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Tribikram Kundu

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Contents

- ix *Authors*
- xi *Conference Committee*
- xv *Introduction*

SESSION 1 DISTRIBUTED SENSORS FOR SHM

- 10600 02 **Multi-rosettes sensing analysis for an impact assessment in composite plate-like structure**
[10600-1]
- 10600 03 **High-frequency ultrasonic sensor arrays based on optical micro-ring resonators** [10600-2]
- 10600 04 **Preliminary studies for the optimization of sensor placement for electro-mechanical
impedance based damage detection** [10600-3]
- 10600 05 **Quantitative monitoring of hole-edge damage growth using eddy current array sensor-
based intelligent bolt** [10600-4]

SESSION 2 NONLINEAR ULTRASONIC TECHNIQUES

- 10600 07 **Damage characterization based on nonlinear guided wave simulation and chirplet
matching pursuit algorithm** [10600-6]
- 10600 08 **Nondestructive detection and assessment of high temperature hydrogen attack damage
in carbon steel pressure vessels** [10600-7]
- 10600 09 **Evaluation of crack orientation using fatigue crack-induced contact acoustic nonlinearity**
[10600-8]
- 10600 0A **Nonlinear scattering features of guided waves from fatigue cracks** [10600-9]

SESSION 3 GUIDED WAVE FOR SHM/NDE

- 10600 0B **Active health monitoring of TN32 dry cask using a scaled down model** [10600-10]
- 10600 0C **Composite structures defect imaging** [10600-11]
- 10600 0D **Hybrid guided wave based SHM system for composite structures for impact and
delamination detection combining fiber Bragg grating sensing and piezoelectric patches**
[10600-12]

- 10600 OE **Reverse engineering stiffened plates using guided wave-based nondestructive testing methods** [10600-13]
- 10600 OF **Effects of transducers on guided wave based structural health monitoring** [10600-14]
- 10600 OG **Silicon wafer defect detection using high frequency guided waves** [10600-15]
- 10600 OH **Development of a de-icing system for aerodynamic surfaces based on ultrasonic waves** [10600-16]
- 10600 OI **Comparative study of deterioration of composