru Tsujino</i>	
Micro Ultrasonic Motor with Ultrasonically Assembled Micro-Mirrors	1058
<i>S. Tin, S. Ardanuc, A. Lal</i>	
Novel Ultrasonic Motor Using Torsional/ Longitudinal Vibration	1062
<i>S. Bhargava, D. W. Greve, I. J. Oppenheim</i>	
Modes and Tip Motions in Ultrasonic Motors Using Torsional/ Longitudinal Vibration	1066
<i>David W. Greve, Irving J. Oppenheim</i>	
A Cylindrical Ultrasonic Motor for NMR Sample Spinning in High Magnetic Field	1070
<i>Hiraku Maeda, Akihito Kobayashi, Takefumi Kanda, Koichi Suzumori, Kiyonori Takegoshi</i>	
Measurement of Electric Properties in a ZnO Single Crystal Via Electromechanical Coupling Using Brillouin Scattering Method	1074
<i>Takahiko Yanagitani, Hiroyuki Sano, Mami Matsukawa</i>	
Eigen-Frequency and Frequency Response Calculation of Piezoelectric Resonator Parameters	1078
<i>Yook-Kong Yong, Frank Fang, Shih Chuang</i>	
One-Parameter Nonlinear Mason Model for Predicting 2nd and 3rd Order Non-Linearities in BAW Devices	1082
<i>David A. Feld</i>	
Nonlinear Acoustic Waves Localized at Crystal Edges	1088
<i>Andreas P. Mayer, Alexey M. Lomonosov, Peter Hess</i>	
The Finite Element Analysis of Quartz Crystal Resonators with Nonlinear Plate Equations	1092
<i>Ji Wang, Leping Chen, Rongxing Wu, Jianke Du, Yook-Kong Yong, Lihong Wang</i>	
Ultrasonic Linear Motor Using Traveling Surface Acoustic Wave	1096
<i>Minoru Kuribayashi Kurosawa</i>	
Segment-Structured Diamond-Like Carbon Films Installed on Driving Surface of Surface Acoustic Wave Linear Motor	1106
<i>Mitsuru Nakamura, Yosuke Fujii, Hiroyuki Kotani, Masaya Takasaki, Takeshi Mizuno, Tsuyoshi Kuroda, Naoto Ohtake</i>	
Defect-Mode Waveguide and Coupled-Mode Theory	1111
<i>Toyokatsu Miyashita</i>	
Properties of Acoustic Wave Propagation in a Double Negative Metamaterial	1115
<i>Ivan Lisenkov, Roman Popov, Sergey Nikitov</i>	
Simultaneous Photonic and Phononic Band Gaps in a Two-Dimensional Lithium Niobate Crystal	1118
<i>Said Sadat-Saleh, Sarah Benchabane, Fadi I. Baida, Maria-Pilar Bernal, Vincent Laude</i>	
Influence of Disorder on Wave Propagation and Localization in 2D Phononic Crystals with a Point Defect	1122
<i>A-Li Chen, Yue-Sheng Wang, Chuanzeng Zhang</i>	
Negatively Refracted Transverse Waves: Study of the Ultrasonic Field at the Exit of an Elastic Phononic Crystal	1126
<i>B. Morvan, A. Tinel, A. C. Hladky-Hennion, J. Vasseur, J. P. Groby, B. Dubus, B. Djafari-Rouhani</i>	
Fabrication of 20 MHz Convex Array Transducers for High Frequency Ophthalmic Imaging	1130
<i>Hyung Ham Kim, Jonathan M. Cannata, Jay A. Williams, Jin Ho Chang, K. Kirk Shung</i>	
Functional Characterisation of High Frequency Arrays Based on Micro-Moulded 1-3 Piezocomposites	1134
<i>Christine Demore, Anne Bernassau, Nigel Bush, Luis Garcia-Gancedo, Florent Dauchy, David Hutson, Tim Button, Jeffrey Bamber, Sandy Cochran</i>	
Electroacoustic Performance of High Frequency PZT Based Transducer Fabricated by Electrophoretic Deposition: Comparison with Screen Printing Technique	1138
<i>Guy Feuillard, Danjela Kuscer, Louis Pascal Tran-Huu-Hue, Emmanuel Le Clezio, Marija Kosec, Marc Lethiecq</i>	
1-3 Piezocomposite Design Optimised for High Frequency Kerfless Transducer Arrays	1142
<i>C. E. M. Démoré, S. Cochran, L. Garcia-Gancedo, F. Dauchy, T. W. Button</i>	
Techniques for Wirebond Free Interconnection of Piezoelectric Ultrasound Arrays Operating Above 50 MHz	1146
<i>A. L. Bernassau, D. Flynn, F. Amalou, M. P. Y. Desmulliez, S. Cochran</i>	

Ultra High Frequency (UHF) Phononic Crystal Devices Operating in Mobile Communication Bands	1150
<i>Roy H. Olsson III, Simon X. Griego, Ihab El-Kady, Mehmet Su, Yasser Soliman, Drew Goettler, Zayd Leseman</i>	
Transmission Properties of 1D and 2D Phononic Crystal Sensors	1154
<i>Ralf Lucklum, Jing Li</i>	
A High-Quality Factor Piezoelectric-On-Substrate Phononic Crystal Micromechanical Resonator	1158
<i>Saeed Mohammadi, Ali A. Eftekhar, Abdelkrim Khelif, Ali Adibi</i>	
Waveguide Localization in Graded Crystals with Antiguiding Acoustic Velocity Profile	1161
<i>A. V. Kozlov , V. G. Mozhaev, A. V. Zyryanova</i>	
Microstructured Materials - Propagation and Use for Impedance Matching	1165
<i>P. Harris, R. Young, A. Dawson, R. Petherick, F. Lecarpentier</i>	
Measurements of Acoustical Properties of ZnO Single Crystals by the LFB /PW Ultrasonic Material Characterization System	1169
<i>Yuusuke Kourai, Sho Yoshida, Yuji Ohashi, Mototaka Arakawa, Jun-Ichi Kushibiki, Noboru Sakagami</i>	
RF MEMS: Focusing on the Next Step	1173
<i>Takeo Oita</i>	
Super High Frequency Width Extensional Aluminum Nitride MEMS Resonators	1179
<i>K. E. Wojciechowski, R. H. Olsson III, C. D. Nordquist, M. R. Tuck</i>	
Effects of Mechanical and Electrical Coupling on Parametric Sensitivity of Mode Localized Sensors	1183
<i>P. Thiruvengatanathan, J. Yan, J. Woodhouse, A. Aziz, A. A. Seshia</i>	
Power Handling and Related Frequency Scaling Advantages in Piezoelectric AlN Contour-Mode MEMS Resonators	1187
<i>Chengjie Zuo, Matteo Rinaldi, Gianluca Piazza</i>	
Joint Estimation of Fibers and Fines Concentration in Paper Pulp Suspensions Using a Combined Optical and Acoustic Technique	1191
<i>Jan Niemi, Johan E. Carlson, Torbjorn Lofqvist</i>	
Cleaning Membranes with Focused Ultrasound Beams for Drinking Water Treatment	1195
<i>Jian-Yu Lu, Xi Du, Glenn Lipscomb</i>	
Ultrasound Thermometry for Monitoring Internal Temperature Gradient in Heated Material	1199
<i>Ikuo Ihara, Manabu Takahashi</i>	
A Quantitative Assessment for the Orientation and Distribution of Carbon Fibers in the Bipolar Plate of Fuel Cell Using High Frequency Ultrasound	1203
<i>Yi-Hsun Lin, Chih-Chung Huang, Shyh-Hau Wang</i>	
Characterization of Material Properties in Solid Oxide Fuel Cells Using a Laser Ultrasound Technique	1207
<i>Che-Hua Yang, Sheng-Wei Tang</i>	
Welding Characteristics of Aluminum, Copper, Nickel and Aluminum Alloy with Alumina Coating Using Ultrasonic Complex Vibration Welding Equipments	1211
<i>Jiromaru Tsujino, Terumichi Murakoshi</i>	
Theoretical Exploration of Shear Stress Generated by Oscillating Microbubbles on the Cell Membrane in the Context of Sonoporation	1215
<i>Alexander A. Doinikov, Peggy Palanchon, Kadija Kaddur, Ayache Bouakaz</i>	
Comparison of Pulse Subtraction Doppler and Pulse Inversion Doppler	1219
<i>V. Mahue, J. M. Mari, M. X. Tang, R. J. Eckersley</i>	
Exploitation of Multi-Frequency Excitation for Contrast Agent Imaging	1223
<i>Anthony Novell, Ayache Bouakaz</i>	
Fractional Fourier Transform with Pulse Inversion for Second Harmonic Pulse Compression	1227
<i>Muhammad Arif, Steven Freear</i>	
Phase-Dependent Dual-Frequency Contrast Imaging	1231
<i>Chih-Hao Cheng, Che-Chou Shen, Chih-Kuang Yeh</i>	
Investigation of Chirp Coded Excitation with Dual-Frequency Transmit for Ultrasonic Harmonic Contrast Detection	1235
<i>Che-Chou Shen, Yi-Yuan Chiu</i>	
Temperature Dependent Behaviour of Ultrasound Contrast Agents	1239
<i>Helen Mulvana, Robert J. Eckersley, Eleanor Stride</i>	
Effect of Bubble Interaction on Contrast Agent Destruction Behaviour Under Repeated Insonation	1243
<i>Monica Siepmann, Martin P. Mienkina, Georg Schmitz</i>	
Improvement of the Power Response in Contrast Imaging with Transmit Frequency Optimization	1247
<i>Sébastien Ménigot, Anthony Novell, Ayache Bouakaz, Jean-Marc Girault</i>	
Registration of Ultrasound Contrast Images for Perfusion Analysis	1251
<i>Radim Kolar, Radovan Jirik, Vratislav Harabis, Kim Nylund, Odd Helge Gilja</i>	
Effects of Phase Transition of a Lipid Bilayer on Dynamics of Bubble Liposomes	1255
<i>Nobuki Kudo, Katsuji Sakaguchi, Ryo Suzuki, Kazuo Maruyama</i>	
Survival of Single Microbubbles Insonated in Solution and in Narrow Tubes	1259
<i>Mairéad Butler, Aris Dermitzakis, David Thomas, Stephen D. Pye, Vassilis Sboros</i>	
Strength of Attachment of a Targeted, In-House, Microbubble, Ultrasound Contrast Agent	1262
<i>A. L. Edgeworth, T. Anderson, J. A. Ross, I. F. Ansell, M. Butler, L. Norrie, W. N. McDicken, C. M. Moran</i>	
Evaluation of the Binding Force Between a Biotinylated Microbubble and a Streptavidin-Coated Surface by Ultrasound Radiation	1266
<i>Toshihiko Sugiura, Klazina Kooiman, Marcia Emmer, Hendrik J. Vos, Annemieke Van Wamel, Nico De Jong</i>	
Effect of Pre-Trapping of Micro Bubbles on Mechanical Damage Enhancement in Bubble Cavitation	1270
<i>Yoshiki Yamakoshi, Takashi Miwa, Nobuyuki Yoshizawa, Yuuji Takahashi, Hiroki Inoguchi</i>	

Multimodality Contrast Agent: Synthesis and Applications of ¹⁸F-Labelled Microbubbles for MicroUS and MicroPET	1274
<i>Ai-Ho Liao, Shih-Yen Wu, Chien-Hsiu Weng, Hsin-Ell Wang, Pai-Chi Li</i>	
Targeting Microbubbles with Shiga-Toxin B-Subunit	1278
<i>O. Couture, M. Tanter, E. Dransart, S. Dehay, L. Johannes</i>	
Parametric Imaging of Dynamic Vascular Patterns of Focal Liver Lesions in Contrast-Enhanced Ultrasound	1282
<i>Nicolas G. Rognin, Laurent Mercier, Peter Frinking, Marcel Arditi, Geneviève Perrenoud, Anass Anaye, Jean-Yves Meuwly</i>	
Using Passive Cavitation Detection to Observe Postexcitation Response of Ultrasound Contrast Agents	1286
<i>Daniel A. King, Mathieu Santin, Michael J. Malloy, Alayna C. Roberts, Alexander Haak, Josquin Foiret, Sylvain Hauptert, Sara Jafari, Lori Bridal, William D. O'Brien Jr.</i>	
An In-Vivo Evaluation of the Effects of Anesthesia Carrier Gases on Ultrasound Contrast Agent Circulation	1290
<i>Lee Mullin, Ryan Gessner, James Kwan, Mark A. Borden, Paul A. Dayton</i>	
Fluorocarbon Droplets as Next Generation Contrast Agents - Their Behavior Under 1-3 MHz Ultrasound	1294
<i>Rei Asami, Takashi Azuma, Ken-Ichi Kawabata</i>	
Design and Evaluations of a Phased Ultrasound Array for Transesophageal Cardiac Ablation	1298
<i>Devina Jaiswal, Jacob Werner, Eun-Joo Park, Nadine Barrie Smith, David Francischelli</i>	
Ultrasonic Analysis of Precision-Engineered Acoustically Active Lipospheres Produced by Microfluidics	1302
<i>Kanaka Hettiarachchi, Abraham P. Lee, Steven G. Feingold, Paul S. Sheeran, Paul A. Dayton</i>	
Computational Model of Phased Array for an Image Guided Pediatric Cardiac Treatment	1306
<i>R. Mosse, R. J. Meyer Jr., S. Ge, N. B. Smith</i>	
Continuous VS Pulse Ultrasound Therapy on the Flexibility of Short Hamstring Muscles	1310
<i>Azadeh Shadmehr, Hasan Nadimi Astaneh</i>	
Comparative Study of the Effects of Respiratory Motion on In-Vivo HIFU Treatments in the Liver	1314
<i>David Melodelima, William A. N'Djin, Naomi R. Miller, Jeffrey C. Bamber, Jean-Yves Chapelon</i>	
A High-Frequency Beamforming Design Based on Variable PMN-PT SAW Delays	1318
<i>Rob Adamson, Zahra Torbatian, Manohar Bance, Jeremy Brown</i>	
A Digital Scan Conversion Algorithm Using Fourier Transform	1322
<i>Dong-Ki Ahn, Mok-Kun Jeong, Sung-Jae Kwon, Moo-Ho Bae</i>	
Co-Array Optimization of CMUT Arrays for Forward-Looking IVUS	1326
<i>Coskun Tekes, Mustafa Karaman, F. Levent Degertekin</i>	
PC-Based Modular Digital Ultrasound Imaging System	1330
<i>Amr M. Hendy, Mawia Hassan, Rania Eldeeb, Dina Kholy, Abou-Bakr Youssef, Yasser M. Kadam</i>	
Using GPUs for Beamforming Acceleration in SAFT Imaging	1334
<i>D. Romero, O. Martinez-Graullera, C. J. Martin, R. T. Higuti, A. Octavio</i>	
Design of a Micro-Beamformer for a 2D Piezoelectric Ultrasound Transducer	1338
<i>S. Blaak, Z. Yu, G. C. M. Meijer, C. Prins, C. T. Lancée, J. G. Bosch, N. De Jong</i>	
Real-Time Specific Beamforming Applied to Motion Trajectory Estimation in Ultrasound Imaging	1342
<i>Guillaume Zahnd, Adrian Basarab, Hervé Liebgott, Olivier Basset, Philippe Delachartre</i>	
A New ASIC Architecture for Ultrasonic Synthetic Aperture Imaging System	1346
<i>Moo-Ho Bae, Jeong-Ho Ham, Ra-Young Yoon, Han-Woo Lee, Mok-Kun Jeong</i>	
Hematocrit Evaluation Based on Ultrasonic Estimations of Shear Rate and Viscosity in Blood Flow	1349
<i>Naotaka Nitta, Hiroshi Masuda, Hidenori Suzuki</i>	
A High-Precision Gravity Intravenous Infusion Rate Meter Using CMUT Arrays	1355
<i>Mengli Wang, Jingkuang Chen</i>	
Evaluation Study of Fast Spectral Estimators Using In-Vivo Data	1359
<i>K. L. Hansen, F. Gran, M. M. Pedersen, I. K. Holfort, J. A. Jensen, M. B. Nielsen</i>	
Adaptive Clutter Rejection for Ultrasound Color Doppler Imaging of Lower Extremity Blood Flow: Preliminary Results	1363
<i>Sangwon Kim, Yuhwa Lee, Jaesok Yu, Tai-Kyong Song, Yang Mo Yoo</i>	
Reducing Color Flow Artifacts Caused by Parallel Beamforming	1367
<i>Torbjørn Hergum, Tore Gruner Bjstad, Lasse Løvstakken, Kjell Kristoffersen, Hans Torp</i>	
New Clutter Rejection Method Using Time-Domain Averaging for Ultrasound Color Doppler Imaging	1371
<i>Jaejin Lee, Jeong Cho, Yang Mo Yoo, Tai-Kyong Song</i>	
Performance of the Transverse Oscillation Method Using Beamformed Data from a Commercial Scanner	1375
<i>Michael Johannes Pihl, Svetoslav Nikolov, Per Haugaard, Martin Christian Hemmsen, Jørgen Arendt Jensen</i>	
A Simulation Setup to Optimize Particle Flow Velocimetry	1379
<i>Hang Gao, Florence Kremer, Hon Fai Choi, Jens-Uwe Voigt, Piet Claus, Jan D'Hooge</i>	
Further Progress on Lateral Flow Estimation Using Speckle Size Variation with Scan Direction	1383
<i>Tiantian Xu, Gregory R. Bashford</i>	
A Least-Squares Vector Flow Estimator for Synthetic Aperture Imaging	1387
<i>Ivan K. H. Tsang, Billy Y. S. Yiu, Alfred C. H. Yu</i>	
Characterization of 3-D Flow Structures in the Stenosed Carotid Bifurcation with Plaque Ulceration	1391
<i>E. Y. Wong, J. S. Milner, D. A. Steinman, T. L. Poepping, D. W. Holdsworth</i>	
The Ultrasound Brain Helmet for 3D Transcranial Doppler Imaging	1395
<i>Brooks D. Lindsey, Nikolas M. Ivancevich, Edward D. Light, Stephen W. Smith, Heather A. Nicoletto, Ellen Bennett, Daniel T. Laskowitz</i>	
QRS Detection and Cardiac Cycle Separation Without ECG	1399
<i>Svein Arne Aase, Sten Roar Snare, Ole Christian Mjølstad, Havard Dalen, Fredrik Orderud, Hans Torp</i>	
Performance Optimization of Block Matching in 3D Echocardiography	1403
<i>Gabriel Kiss, Espen Nielsen, Fredrik Orderud, Hans G. Torp</i>	

Bandwidth Doppler Tissue Imaging (BDTI) in the Myocardium	1407
<i>W. N. McDicken, M. J. Bennett, M. Butler, T. Anderson</i>	
An In-Vivo Study on the Difference Between Principal and Cardiac Strains	1411
<i>Daniel Barbosa, Piet Claus, Hon Fai Choi, Krasimira Hristova, Dirk Loeckx, Jan D'Hooge</i>	
A High Performance Spatio-Temporal Displacement Smoothing Method for Myocardial Strain Imaging	1415
<i>Shuhui Bu, Tsuyoshi Shiina, Makoto Yamakawa</i>	
Sources and Characterization of Clutter in Cardiac B-Mode Images	1419
<i>Muyinatu A. Lediju, Brett C. Byram, Gregg E. Trahey</i>	
An Multi-Resolution Displacement Estimator for Ultrasonic Myocardial Strain Imaging	1423
<i>Lingyun Huang, Congxian Jia, Sheng-Wen Huang, Chi Hyung Seo, Matthew O'Donnell</i>	
Tracking the Endocardial Border in Artifact-Prone 3D Images	1427
<i>K. Y. Esther Leung, Mikhail G. Danilouchkine, Marijn Van Stralen, Nico De Jong, Antonius F. W. Van Der Steen, Johan G. Bosch</i>	
Fibroscan® in Hepatology: A Clinically-Validated Tool Using Vibration-Controlled Transient Elastography	1431
<i>Laurent Sandrin, Céline Fournier, Véronique Miette, Gunda Millonig, Sebastian Mueller</i>	
Validation of Vibration-Controlled Transient Elastography by Means of Dynamic Mechanical Analysis: Application to In Vivo / In Vitro Porcine Liver	1435
<i>Jennifer Oudry, Nicolas Périchon, Simon Chatelin, Pierre Allemann, Luc Soler, Rémy Willinger, Laurent Sandrin</i>	
In Vivo Assessment of Fibrosis in Murine Liver Using Transient Microelastography: A Feasibility Study	1439
<i>Cécile Bastard, Matteo Bosisio, Meriem Yorgov, Hélène Gilgenkrantz, Laurent Sandrin</i>	
Quantitative Elasticity Measurements Reveal Intratumoral Changes in Response to Antiangiogenic Therapy – Preliminary Results	1443
<i>Kenneth Hoyt, Jason M. Warram</i>	
Shear Viscosity Measurement Using Vibration-Controlled Transient Elastography	1447
<i>Cécile Bastard, Jean-Pierre Remeniéras, Laurent Sandrin</i>	
Measurement of Elastic Property of Breast Tissue for Elasticity Imaging	1451
<i>T. Matsumura, T. Umemoto, Y. Fujihara, E. Ueno, M. Yamakawa, T. Shiina, T. Mitake</i>	
Fibroscan® Practice Improvement with a Real-Time Assistance Ultrasound Tool: A Preliminary Study	1455
<i>Stéphane Audière, Yassine Mofid, Maurice Charbit, Elsa Angelini, Veronique Miette, Laurent Sandrin</i>	
Determination of Sound Velocity Distribution Using Sectional Near-Field Acoustical Holography and Simulated Annealing	1459
<i>Takeshi Ohbuchi, Tadashi Ebihara, Koichi Mizutani, Naoto Wakatsuki, Hiroyuki Masuyama</i>	
Study on the Shallow Underground Imaging by the Pulse Compression Method That Considered Frequency Dependent Attenuation	1463
<i>Tsuneyoshi Sugimoto, Hiraku Kawasaki</i>	
An Improved Method for Tomographic Density Imaging Using a Multiple Frequency Inverse Scattering Approach	1467
<i>Roberto J. Lavarello, Michael L. Oelze</i>	
Laser Ultrasonic Investigation of Laminate Disbonding	1471
<i>Alexandr Karabutov, Oleg Sapozhnikov</i>	
Experimental Evaluation of the Moving Linear Array Technique Applied to Livescan Biometrics	1475
<i>Antonio Iula, Michele De Santis, Giosuè Caliano, Massimo Pappalardo</i>	
Non-Destructive Evaluation of the 18th Century Ship Wreck Vrouw Maria	1479
<i>Ari Salmi, Joonas Eskelinen, Marko Peura, Edward Hægström, Kari Steffen, Leone Montonen</i>	
An Efficient Formulation for Harmonic Waves in Multilayered Cylindrical Structures	1483
<i>Ergun Simsek, Bikash K. Sinha</i>	
Piezoelectric Composite Film for Acoustic Emission Detection	1487
<i>Walter Katsumi Sakamoto, Ricardo Tokio Higuti, Marcelo Moreira Tiago</i>	
Efficient Mode Conversion Transducers for Use in Ultrasonic Flow Meters	1491
<i>Shrinivas Joshi, Ghatadi Nagaraj, Boris Zaitsev, Iren Kuznetsova</i>	
Visualization of Sound Propagation in Solids Using Electrodynamical Probes	1495
<i>Uwe Völz, Marc Kreutzbruck, Heinz Mrasek, Klaus Matthies</i>	
Guided Waves Based Approach for the Reconstruction of the Elastic Moduli of Plates	1499
<i>Michele Sale, Alessandro Marzani, Piervincenzo Rizzo</i>	
High Frequency Guided Waves in a 7 Wire Strand: Warped Frequency Transform for Spectro-Temporal Characterization	1503
<i>A. Marzania, L. De Marchi, N. Speciale, P. Rizzo</i>	
Resonant Langasite Microsensor for Scanning Microdeformation Microscopy	1507
<i>G. Douchet, F. Sthal, E. Bigler, T. Leblois, P. Vairac</i>	
Quantitative Ultrasonic Characterization of Layered Polymer Structures	1511
<i>Tom Fabritius, Joonas Eskelinen, Edward Hægström</i>	
Synthetic Aperture Focusing Technique for High-Resolution Imaging of Surface Structures with High-Frequency Ultrasound	1514
<i>M. Vogt, J. Opretzka, H. Ermert</i>	
Aberration Correction for Biological Acoustic Impedance Microscope	1518
<i>T. Uemura, T. Suzuki, K. Hanai, N. Hozumi, S. Yoshida, K. Kobayashi, S. Yamamoto, Y. Saijo</i>	
A Generic Parametric Model for Ultrasonic Echo Analysis	1522
<i>Ramazan Demirli, Jafar Saniie</i>	
Frequency Domain Low Time-Bandwidth Product Chirp Synthesis for Pulse Compression Side Lobe Reduction	1526
<i>Teemu Virolainen, Joonas Eskelinen, Edward Hægström</i>	
Target Sizing: Spectral Method Versus Wavelet-Based Estimator	1529
<i>Angel Scipioni, Patrick Schweitzer, Pascal Rischette, Jerome Mathieu</i>	

Enhancing Real-Time Ultrasound Signatures of Molten Nugget Growth for Quality Evaluation of Resistance Spot Welds	1533
<i>A. C. Karloff, A. M. Chertov, R. Gr. Maev</i>	
Characterization of Thin Layers in Multi-Layered Structures: On the Problem of Finding Starting Values for Numerical Solutions to Inverse Problems	1537
<i>Johan E. Carlson, Fredrik Hagglund</i>	
SAW Passive Wireless Multi Sensor System	1541
<i>N. Y. Kozlovski, D. C. Malocha</i>	
Visualization of Negative Refraction in Phononic Crystal Using Pulsed Light Source	1545
<i>Kojiro Nishimiya, Takeshi Ohbuchi, Naoto Wakatsuki, Koichi Mizutani, Ken Yamamoto</i>	
Finite Element Method for Analysis of Band Structures of Phononic Crystal Slabs with Archimedean-Like Tilings	1548
<i>Jianbao Li, Yue-Sheng Wang, Chuanzeng Zhang</i>	
Off-Axis Directional Acoustic Wave Beaming Control by an Asymmetrically Rubber Heterostructures Film Deposited on Steel Plate in Water	1552
<i>Feyan Cai, Hairong Zheng, Zhaojian He, Zhengyou Liu</i>	
Band Structures for Different Kinds of Point Defect in Phononic Crystal Thin Plates	1555
<i>Zong Jian Yao, Guilan Yu, Yue Sheng Wang</i>	
Evaluation of Synthetic Silica Glasses by the Ultrasonic Microspectroscopy Technology	1559
<i>Mototaka Arakawa, Hideki Shimamura, Jun-Ichi Kushibiki</i>	
Investigation of High-Pressure Transitions in Vegetable Oils by Measuring Phase Velocity of Longitudinal Ultrasonic Waves	1563
<i>P. Kielczynski, M. Szalewski, A. J. Rostocki, M. Zduniak, R. M. Siegoczynski, A. Balcerzak</i>	
Measurements Under High Pressure of Ultrasonic Wave Velocity in Glycerol	1567
<i>Hassina Khelladi, Frédéric Plantier, Jean Luc Daridon, Hakim Djelouah</i>	
LGS as a Crystal for MEMS Micromachining in HCl:H₂O, Anisotropy, Database and Simulations	1571
<i>C. R. Tellier, M. Akil, T. G. Leblois</i>	
Characterization of ZnO Polycrystalline Films on Silica Glass by the LFB Ultrasonic Material Characterization System	1575
<i>Jun-Ichi Kushibiki, Yuuji Ohashi, Mototaka Arakawa, Sho Yoshida, Yuusuke Kourai, Takanori Kondo, Satoshi Fujii</i>	
A Novel Method for Numerical Simulation of Sound Wave Propagation Using Heptic Interpolation Profile Method	1579
<i>Kan Okubo, Takao Tsuchiya, Ryo Seta, Norio Tagawa</i>	
Numerical Simulation of Parametric Field Patterns of Ultrasonic Transducer Arrays	1582
<i>Milan Cervenka, Michal Bednarik, Petr Konicek</i>	
A Theoretical Potential-Well Model of Acoustic Tweezers	1586
<i>Shih-Tsung Kang, Chih-Kuang Yeh</i>	
Attenuation of Ultrasound Pressure Fields Described Via Contrast Source Formulation	1590
<i>L. Demi, M. D. Verweij, J. Huijssen, N. De Jong, K. W. A. Van Dongen</i>	
Application of Waterman-Truett Theory and the Dynamic Generalised Self-Consistent Model to the Study of the Trabecular Bone Case	1594
<i>M. Molero, A. Villareal, L. Medina</i>	
2D Finite Impulse Response Filters for Surface Wave Identification	1598
<i>Loïc Martinez, Nicolas Wilkie-Chancellier, Bart Sarens, Christ Glorieux</i>	
Modelling Ultrasonic Wave Propagation in a Multilayered Medium for Resistance Spot Welding	1602
<i>J. Kocinski, W. Arthur, P. Kustron, A. M. Chertov, R. Gr. Maev, J. Kocinski, P. Kustron, M. Korzeniowski, A. Ambroziak</i>	
Eigenfrequency of Cavity Resonators at Different Reflection Conditions	1606
<i>Andreas Peter, Svetla Vassileva</i>	
Frequency Domain Perfectly Matched Layers for Acoustic Scattering Integral Equation Problems	1610
<i>E. J. Alles, K. W. A. Van Dongen</i>	
Quasi-Epitaxial Growth of Crystalline Wurtzite AlN Thin Films on Si (001) by RF Magnetron Sputtering	1614
<i>C. Caliendo, P. Imperatori, G. Scavia</i>	
The Temperature Dependence of Quantum Optical Transition Properties of GaN and GaAs in a Infinite Square Well Potential System	1620
<i>S. H. Lee, J. Y. Sug, J. Y. Choi, G. Sa-Gong, J. T. Lee</i>	
Pneumatic Flow Control Valve Using Particle Excitation by PZT Transducer	1624
<i>Daisuke Hirooka, Koichi Suzumori, Takefumi Kanda</i>	
Noncontact Ultrasonic Particle Manipulation for a Long Distance in Air Using a Bending Vibrator and a Reflector	1628
<i>Daisuke Koyama, Yu Ito, Kentaro Nakamura</i>	
Analysis of Exponentially Tapered Piezoelectric Bimorph Actuator	1632
<i>Jungsoon Kim, Moojoon Kim, Kanglyeol Ha</i>	
Experimental Consideration of High Frequency Ultrasonic Atomization Using SAW Devices	1636
<i>Jun Kondoh</i>	
Propulsion of Droplets on Non-Piezoelectric Substrates Via Mode Conversion of Lamb Waves	1640
<i>M. Schmitt, G. Lindner, S. Krempel, H. Faustmann, F. Singer</i>	
Time-Delay Compensation in Detection Electronics of Fast Scanning 2D SAW/BAW Laser Probe	1644
<i>Tatsuya Omori, Keisuke Kashiwa, Ken-Ya Hashimoto, Masatsune Yamaguchi</i>	
A Multiple-Scan Focusing Method for RF BAW Device Observation by Laser Probe System	1648
<i>Nan Wu, Ken-Ya Hashimoto, Tatsuya Omori, Masatsune Yamaguchi</i>	
Method for Phase Sensitive Measurements of Surface Vibrations Using Homodyne Interferometry Without Stabilization	1652
<i>Lauri Lipiainen, Kimmo Kokkonen, Olli Holmgren, Matti Kaivola</i>	

SAW Reflection from Surface Inhomogeneities of Isotropic and Anisotropic Substrates	1656
<i>Alexander Darinskii, Manfred Weihnacht, Hagen Schmidt</i>	
Four-Wave Interaction in 2D Periodic Structures	1660
<i>Elena Mayer, Leonhard M. Reindl, Victor Plessky, Andreas P. Mayer</i>	
Computation of Plate Wave Dispersion Diagrams and Surface Wave Velocities Without Explicit Boundary Conditions	1664
<i>Vincent Laude, Badreddine M. Assouar, Zhilin Hou</i>	
Simulation of SAW Waveguiding on Substrates with Asymmetric Slowness and Excitation	1668
<i>Markus Mayer, Karl Wagner</i>	
Study of Tantalum and Iridium as Adhesion Layers for Pt/LGS High Temperature SAW Devices	1672
<i>Thierry Aubert, Omar Elmazria, Badreddine Assouar, Laurent Bouvot, Zoumnone Bournebe, Michel Hehn, Sylvain Weber, Mourad Oudich, Patrick Alnot</i>	
Material and Resonator Design Dependent Loss in Languisite Bulk Acoustic Wave Resonators at High Temperatures	1676
<i>Michal Schulz, Denny Richter, Holger Fritze</i>	
Influence of Packaging Atmospheres on the Durability of High-Temperature SAW Sensors	1680
<i>Jochen Bardong, Gudrun Bruckner, Martin Kraft, Rene Fachberger</i>	
Theoretical Sensitivity Evaluation of a Shear-Horizontal SAW Based Micro Rate Sensor	1684
<i>Wen Wang, Shitang He, Honglang Li</i>	
SAW Tags Based of the Selfmatched Unidirectional Transducers	1688
<i>Boris Sveshnikov</i>	
Microstructure of Piezoelectric AlN Films Deposited by AC Reactive Sputtering	1691
<i>S. M. Tanner, V. V. Felmetzger</i>	
Tapered Transmission Line Implementation of Graded Matching Layers for Thickness Mode Piezoelectric Transducers	1695
<i>S. N. Ramadas, R. L. O'Leary, A. J. Mulholland, G. Hayward, A. R. Mackintosh, A. Troge, R. A. Pethrick</i>	
Ceramic Piezocomposites Modeling and Fabrication	1699
<i>Andrey Rybyanets, Andrey Nasedkin, Tamara Domashenkina, Anastasia Rybyanets, Maria Lugovaya</i>	
LGS (La₃Ga₅SiO₁₄) Wet-Etching Experiments and Simulations	1703
<i>G. Ouyang, H. Liu, Z. Ramic, E. Halvorsen</i>	
Novel Piezoelectric Ceramic-Polymer Aligned Composites Via the Freeze Casting Method for High Frequency Transducer Applications	1707
<i>Q. F. Zhou, B. P. Zhu, C. H. Hu, K. K. Shung, E. P. Gorzkowski, M. J. Pan</i>	
Preparation of Solid and Hollow Piezoelectric Ceramic Fibers and Springs Using a Novel Alginate Gelation Method	1711
<i>Sedat Alkoy, Cem Göl</i>	
Multimodal and Unimodal Functionally Graded Piezoelectric Ultrasonic Transducers	1715
<i>Wilfredo Montealegre Rubio, Emilio Carlos Nelli Silva, Flávio Buiocchi</i>	
Nanocomposite Materials for High Frequency Ultrasound Matching Layers	1719
<i>Frank Tiefensee, Carsten Becker-Willinger</i>	
Comparison of Different Piezoelectric Materials for GHz Acoustic Microscopy Transducers	1722
<i>A. Jakob, M. Bender, T. Knoll, R. Lemor, Q. Zhou, B. P. Zhu, J. X. Han, K. K. Shung, M. Bender, T. Lehnert, M. Koch, M. Veith</i>	
Modulation and Codification of Ultrasonic Signals with EMFi Transducers	1726
<i>Fernando Seco, Joao L. Ealo, Antonio R. Jimenez</i>	
A Study of Time Stability of Piezoelectricity in Porous Polypropylene Electrets	1730
<i>Hidekazu Kodama, Yoshinobu Yasuno, Munehiro Date, Eiichi Fukada</i>	
Characteristics of Thin Film Piezoelectric Ultrasonic Transducer Array by Chemical Solution Deposition	1734
<i>J. Palosaari, J. Juuti, F. Tyholdt, N. P. Østbø, A. Vogl, E. Poppe, S. Guðbjörnsson, E. Ringgaard, B. Hök, P. -E. Fägerman, P. Gløersen, H. Ræder, H. Jantunen</i>	
Lead-Free Piezoelectric Thick Films Based on Potassium Sodium Niobate Solutions	1738
<i>Karsten Hansen, Konstantin Astafiev, Tomasz Zawada</i>	
Processing of Fine PZT Fibers by Sol-Gel Method and Preparation of Piezocomposites	1742
<i>Ebru Mensur Alkoy, A. Serkan Tekdas</i>	
Fabrication and Characterization of Large Area 1-3 Piezo-Composites Based on PMN-PT Single Crystals for Transducer Applications	1745
<i>Mai Phamthi, Hung Le Khanh, Anne-Christine Hladky-Hennion, Didace Ekeom, Louis-P. Tran-Huu-Hue, Marc Lethiecq, Franck Levassort</i>	
Feasibility of a Closed-Loop Controlled Noninvasive Ultrasonic Glucose Sensing and Insulin Delivery System	1749
<i>Eun-Joo Park, Jacob Werner, Devina Jaiswal, Andrew G. Webb, Nadine Barrie Smith</i>	
Unequal Heating Duration to Reduce the Treatment Time in High-Intensity Focused Ultrasound Therapy	1753
<i>Ji Xiang, Bai Jingfeng, Shen Guofeng, Chen Yazhu</i>	
Photoacoustic Thermometry for Therapeutic Hyperthermia	1757
<i>Parag V. Chitnis, Jonathan Mamou, James McLaughlan, Todd Murray, Ronald A. Roy</i>	
Temperature Estimation in HIFU with Lateral Speckle Tracking	1761
<i>Eunsol Baek, Jongbum Seo</i>	
Multi-Frequency Harmonics Technique for HIFU Tissue Treatment	1765
<i>Andrey Rybyanets, Andrey Nasedkin, Anastasia Rybyanets, Maria Lugovaya, Tamara Domashenkina</i>	
Tissue Coagulation Imaging Based on Bi-Plane RF Cross-Correlation During High Intensity Focused Ultrasound Therapy	1769
<i>Takashi Azuma, Ken-Ichi Kawabata, Rei Asami, Shin-Ichiro Umemura</i>	

Comparison of Acoustic Power Calibration Methods for Therapeutic Ultrasound Transducers Using PVDF Membrane Hydrophone, Scanning Laser Vibrometry and Radiation Force Measurements	1773
<i>Junho Song, Kullervo Hynynen</i>	
Function Approximations to Accelerate 3-D Beam Predictions for Thermal Dose Calculations	1777
<i>Dustin E. Kruse, Chun-Yen Lai, Mario Hlawitschka, Katherine W. Ferrara</i>	
Use of Quantitative Ultrasound to Detect Temperature Variations in Biological Phantoms Due to Heating	1780
<i>Goutam Ghoshal, Michael L. Oelze</i>	
Ultrasound Mediated Gene Silencing with Short-Hairpin RNA	1784
<i>Chien Ting Chin, Christopher S Hall, Alexander Ghanem, Clemens Troatz, Klaus Tiemann</i>	
Detection of Blood-Brain Barrier Disruption by Contrast-Enhanced High Frequency Ultrasound Image: Small Animals Study	1788
<i>Ching-Hsiang Fan, Chih-Kuang Yeh, Po-Hong Hsu, Hao-Li Liu</i>	
Ultrasound-Activated Microbubbles as Novel Enhancers of Radiotherapy in Leukemia Cells In Vitro	1792
<i>Raffi Karshafian, Anoja Giles, Peter N. Burns, Gregory J. Czarnota</i>	
Translational Studies of Pulsed HIFU Enhanced Tissue Permeability: Mechanisms in Mice and Rabbit Models	1795
<i>Brian E. O'Neill, Christof Karmonik, Elisabetta Sassaroli, King C. P. Li</i>	
The Effect of Microbubble to Skin-Like Soft Material	1799
<i>Kazuya Obata, Kenji Yoshida, Akira Tsukamoto, Takashi Ushida, Yoshiaki Watanabe</i>	
Enhancement of Doxorubicin Effect on Cancer Cell Mortality with Ultrasound and Microbubbles	1803
<i>Julien Piron, Kadija Kaddur, Ayache Bouakaz</i>	
Ultrasound and Microbubble Mediated Generation of Transient Pores on Cell Membranes In Vitro	1805
<i>Raffi Karshafian, Peter N. Burns</i>	
Acoustic Size Distribution Analyzer for Microbubbles	1809
<i>David Maresca, Marie Muller, Marcia Emmer, Hendrik J. Vos, Nico De Jong, Antonius F. W. Van Der Steen</i>	
Acoustic Characterization of Individual Monodisperse Contrast Agents with an Optical-Acoustical System	1813
<i>Mehmet Kaya, Steven Feingold, Jason Streeter, Kanaka Hettiarachchi, Abraham P. Lee, Paul A. Dayton</i>	
Ultrafast Framing Optical and Acoustical Recordings of Nonlinearly Oscillating Microbubbles	1817
<i>H. J. Vos, N. De Jong, R. Mori, J. Viti, F. Guidi, P. Tortoli, J. Sijl</i>	
An Investigation of Contrast Agent Shell Rupture Threshold in Response to Overpressure	1821
<i>Parag V. Chitnis, Paul Lee, Jonathan Mamou, Jeffrey Ketterling</i>	
A New Theoretical Model for Cracked Microbubbles	1825
<i>P. Looney, D. Thomas, R. Steel, T. Anderson, N. Pelekasis, V. Sboros</i>	
Ultrasound Phase Velocities in SonoVue™ as a Function of Pressure and Bubble Concentration	1829
<i>Kathryn Hibbs, Robert J. Eckersley, Alison Noble, Meng-Xing Tang</i>	
Theoretical Model for the Threshold Onset of Contrast Microbubble Oscillations	1833
<i>Alexander A. Doinikov, Ayache Bouakaz</i>	
GPU-Based Color Doppler Ultrasound Processing	1836
<i>Li-Wen Chang, Ke-Hsin Hsu, Pai-Chi Li</i>	
Design of a Multi-Channel Pre-Beamform Data Acquisition System for an Ultrasound Research Scanner	1840
<i>Ivan K. H. Tsang, Billy Y. S. Yiu, Dave K. H. Cheung, Harry C. T. Chiu, Chris C. P. Cheung, Alfred C. H. Yu</i>	
Software-Based Hand-Held Ultrasound Color Doppler Imaging System	1844
<i>Hyuntaek Lee, Hak-Yeol Sohn, Changhan Yoon, Yang Mo Yoo, Tai-Kyong Song</i>	
Compact Modular Doppler System with Digital RF Processing	1848
<i>Marcin Lewandowski, Mateusz Walczak, Andrzej Nowicki</i>	
Development of an Ultrasound Imaging System for Needle Guidance	1852
<i>Rahul S. Singh, Shyam Natarajan, Michael Lee, Aaron E. Dann, Brian P. Cox, David B. Bennett, Elliott R. Brown, Hua Lee, Warren S. Grundfest, Martin O. Culjat</i>	
A Transmission Method of 200MHz Range Ultrasonic Wave Using a Fused Quartz Fiber	1856
<i>Takasuke Irie, Norio Tagawa, Tadashi Moriya, Kouichi Itoh</i>	
Electronic Fresnel Focusing for Low-Cost Portable Ultrasound Imaging	1860
<i>M. Nguyen, J. Mung, J. Yen</i>	
5-DoF Trajectory Reconstruction for Handheld Ultrasound with Local Sensors	1864
<i>Philipp J. Stolka, Joyce Choi, Joseph Wang, Michael Choti, Emad M. Boctor</i>	
Optical Quantification of Acoustic Radiation Force Impulse-Induced Dynamics in a Translucent Phantom	1868
<i>Richard R. Bouchard, Mark L. Palmeri, Jason E. Streeter, Paul A. Dayton</i>	
In Vivo ARFI Imaging of the Mechanical Properties of Muscle in a Dog Model of Duchenne Muscular Dystrophy	1871
<i>Mallory R. Scola, Russell H. Behler, Joe N. Kornegay, Caterina M. Gallippi</i>	
Effects of Correlation Window Length and Reflection Amplitude on Axial Displacement Measurements Using Cone Phantoms	1875
<i>Manoj G. Menon, Stephen A. McAleavey</i>	
In Vivo Hemostasis Detection at Human Femoral Arteriotomy by ARFI Ultrasound	1879
<i>Russell H. Behler, Mallory R. Scola, Timothy Nichols, Melissa Caughey, Hongtu Zhu, Caterina M. Gallippi</i>	
Analysis of Cross-Correlation Coefficients for Subcutaneous Blood Signal Detection by ARFI Imaging	1883
<i>Mallory R. Scola, Elizabeth Mauldin, Caterina M. Gallippi</i>	
Image Reconstruction of Local Shear and Viscosity Moduli for a Finite Amplitude Modulated Acoustic Radiation Force	1887
<i>Alexia Giannoula, Richard S. C. Cobbold</i>	
Acoustic Radiation Force Impulse Imaging for Aneurysms	1891
<i>Aine Tierney, Douglas Dumont, Anthony Callanan, Tim McGloughlin</i>	

A Comparison Between 1D and 1.5D Arrays for the Formation of Spatially Modulated Ultrasound Radiation Force Beams	1895
<i>Etana Elegbe, Stephen McAleavey</i>	
Measurement of Longitudinal Wave Velocity in Trabeculae by Micro-Brillouin Scattering	1898
<i>Masahiko Kawabe, Mami Matsukawa, Norikazu Ohtori</i>	
Tendinopathy Discrimination Using Spatial Frequency Parameters and Artificial Neural Networks	1902
<i>Pengfei Song, Kristopher R. Linstrom, A. John Boye, Kornelia Kulig, Judith M. Burnfield, Gregory R. Bashford</i>	
Tooth Characterization Using Ultrasound with Fractional Fourier Transform	1906
<i>Sevan Harput, David M. J. Cowell, J. A. Evans, Nigel Bubb, Steven Freear</i>	
Assessment of Articular Cartilage Morphological, Acoustic and Mechanical Properties Using High Frequency Ultrasound	1910
<i>Yong-Ping Zheng, Shu-Zhe Wang, Yan-Ping Huang</i>	
Ultrasonic Guided Wave Propagation in Long Bones with Varying Cortical Thickness	1914
<i>Dean Ta, Kailiang Xu, Petro Moilanen, Weiqi Wang, Sulin Cheng</i>	
Effect of Porosity Distribution in a Propagation Direction on Ultrasound Waves Through Cancellous Bone	1918
<i>Atsushi Hosokawa</i>	
Correlations Between Signal Spectrum of Ultrasonic Backscatter and Cancellous Bone Microstructure	1922
<i>Dean Ta, Kai Huang, Weiqi Wang</i>	
Characterizing Biot Constants from Ultrasound Through Trabecular Bone	1926
<i>Guillermo Rus, Michal Pakula, Quentin Grimal, Pascal Laugier</i>	
Warped Signal Dictionaries for the Analysis of Ultrasonic Guided Waves in Long Bones	1930
<i>L. De Marchi, Kailiang Xu, De-An Ta, A. Marzani, S. Caporale, N. Speciale</i>	
Simple and Noninvasive Analysis of the Pulse Wave for Blood Vessel Evaluation	1934
<i>Masashi Saito, Yuya Yamamoto, Mami Matsukawa, Yoshiaki Watanabe, Mio Furuya, Takaaki Asada</i>	
Nonlinear Tissue Characterization with Intravascular Ultrasound Harmonic Imaging	1938
<i>Sushma Srinivas, Chaitanya Chandrana, Vladimir Zagrodsky, Shuvo Roy, Aaron Fleischman</i>	
On the Characterization of Left Ventricular Function with Acoustic Radiation Force Impulse Imaging	1942
<i>Stephen J. Hsu, Richard R. Bouchard, Douglas M. Dumont, Patrick D. Wolf, Gregg E. Trahey</i>	
Algorithm for Estimating the Attenuation Slope from Backscattered Ultrasonic Signals	1946
<i>Alexander Haak, Zachary T. Hafez, Janelle J. Anderson, Maria-Teresa Herd, Kibo Nam, Ernest L. Madsen, Timothy A. Bigelow, Timothy J. Hall, William D. O'Brien Jr</i>	
Inter-Laboratory Comparison of Backscatter Coefficient Estimates for Tissue-Mimicking Phantoms	1950
<i>Janelle J. Anderson, Maria-Teresa Herd, Michael R. King, Alexander Haak, Zachary T. Hafez, Jun Song, Michael L. Oelze, Ernest L. Madsen, James A. Zagzebski, William D. O'Brien Jr., Timothy J. Hall</i>	
Estimation of Ultrasound Tissue Attenuation Along the Propagation Path by Applying Multiple Filters to the Backscattered Echoes	1954
<i>Timothy A. Bigelow</i>	
Preparation and Characterization of Microstructured Poly(Vinyl Alcohol) Phantoms Mimicking Fibrous Tissue	1958
<i>Andrew Dawson, Gideon Gouws, Paul Harris</i>	
Development of Silicon-Based Materials for Ultrasound Biological Phantoms	1962
<i>L. E. Maggi, M. A. Von Krüger, W. C. A. Pereira, E. E. C. Monteiro</i>	
Semi-Analytical Finite Element Method for Dispersion Curves Using Higher Order Elements for Long Range Ultrasonic Testing	1966
<i>José Otero, Nekane Galarza, Benjamín Rubio, Eduardo Moreno</i>	
Numerical Simulation of Sound Wave Propagation Using Hybrid Technique Combining FDTD Method and CIP Method	1970
<i>Masaki Ohmiya, Kan Okubo, Takao Tsuchiya, Norio Tagawa</i>	
Array Configurations for Higher Power Generation in Piezoelectric Energy Harvesting	1973
<i>Daisuke Koyama, Kentaro Nakamura</i>	
Free-Standing Thick-Film Piezoelectric Multimorph Cantilevers for Energy Harvesting	1977
<i>Swee L. Kok, Neil M. White, Nick R. Harris</i>	
Measurement of Granule Strength in Particle Beds Using Ultrasonic Velocity	1981
<i>P. J. Coghill, R. Bruniges, P. Giang</i>	
Compacting of Various Metal Alloy and Ceramic Powder Using 20 KHz Ultrasonic Vibration Compacting Equipment with Upper and Lower Vibration Punches	1985
<i>Jiromaru Tsujino, Noboru Shimada, Yasunori Saotome, Eiichi Sugimoto</i>	
Ultrasonic Characterization of Unconsolidated Granular Media Undergoing Compaction	1989
<i>Jean-Baptiste Legland, Vincent Tournat, Vitalyi Gusev</i>	
Wavelet Cycle-Spinning Denoising of Ultrasonic Traces Acquired from Austenitic Steel	1992
<i>Jose Luis San Emeterio, Emilia Pardo, Miguel Angel Rodriguez</i>	
Evaluation of Chirp and Binary Codes as Excitation Pulses for 3D USCT Transducers	1996
<i>M. Zapf, B. F. Derouiche, N. V. Ruiter</i>	
Applications of Time-Frequency Distributions for Ultrasonic Flaw Detection	2000
<i>Erdal Oruklu, Semih Aslan, Jafar Saniie</i>	
Hilbert Transform Pitfalls and Solutions for Ultrasonic NDE Applications	2004
<i>Erdal Oruklu, Yufeng Lu, Jafar Saniie</i>	
Real Time Adaptive Parametric Equalization of Ultrasonic Transducers	2008
<i>Sean G. Mc Sweeney, William M. D. Wright</i>	

Characterization of Bulk Acoustic Wave Transducers and Resonators Based on Low Temperature Sputtered AlN Thin Films	2012
<i>Cinzia Caliendo</i>	
Determination of the Temperature Coefficient Piezoelectric Constant (TC_{e33}) to Improve Thermal 1D Acoustic Tool for BAW Resonator Design	2016
<i>D. Petit, B. Gautier, D. Albertini, E. Defay, J. Verdier, D. Barbier, J. -F. Carpentier</i>	
The Experimental Study of Acoustic Waves of Frequency About 40GHz	2020
<i>Boris Zaitsev, Iren Kuznetsova, Mikhail Grigoriev</i>	
The Effect of Viscosity on the Love Waves in Piezoelectric Structures	2024
<i>Jianke Du, Xiaoyu Cheng, Ji Wang, Yook-Kong Yong</i>	
The Calculation of Electrical Parameters of Film Bulk Acoustic Wave Resonators from Vibrations of Layered Piezoelectric Structures	2027
<i>Ji Wang, Jiansong Liu, Jianke Du, Dejin Huang</i>	
Two-Dimensional FDTD Simulation for the Acoustic Propagation in a Piezoelectric Superlattice	2031
<i>C. Zhang, Y. Q. Qin, G. Zhao, Y. Y. Zhu</i>	
Acousto-Electron and Acousto-Optic Phenomena in Laser Heterostructures	2033
<i>Liudmila Kulakova, Ilya Tarasov, Vitaly Voloshinov</i>	
New Acousto-Optical Effect – Constant High Diffraction Efficiency in Wide Range of Acoustic Power	2037
<i>Sergey Antonov, Valery Proklov, Alexander Vainer, Yuri Rezvov</i>	
Signal Processing Methods for Materials Defects Detection	2041
<i>T. Bouden, S. Dib, K. Aissalous, M. Grimes</i>	
Resonant Acoustic Calorimetry of the Interaction of Laser Radiation with Nonlinear-Optical Crystals	2045
<i>A. V. Konyashkin, A. V. Doronkin, V. A. Tyrtshnyy, D. V. Myasnikov, O. A. Ryabushkin</i>	
Analysis of the Leaky Surface Acoustic Wave Radiation in YX-LiTaO₃ for Symmetric and Non-Symmetric IDTs	2049
<i>Paulius Kazdailis, Romualdas Rimeika, Daumantas Ciplys</i>	
Kinetics of the Nonlinear-Optical Crystal Equivalent Temperature During the Interaction with Single-Mode High-Power Laser Radiation	2053
<i>A. V. Doronkin, A. V. Konyashkin, V. A. Tyrtshnyy, D. V. Myasnikov, O. A. Ryabushkin</i>	
Ultrasonic Trapping of Beads in a Straight Channel	2057
<i>R. J. Boltryk, P. Glynne-Jones, M. Hill, S. Hirawa, T. Okada</i>	
Comparison of Bubble Behaviors on Two Different Wall-Materials in Low Frequency Ultrasonic Field	2061
<i>Kenji Yoshida, Taisuke Yoshikawa, Kazuya Obata, Yoshiaki Watanabe</i>	
Sound Propagation in Thin-Walled Elastic Pipe with Viscous Liquid-Bubble Mixture and Deformable Central Rod	2065
<i>Rudolf Bergman, Semyon Levitsky, Jehuda Haddad</i>	
A Prototype of Small-Size and Self-Oscillate Thermoacoustic System	2069
<i>Kohei Hotta, Shin-Ichi Sakamoto, Daichi Tsukamoto, Yoshiaki Watanabe</i>	
Ultrasonic Measurements of Spherical Resonator Characteristics and Determination of Their Errors	2073
<i>Ilona Ali Bláhová</i>	
Efficient Ultrasonic Atomization Using a Vibrating Small Gap	2076
<i>Kenta Tokumitsu, Daisuke Koyama, Kentato Nakamura</i>	
Nonlinear and Von Neumann Reflection of Elastic Shock Waves in Soft Solids	2080
<i>Gianmarco F. Pinton, Francois Coulouvrat, Jean-Luc Gennisson, Mickael Tanter</i>	
Laser Thermal Efficiency Increase by Means of Fast Acousto-Optic Beam Scanning	2084
<i>Sergey Antonov, Valery Proklov, Alexander Vainer, Arseniy Yunusov, Yuri Rezvov</i>	
Ultrasonic Rock Drilling Devices Using Longitudinal-Torsional Compound Vibration	2088
<i>Patrick Harkness, Andrea Cardoni, Margaret Lucas</i>	
Characterisation of Nonlinear Behaviour of Power Ultrasonic Drilling Horns	2092
<i>Andrew Mathieson, Andrea Cardoni, Patrick Harkness, Margaret Lucas</i>	
Ultrasonic Velocity in Magnetorheological Fluids Under Magnetic Fields Induced by Permanent Magnets	2096
<i>J. Rodríguez-López, L. Elvira Segura, Y. Gómez-Ullate Ricón, F. Montero De Espinosa Freijo</i>	
Explosive Instability of Ultrasonic Triads Under Frequency Modulated Electromagnetic Pumping	2100
<i>V. L. Preobrazhensky, O. Yevstafiev, P. Pernod, V. Berzhansky</i>	
The Effect of Electrical Current in Biological Tissues on Ultrasound Echoes	2103
<i>Ozkan Doganay, Yuan Xu</i>	
Experimental Optimization of Electrodes for High Q, High Frequency HBAR	2107
<i>Lukas Baumgartel, Eun Sok Kim</i>	
A Design Procedure for an Acoustic Mirror Providing Dual Reflection of Longitudinal and Shear Waves in Solidly Mounted BAW Resonators (SMRs)	2111
<i>S. Jose, A. B. M. Jansman, R. J. E. Hueting</i>	
Influence of Mobile Charges in the Substrate of BAW Filters on High Resistivity Silicon	2115
<i>A. Hagelauer, R. Weigel, B. Bader, G. Henn, A. Schaeufele, S. Marksteiner, K. Wagner</i>	
Wide Bandwidth Bragg Mirrors for Multiband BAW Filter Chips	2119
<i>J. Olivares, E. Wegmann, M. Clement, J. Capilla, E. Iborra, J. Sangrador</i>	
Reduced Order Finite Element Models of Bulk Acoustic Wave Resonators	2123
<i>Philip Katus, L. M. Reindl</i>	
Integrated Finite Element Analysis of an Electrostatically-Driven Vibrating Beam Used as a Gyro Sensor	2129
<i>Jerome Maisonnnet, Bernard Dulmet</i>	
Gyroscopic Effect for SAW in Common Piezoelectric Crystals	2133
<i>Sergey V. Biryukov, Hagen Schmidt, Manfred Wehnacht</i>	

A New Thin-Reflector Mode for Ultrasonic Particle Manipulation in Layered Resonators	2137
<i>Peter Glynne-Jones, Rosemary J. Boltryk, Martyn Hill, Nicholas R. Harris</i>	
Multi-Band RF Filter Integrating Different Modes of AlN Resonator by CMOS-Compatible Process	2141
<i>Takeshi Matsumura, Masayoshi Esashi, Hiroshi Harada, Shuji Tanaka</i>	
PZT Transduced High-Overtone Width-Extensional Resonators Above 1 GHz.....	2145
<i>Hengky Chandralalim, Sunil A. Bhave, Ronald G. Polcawich, Jeffrey S. Pulskamp, Roger Kaul</i>	
Suppression of Parasitic Resonance in Piezoresistively Transduced Longitudinal Mode Silicon MEMS Resonators	2149
<i>Jize Yan, Angel T. -H. Lin, Ashwin A. Seshia</i>	
Microresonant Impedance Transformers	2153
<i>Roy H. Olsson III, Kenneth E. Wojciechowski, Melanie R. Tuck, James E. Stevens</i>	
The Effects of Ultraviolet Radiation, Humidity and Reducing Gases on the Temperature Coefficient of Resonant Frequency of ZnO Based Film Bulk Acoustic-Wave Resonator	2158
<i>Xiaotun Qiu, Jie Zhu, Hongyu Yu, Ziyu Wang, Jon Oiler, Hongyu Yu</i>	
Multilayer Shear Wave Resonator Consisting of C-Axis Tilted ZnO Films.....	2162
<i>Naoki Morisato, Shinji Takayanagi, Takahiko Yanagitani, Mami Matsukawa, Yoshiaki Watanabe</i>	
Nanomagnet Fabrication on FBAR for Magnetic Sensor Applications	2166
<i>Humberto Campanella, Jordi Llobet, Marta Duch, Jaume Esteve, José A. Plaza, R. P. Del Real, Marina Díaz-Michelena, Héctor Guerrero</i>	
Discussion of Millimeter Wave FBAR with Very Thin AlN Film Fabricated Using MOCVD Method	2170
<i>Shoichi Tanifuji, Yuji Aota, Suguru Kameda, Tadashi Takagi, Kazuo Tsubouchi</i>	
Influence of AlN Quality on the Transversal and Longitudinal Coupling Coefficients of Acoustic Devices	2174
<i>J. Capilla, M. Clement, J. Olivares, J. Sangrador, E. Iborra</i>	
Piezoelectric Coefficients Measured by Picosecond Ultrasonics	2178
<i>P. Emery, A. Devos, N. Ben Hassine, E. Defay</i>	
Zero Mass Loading Sensitivity of the S0 Lamb Wave Resonance in Thin Film Plate Acoustic Resonators (FPAR).....	2181
<i>V. Yantchev</i>	
Patterning of 30MHz Ultrasonic Fresnel Zone Plate by Laser Poling of PVDF-TrFE Film	2185
<i>Hiroataka Yanagida, Yasutaka Tamura, Tatsuhisa Takahashi</i>	
Modeling the Pulse-Echo Response of a 2D CMUT Array Element.....	2189
<i>Feysel Yalcin Yamaner, Ayhan Bozkurt</i>	
A Novel Equivalent Circuit Model for CMUTs	2193
<i>H. Kagan Oguz, Selim Olcum, Muhammed N. Senlik, Abdullah Atalar, Hayrettin Köymen</i>	
PMN-PT Piezoelectric Thick Film for High Frequency Ultrasonic Transducer Applications.....	2197
<i>B. P. Zhu, Q. F. Zhou, K. K. Shung, Q. Wei, Y. H. Huang</i>	
High-Frequency Micromachined Ultrasonic Annular Arrays	2201
<i>D. W. Wu, C. G. Liu , Q. F. Zhou, K. K. Shung, F. T. Djuth</i>	
Characterization of cMUT by Digital Holography Microscopy.....	2205
<i>Nicolas Sénégon, Dominique Certon, Jean-Edouard Bernard, Franck Teston</i>	
Transurethral Ultrasound Catheter-Based Transducer	2209
<i>Martin O. Culjat, Aaron E. Dann, Michael Lee, David B. Bennett, Peter G. Schulam, Hua Lee, Warren S. Grundfest, Rahul S. Singh</i>	
Evanescence CHOTs for the Optical Generation and Detection of Ultrahigh Frequency SAWs	2213
<i>Ahmet Arca, Theodosia Stratoudaki, Richard J. Smith, Matt Clark, Mike Somekh</i>	
Lowering the Centre-Frequency of Thick Film PZT Devices Using Acoustically Matched Backing Layers	2217
<i>Stephen Ellwood, Steven Freear, Andrew J. Bell, Tim P. Comyn</i>	
Edge-Connected, Crossed-Electrode Array Comprising Non-Linear Transducers	2221
<i>Ichiro Fujishima, Yasutaka Tamura, Hiroataka Yanagida, Jubee Tada, Tatsuhisa Takahashi</i>	
Feasibility Study of a Membrane-Type Magnetostrictive Acoustic Transducer for Ultrasonic Thrombolysis.....	2225
<i>Seung Hyun Cho, Hong Jin Kim, Yoon Young Kim</i>	
Linear Hydrophone Arrays for Measurement of Shock Wave Lithotripter Acoustic Fields	2228
<i>Jeffrey A. Ketterling, Jonathan M. Kracht, Robin O. Cleveland</i>	
Investigating Pseudoarthritis with Ultrasound Backscattered Signals	2232
<i>Daniel Patterson Matusin, Wagner Coelho De A. Pereira, Christiano Bittencourt Machado, Manoel L. Ferreira, Alberto Schanaider</i>	
Multi-Parametric Study to Identify the Hepatic Fibrosis Stages	2236
<i>Mahmoud Meziri, Razika Bouzitoune, Chistiano Bittencourt Machado, Wagner Coelho De A. Pereira, Christiano Bittencourt Machado, Frédéric Padilla, Pascal Laugier</i>	
Periodicity Estimation Under Variations of Scatterers Spacings, Thickness and Pulse Frequency: A 2D Simulation Study	2240
<i>Christiano Bittencourt Machado, Frédéric Padilla, Wagner Coelho De A. Pereira, Mahmoud Meziri</i>	
Integrated Reflection Coefficient Correction with Respect to Surface Inclination and Axial Distance	2244
<i>N. Maennicke, M. Schoene, K. Raum</i>	
Signal Analysis for Estimating Mechanical Properties of Viable Cells Using Acoustic GHz-Microscopy.....	2248
<i>Sebastian Brand, Nick Grube, Kay Raum, Eric M. Strohm, Michael C. Kolios</i>	
Quantitative Ultrasound for Evaluating Human Cervical Microstructure	2252
<i>Lisa M. Reusch, Kibo Nam, Janelle J. Anderson, Helen Feltovich, Mark A. Kliewer, Josephine M. Harter, Timothy J. Hall</i>	
Novel Controlled Attenuation Parameter for the Evaluation of Fatty Liver Disease.....	2256
<i>Magali Sasso, Véronique Miette, Laurent Sandrin</i>	
High Resolution Ultrasonic Method for 3D Fingerprint Recognizable Characteristics in Biometrics Identification	2260
<i>Anna Maeva, Fedar Severin</i>	

Intravascular Ultrasound (IVUS) as a Potential Tool for the Arthroscopic Assessment of Articular Cartilage	2264
<i>Yong-Ping Zheng, Yan-Ping Huang</i>	
Improved Estimation of Parameters of the Homodyned K Distribution	2268
<i>David Hruska, Roberto Lavarello, William D. O'Brien Jr., Michael L. Oelze</i>	
3D Regularized Speed-Map Reconstruction in Ultrasound Transmission Tomography	2272
<i>Radovan Jirik, Igor Peterlik, Jir Jan, Nicole Ruiter, Michael Zapf</i>	
Adaptive Spatial Compounding for Ocular Imaging	2276
<i>Leo Pan, Robert Rohling</i>	
2D Noninvasive Acoustical Image Reconstruction of a Static Object Through a Simulated Human Skull Bone	2279
<i>Kiyanoosh Shapoori, Jeff Sadler, Eugene Malyarenko, Elena Maeva, Fedar Severin, Roman Gr. Maev</i>	
Displacement Vector Measurement Based on Two-Dimensional Modulation Method with Hyperbolic Scanning	2284
<i>Tsuyoshi Shiina, Kengo Kondo, Makoto Yamakawa</i>	
Tissue Characterization Using Optically Assisted Ultrasonic Velocity-Change Imaging Method	2288
<i>H. Horinaka, S. Ishibashi, D. Sakurai, H. Sano, T. Matsuyama, K. Wada, T. Matsunaka</i>	
Speckle Removal from Heterogeneous-Tissue Signals Using Independent Component Analysis	2292
<i>Tadashi Yamaguchi, Tomoyuki Iwashina, Naohisa Kamiyama, Jonathan Mamou, Hiroyuki Hachiya</i>	
Enhancement of Muscle Visualization in Ultrasonography Using Gabor Filter Bank	2296
<i>Yongjin Zhou, Yong-Ping Zheng</i>	
Mechanisms of Image Quality Improvement Utilizing Harmonic Imaging	2300
<i>Gianmarco F. Pinton, Jeremy Dahl, Gregg Trahey</i>	
Automatic Real-Time View Detection	2304
<i>Sten Roar Snare, Svein Arne Aase, Ole Christian Mjølstad, Havard Dalen, Fredrik Orderud, Hans Torp</i>	
CREASIMUS: A Fast Simulator of Ultrasound Image Sequences Using 3D Tissue Motion	2308
<i>A. Marion, J. Poree, D. Vray</i>	
Compensation of the Transducer Response for High Frequency Coded Excitation Imaging	2312
<i>Jinhyoung Park, Changhong Hu, Dawei Wu, Qifa Zhou, K. K. Shung</i>	
Asynchronous Telemedicine with Ultrasound: Improving Maternal Health in Developing Countries	2316
<i>M. Solano, E. Kim, M. Christiansen, C. Scheffer, T. Easterling, L. Geerts, K. Beach, Y. Kim</i>	
Efficient Arbitrary Volume Reslicing for Pre-Scan-Converted Volume in an Ultrasound Backend	2320
<i>Junqing Shang, Ravi Managuli, Yongmin Kim</i>	
Volume Rendering Algorithms for Three-Dimensional Ultrasound Imaging: Image Quality and Real-Time Performance Analysis	2324
<i>Ravi Managuli, Kerem Karadayi, Canxing Xu, Yongmin Kim</i>	
Filtering and Scan Conversion of 3D Displacement Vectors from a 4D Curvilinear Transducer	2328
<i>Eric R. Pospisil, Robert Rohling</i>	
Preserving Speckle Statistics in Minimum-Variance Beamformed Images: The Effectiveness of Spatial Compounding	2332
<i>Francois G. Vignon, Michael R. Burcher</i>	
Mapping Skull Attenuation for Optimal Probe Placement in Transcranial Ultrasound Applications	2336
<i>Francois Vignon, William T. Shi, Ramon Erkamp, Emil Radulescu, Vijay Shamdasani, Jeffrey E. Powers</i>	
Simulation of Acoustic Fields from Arbitrary Transducer Stacks Using a FEM Transducer Model and Nonlinear Wave Propagation	2340
<i>M. E. Frijlink, H. Torp</i>	
Spatial Refinement of Ultrasound Pressure Fields Using Polycarbonate Lenses: Model and Experimental Validation in the Context of Sonoporation	2344
<i>Hans O. Rølfesnes, Donald A. McLean, Paul A. Campbell</i>	
APES Beamforming Applied to Medical Ultrasound Imaging	2347
<i>Ann E. A. Blomberg, Iben Kraglund Holfort, Andreas Austeng, Johan-Fredrik Synnevåg, Sverre Holm, Jørgen Arendt Jensen</i>	
Super-Resolution Image Reconstruction with Reduced Computational Complexity	2351
<i>Michael A. Ellis, William F. Walker</i>	
Image Amplitude Estimation with the Minimum Variance Beamformer	2355
<i>Andreas Austeng, Are C. Jensen, Johan-Fredrik Synnevaag, Sverre Holm</i>	
Model-Based Reconstruction for Photoacoustic Tomography with Finite Aperture Detectors	2359
<i>Meng-Lin Li, Chung-Chih Cheng</i>	
Multiresolution Analysis of Intravascular Ultrasound Harmonic Signals to Image Pre-Rupture Plaques	2363
<i>Sushma Srinivas, Chaitanya Chandrana, Shuvo Roy, Aaron Fleischman</i>	
Reverberation Artifact Rejection in Arterial ARFI Imaging	2367
<i>Russell H. Behler, Mallory R. Scola, Caterina M. Gallippi</i>	
Automatic Detection of Micro-Emboli by Means of a Synchronous Linear Prediction Technique	2371
<i>Sébastien Ménigot, Latifa Dreibine, Nawal Meziati, Jean-Marc Girault</i>	
Performance Evaluation on High Frame-Rate Speckle Tracking	2375
<i>Shih-Ying Wu, Shun-Li Wang, Pai-Chi Li</i>	
Angular Spectrum Simulation of Pulsed Ultrasound Fields	2379
<i>Yigang Du, Henrik Jensen, Jørgen Arendt Jensen</i>	
Correcting for Focusing When Estimating Tissue Attenuation from Mean Frequency Shift	2383
<i>Jerzy Litniewski, Ziemowit Klimonda, Marcin Lewandowski, Andrzej Nowicki, Elzbieta Szymanska</i>	
Huffman Sequence Design for Coded Excitation in Medical Ultrasound	2386
<i>Alessandro Polpetta, Paolo Banelli</i>	

A Novel Technique for High Resolution Ultrasound Imaging Using Super Resolution FM-Chirp Correlation Method (SCM)	2390
<i>Masaki Fujiwara, Kan Okubo, Norio Tagawa</i>	
Fast Simulation of Second Harmonic Ultrasound Fields	2394
<i>Nicola Testoni, Karin Hensel, Monica Siepmann, Nicolo Speciale, Georg Schmitz</i>	
Small Calculus Detection for Medical Acoustic Imaging Using Cross-Correlation Between Echo Signals	2398
<i>Hirofumi Taki, Takuya Sakamoto, Toru Sato, Makoto Yamakawa, Tsuyoshi Shiina</i>	
Multi-Dimensional Sub-Sample Motion Estimation: Initial Results	2402
<i>Reza Zahiri-Azar, Orcun Goksel, Septimiu E. Salcudean</i>	
A BEM Study on Ultrasound Guided Wave Propagation in Bone-Mimicking Plates with Microstructural Effects	2406
<i>M. G. Vavva, A. Papacharalampopoulos, V. C. Protopappas, D. I. Fotiadis, D. Polyzos</i>	
Nonlinear Mechanical Behavior of Cervical Tissue with Increasing Pre-Compression	2410
<i>Ryan J. Dewall, Tomy Varghese, Mark A. Kliewer, Josephine M. Harter, Ellen M. Hartenbach</i>	
Monitoring Local Temperature Changes in Soft Tissues by Time-Reversal Elastography	2414
<i>Nicolás Benech, Carlos Negreira, Stefan Catheline</i>	
Exploration of Abnormal Skin Tissue (Marfan Syndrome) with 2D High Resolution Elastography	2418
<i>S. Gahagnon, F. Ossant, T. Edouard, G. Josse</i>	
B-Mode Image Contrast Improvement and 2-D Strain Estimation Using Satellite-View Imaging Method	2422
<i>Makoto Yamakawa, Kengo Kondo, Tsuyoshi Shiina</i>	
On the Imaging of Slip Boundaries Using 3D Elastography	2426
<i>Leo J. Garcia, Christopher Uff, Jérémie Fromageau, Jeffrey C. Bamber</i>	
Robust Motion Estimation Using Complex Principal Components	2429
<i>F. William Mauldin Jr., Francesco Viola, William F. Walker</i>	
Novel 2D Displacement Estimation Using Free-Shape Kernels of RF-Data in Rotating and Shearing Structures	2433
<i>R. G. P. Lopata, H. H. G. Hansen, M. M. Nillesen, L. Kapusta, J. M. Thijssen, C. L. De Korte</i>	
The Spatio-Temporal Strain Distribution in Inhomogeneous Poroelastic Phantoms	2437
<i>Jérémie Fromageau, Gearóid Berry, Jeffrey C. Bamber</i>	
An Ultrasonic Technique for Imaging of Tissue Motion Due to Muscle Contraction	2441
<i>Jason Silver, Yuu Ono, Andy Adler</i>	
Reflected Shear Wave Imaging (RSWI) of Atherosclerosis	2445
<i>Russell H. Behler, Timothy C. Nichols, Elizabeth P. Merricks, Caterina M. Gallippi</i>	
Application of a Transient Elastography Technique to the Characterization of the Arterial Wall Elasticity	2449
<i>Javier Brum, Nicolas Benech, Carlos Negreira, Daniel Bia, Ricardo Armentano</i>	
Theoretical and Experimental Studies on Group Velocity for Estimating the Elasticity of Arteries	2453
<i>Xiaoming Zhang, James F. Greenleaf</i>	
Non-Invasive Assessment of Shear Strain in the Carotid Arterial Wall Based on Ultrasound Radiofrequency Data	2456
<i>T. Idzenga, H. H. G. Hansen, R. G. P. Lopata, C. L. De Korte</i>	
Ultrasound Wall-Tracking Diameter Distension for Assessment of Arterial Distensibility: An Urgent Need for Direct Stiffness Measurement	2460
<i>Patrick Segers, Abigail Swillens, Thomas De Schryver, Sebastian Vermeersch, Ernst Rietzschel, Marc De Buyzere</i>	
Lateral Motion Estimator for Measurement of Artery-Wall Displacement	2464
<i>Hideyuki Hasegawa, Hiroshi Kanai</i>	
Level-Set Segmentation of Myocardium and Epicardium in Ultrasound Images Using Localized Bhattacharyya Distance	2468
<i>M. Alessandrini, D. Friboulet, O. Basset, J. D'Hooge, O. Bernard</i>	
Preliminary Results of an Ultrasound Segmentation Method Based on Statistical Unit-Root Test of B-Scan Radial Intensity Profiles	2472
<i>Mehdi Moradi, Julian Guerrero, Robert Rohling, Septimiu E. Salcudean</i>	
Evaluation of Segmentation Algorithms for Vessel Wall Detection in Echo Particle Image Velocimetry	2476
<i>F. Zhang, L. O. Murta, J. S. Chen, A. J. Barker, L. Mazzaro, C. Lanning, R. Shandas</i>	
Segmentation of Plaques in Sequences of Ultrasonic B-Mode Images of Carotid Arteries Based on Motion Estimation and Nakagami Distributions	2480
<i>Francois Destrempes, Gilles Soulez, Marie-France Giroux, Jean Meunier, Guy Cloutier</i>	
Breast Ultrasound Phantom for Image Segmentation Assessment	2484
<i>Isabela Miller De Carvalho, Rodrigo Leite Q. Basto, Antonio Fernando C. Infantosi, Marco Antonio Von Krüger, Wagner Coelho De A. Pereira</i>	
Classification of Benign and Malignant Breast Tumors by the Contour Analysis and Scatterers Characterization	2488
<i>Yin-Yin Liao, Chih-Kuang Yeh, Po-Hsiang Tsui, Chien-Cheng Chang</i>	
Nonlinear Viscoelastic Measurements in Fluids Using “Acoustical Rheology”	2492
<i>Samuel Callé, Hélène Moreschi, Guillaume Renaud, Marielle Defontaine</i>	
Self-Temperature-Compensation Characteristics at 1st- And 3rd- Harmonic Frequencies for SAW Gas Sensor Used in Sensor Network	2496
<i>M. Hikita, Y. Kato, J. Matsuda, T. Watanabe, A. Nakano</i>	
Polymer Characterisation on Langasite Delay Lines	2500
<i>V. Carolina Ayala, Ismail Shrena, David Eisele, Leonhard Reindl, Katrin Moosmann, Oswald Prucker, Jürgen Rühe</i>	
Monitoring of Several Complex Materials with Ultrasonic Sensors Array	2504
<i>Emmanuel Caplain, Stéphane Serfaty, Pascal Griesmar, Loïc Martinez, Jean-Yves Le Huérou</i>	
A Novel Approach in Liquid-Level Sensing by Trapped-Energy-Mode Thickness Vibrators	2508
<i>Ken Yamada, Shuhei Horiuchi, Hisato Honda, Tetsuya Kinai</i>	

(Yx)21.82° LiNbO₃ Pseudo-LFE Acoustic Wave Sensors	2511
<i>Tingfeng Ma, Zhitian Zhang, Wenyan Wang, Chao Zhang, Guanping Feng</i>	
SAW OFC Strain Sensor	2515
<i>M. Roller, D. C. Malocha, R. Vaidyanathan</i>	
Mitigating Spurious Compressional Waves in Multi-Measured TSM Sensors	2519
<i>Jeffrey C. Andle, Reichl Haskell, Maly Chap, Daniel Stevens, Jo Columbus, Richard Gomes, Long Nguyen</i>	
Novel Air-Borne Ultrasonic Sensor Using Nanofoam and a Laser Doppler Vibrometer	2525
<i>Takuya Iwamoto, Hidetomo Nagahara, Yuriko Kaneko, Ushio Sangawa, Masahiko Hashimoto</i>	
A New Type of MEMS Ultrasonic Separator Based on 2-D Normal Mode	2529
<i>Yuxiang Wang, Jiexiong Ding, Chenhui Hua</i>	
Performing Microdroplets Mixing Using an Acoustic Transducer with Low Vibration Frequencies	2533
<i>Faten Kardous, Reda Yahiaoui, Jean-François Manceau</i>	
Acoustic Particle Manipulation in a Microchannel Narrower Than Half a Wavelength: Stability of the Node of Pressure	2537
<i>I. Gonzalez, T. E. Gómez, J. L. Fernandez</i>	
Non-Contact Ultrasonic Assessment of the Properties of Vacuum-Packaged Dry-Cured Ham	2541
<i>Tomás Gómez Álvarez-Arenas, José Benedito, Edith Corona</i>	
Ultrasonic Inclusion and Pore Classification in Rolled and Unrolled Steel Samples	2545
<i>V. Kananen, J. Eskelinen, E. Hægström</i>	
Material Evaluation with New Modulation Method in Photoacoustic Technique	2549
<i>Akiyuki Minamide, Yoshiaki Tokunaga</i>	
Ultrasonic Chirplet Signal Decomposition for Defect Evaluation and Pattern Recognition	2553
<i>Yufeng Lu, Erdal Oruklu, Jafar Santié</i>	
An Annular Array with Fiber Composite Microstructure for Far Field NDT Imaging Applications	2557
<i>S. N. Ramadas, J. Dziewierz, R. L. O'Leary, A. Gachagan, A. Velichko, P. D. Wilcox</i>	
Ultrasonic Stiffness Measurements of Single Plant Fibers During Humidity Cycling	2561
<i>R. Montonen, T. Karppinen, A. Salmi, K. Mustonen, E. Hægström</i>	
Comparison Between Picosecond Ultrasonics and Nanoindentation Characterization in Thin Film	2564
<i>P. -A. Mante, A. Devos, G. Raymond, P. Morin, P. Ancey</i>	
Quality Factor of MEMS and NEMS AIN Contour-Mode Resonators in Liquid Media	2568
<i>C. Zuniga, M. Rinaldi, G. Piazza</i>	
Guided Waves Propagating in a Bi-Layer System Composed of a Piezoelectric Plate and a Dielectric Fluid Layer	2572
<i>Chia-Han Wu, Che-Hua Yang</i>	
On the Nonlinear Dynamics of Plate-Transducers	2576
<i>Andrea Cardoni, Enrique Riera Franco De Sarabia, Alfonso Blanco-Blanco, Juan Gallego-Juarez, Victor Acosta-Aparicio</i>	
General Properties of the Anisimkin Jr. Plate Modes	2580
<i>Vladimir I. Anisimkin</i>	
Recognition of Optical Layered BPSK Labels Using Collinear Double-Stage Acoustooptic Processor for Hierarchical Photonic Routing	2584
<i>Nobuo Goto, Yasumitsu Miyazaki</i>	
Refracto-Vibrometry for Visualizing Ultrasound in Small-Sized Channels, Cavities and Solid Objects	2588
<i>L. Zipser, H. -D. Seelig, H. Franke</i>	
Toward Design of Functionally Graded Piezoelectric Ultrasonic Motors Using Topology Optimization	2592
<i>Wilfredo Montealegre Rubio, Emilio Carlos Nelli Silva</i>	
Design and Evaluation of Low-Profile Micro Ultrasonic Motors Driven by Sector Shaped Piezoelectric Vibrators	2596
<i>Takefumi Kanda, Takashi Ichihara, Koichi Suzumori</i>	
Visualization of Flexural Wave Propagation in Helical Coiled Ultrasonic Waveguide	2600
<i>Ryo Tanaka, Masayuki Tanabe, Kan Okubo, Norio Tagawa</i>	
Theoretical and Experimental Investigations of the Contact Mechanics in Standing Wave Type Piezoelectric Ultrasonic Motors	2603
<i>Jens Twiefel, Wiebold Wurpts, Jorg Wallaschek</i>	
Miniature Flat Type Inertial Piezoelectric Motor	2607
<i>Piotr Vasiljev, Dalius Mazeika</i>	
Ultrasonic Air-Coupled Wave Phase Conjugator for the Low Megahertz Frequency Range	2611
<i>Yu. V. Pyl'nov, P. N. Shirkovskiy, P. Pernod, V. L. Preobrazhensky</i>	
Hartmann Ultrasound Generator Combined with Electrical Discharge	2615
<i>Rudolf Balek, Stanislav Pekarek</i>	
Nonlinear Acoustical Waves in the Air-Filled Resonator	2619
<i>Petr Konicek, Michal Bednarik, Milan Cervenka</i>	
Parametric Excitation of Nonlinear Standing Waves in Acoustic Resonators	2623
<i>Michal Bednarik, Milan Cervenka, Petr Konicek</i>	
Correlating the Ultrasonic Thrust Force with Acoustic Streaming Velocity	2627
<i>Alfred C. H. Tan, Franz S. Hover</i>	
A Hybrid Substrate for a Temperature-Compensated Surface Acoustic Wave Filter	2631
<i>Yuji Hori, Hiroki Kobayashi, Kazutoshi Tohyama, Yasunori Iwasaki, Kenji Suzuki</i>	
Transformation of Surface Acoustic Waves Into Boundary Waves in Piezoelectric/Metal/Dielectric Structures	2635
<i>Natalya Naumenko</i>	
High Electromechanical Coupling Coefficient SAW Resonator on Ta₂O₅/Al/LiNbO₃ Structure for Wide Duplex Gap Application	2639
<i>H. Nakanishi, H. Nakamura, R. Goto</i>	

Highly Oriented Ta₂O₅ Piezoelectric Thin Films Prepared by RF-Magnetron Sputtering	2643
<i>Shoji Kakio, Takeshi Mitsui, Akinori Tsuchiya, Yasuhiko Nakagawa</i>	
In-Situ Monitored Deposition of SiO₂ on Longitudinal Wave Based Resonator	2647
<i>S. Zhgoon, A. Shvetsov, M. S. Patel, K. Bhattacharjee</i>	
Phase Linear • Flat Wide Band • Low Loss Filters Using Dispersive Unidirectional Up-Chirp and Down-Chirp Inter-Digital Transducers	2651
<i>Yusuke Satoh, Kazuhiko Yamanouchi</i>	
String Weighted Tapered SAW Transducer Analysis	2655
<i>Svetlana Malocha, Rodolfo Chang, Jon Vandendriessche</i>	
Acoustic Filter and Resonator on Periodical Poled LiTaO₃	2659
<i>Michio Kadota, Takashi Ogami, Kansho Yamamoto, Yasuo Cho</i>	
Revisiting of RAC Devices	2663
<i>Xianyi Li , Victor Plessky, Paul Hartogh , Thomas Weimannz, Leonhard Reindlx, V. I. Grigorievsky</i>	
Ultra Wide Band Resonator Composed of Grooved Cu-Electrode on LiNbO₃ and Its Application to Tunable Filter	2668
<i>Michio Kadota, Tetsuya Kimura, Yasuyuki Ida</i>	
Design of New Lateral Field Excitation Langasite Resonant Sensors	2672
<i>T. G. Leblois, C. R. Tellier</i>	
Analysis of Additional Surface Mechanical Features in Micro-Acoustic Devices - A Combined FEM-JTFA Approach	2676
<i>Glenn I. Matthews, Alireza Baghai-Wadji</i>	
Zooming Into the Near Field: Erroneous Assumption of Superluminal Speeds in Green's Function Theory as the Origin of Singularities in BEM-Based Modelling of SAW and BAW Devices	2680
<i>A. R. Baghai-Wadji</i>	
Ab-Initio Mesh-Less Modelling of Three Dimensional Massloading Effect in SAW and BAW Devices	2684
<i>Hardik Vagh, Alireza Baghai-Wadji, Stephane Chamaly</i>	
Fabrication of SAW Devices with Small Package Size Using Through Substrate Via Technology	2688
<i>Keishin Koh, Hiroyuki Okitsui, Kohji Hohkawa</i>	
A Study of Wafer Level Packaging of SAW Filter for Module Solution	2692
<i>Kaoru Sakinada, Akira Moriya, Masayuki Kitajima, Osamu Kawachi</i>	
Multi-Row Linear Array Using cMUTs and Multiplexing Electronics	2696
<i>Robert Wodnicki, Charles G. Woychik, Albert T. Byun, Rayette Fisher, Kai Thomenius, Der-Song Lin, Xuefeng Zhuang, Omer Oralkan, Srikant Vaithilingam, Butrus T. Khuri-Yakub</i>	
Development of Transducer System for Tissue Harmonic Imaging of Long Coded Signal	2700
<i>Masayuki Tanabe, Kan Okubo, Norio Tagawa</i>	
On Sensitivity and Surface Temperature of Multilayered Linear Ultrasound Phased Arrays for Medical Imaging: Modeling, Prototyping and Experiments	2704
<i>Mihai State, Andrea Grandoni, Lorenzo Spicci, Peter Kerkhof, Peter J. Brands, Frans N. Van De Vosse</i>	
Development of High Frequency Annular Array Ultrasound Transducers Using Interdigital Bonded Composites	2708
<i>Hamid Reza Chabok, Jonathan Matthew Cannata, Hyung Ham Kim, K. Kirk Shung</i>	
Multiple-Frequency Ultrasonic Imaging Using a Multiple-Resonance Transducer	2712
<i>Iwaki Akiyama, Natsuki Yoshizumi, Kentaro Nakamura</i>	
Improving Ultrasound Imaging with Integrated Preamplifiers	2718
<i>Pascal Chatain, David Voisin, Mathieu Legros, Guillaume Férin, Rémi Dufait</i>	
Focused 20 MHz Single-Crystal Piezocomposite Ultrasound Array	2722
<i>C. Bantignies, P. Mauchamp, G. Férin, S. Michau, R. Dufait</i>	
Non-Scanning Measurement of Local Curvature with an Ultrasound Annular Array	2726
<i>Michael Lenz, Jorg Sorber, Elfgard Kuhncke, Gerald Gerlach, Thomas Rodig, H. G. Trier</i>	
Fine Pitch Non-Uniform Multilayered Linear Ultrasound Phased Arrays for Medical Imaging: Design and Testing	2730
<i>Mihai State, Andrea Grandoni, Lorenzo Spicci, Peter Kerkhof, Peter J. Brands, Frans N. Van De Vosse</i>	
Wideband Multimode Tonpilz Transducer with a Cavity Inside a Head Mass	2734
<i>Saosometh Chhih, Yongrae Roh</i>	
Optimal Design of a Piezoelectric 2D Array Transducer to Minimize the Cross Talk Between Active Elements	2738
<i>Wonseok Lee, Yongrae Roh</i>	
A Wideband Annular Piezoelectric Composite Transducer Configuration with a Graded Active Layer Profile	2742
<i>S. N. Ramadas, R. L. O'Leary, A. Gachagan, G. Hayward, R. Banks</i>	
Operation of a High Frequency Piezoelectric Ultrasound Array with an Application Specific Integrated Circuit	2746
<i>Anne Lyse Bernassau, Tim Button, Kyusun Choi, Sandy Cochran, Christine Demore, Luis Garcia-Gancedo, David Hutson, Tom Jackson, Hyunsoo Kim, Insoo Kim, Carl Meggs, Susan Trolhier-McKinstry, Rick Tutwiler</i>	
High Frequency Piezo-Composite Transducer with Hexagonal Pillars	2750
<i>Jianhua Yin, Mike Lee, Emmanuel Cherin, Marc Lukacs, F. Stuart Foster</i>	
Dynamic Response Estimation of Multilayer Ferroelectret-based Transducers Using Lumped-Element Electromechanical Models	2754
<i>Joao L. Ealo, Jose Carlos Prieto, Fernando Seco</i>	
Control of Ultrasound Direction with a Miniaturized Double-Transducer for Microwelding Applications	2758
<i>Michael Mayer, Peter Hess</i>	
Toward More Efficient Matching Layers for Piezoelectric Transducers	2762
<i>Franck Levassort, Pierre Maréchal, Philippe Boy, Olivier Acher</i>	
A Model for Radial Modes in a Piezoelectric Disc Exhibiting Non-Uniform Polarization: Application to a Bi-Frequency Transducer, Method Design, Simulation and Experiments.	2766
<i>H. Calás, L. D. Pérez-Fernández, E. Moreno, J. A. Eiras, A. Ramos</i>	

Ultrasound Catheter for Microbubble Based Drug Delivery	2770
<i>Joseph P. Kilroy, Abhay V. Patil, John A. Hossack</i>	
Evaluation of CMUT Annular Arrays for Side-Looking IVUS	2774
<i>Alper Sisman, Jaime Zahorian, Gökçe Gürün, Mustafa Karaman, Müjdat Balantekin, F. Levent Degertekin, Paul Hasler</i>	
Optical and Acoustic Characterization of Vapourized Perfluorocarbon Droplets as Ultrasound Contrast Agents	2778
<i>Nikita Reznik, Ross Williams, Peter N. Burns</i>	
Optical Observations of Microbubble Oscillation in Small Tubes	2782
<i>David Thomas, Vassilis Sboros, Marcia Emmer, Hendrik J. Vos, Nico De Jong</i>	
Ex Vivo Measurements of Mechanical Properties of Myocardium Using Lamb and Rayleigh Wave Dispersion Velocities	2785
<i>Ivan Nenadic, Matthew W. Urban, James F. Greenleaf</i>	
Surface Acoustic Wave Interdigital Transducers Response to Deep UV Illumination in AlGaN/Sapphire	2789
<i>Venkata S. Chivukula, Daumantas Ciplys, Michael S. Shur, Jinwei Yang, Remis Gaska</i>	
Measurement of Three-Dimensional Distribution of Crack Tips by Low Power Pulsed Laser	2793
<i>Atsushi Miyamoto, Mami Matsukawa</i>	
Extraction of Pt/Rh/ZrO₂ High Temperature Elastic Constants	2797
<i>Dana Gallimore, Thomas Moonlight, Mauricio Pereira Da Cunha</i>	
Angular Spectrum Method for the Estimation of Pressure Fields in the Super Harmonic Band	2801
<i>Mirza Pasovic, Mike Danilouchkine, Paul Van Neer, Olivier Basset, Christian Cachard, Antonius F. W. Van Der Steen, Nico De Jong</i>	
Fast Evaluation of Lamb Wave Scattering by Time Harmonic FEM Simulation	2805
<i>Florian Thalmayr, Ken-Ya Hashimoto, Tatsuya Omori, Masatsune Yamaguchi</i>	
Suppression of Transverse Waveguide Modes for SAW Resonators with Pt and Pt/Rh/ZrO₂ Electrodes	2810
<i>B. J. Meulendyk, M. Pereira Da Cunha</i>	
Selectable Frequency CMUT with Membrane Stand-Off Structures	2814
<i>Matthew D. C. Eames, Theodore J. Reck, John A. Hossack</i>	
Applications of Low Intensity Pulsed Ultrasound for Functional Bone Tissue Engineering Using Adult Stem Cells	2818
<i>Skylar Marvel, Stan Okrasinski, Susan H. Bernacki, Elizabeth Loba, Paul A. Dayton</i>	
Author Index	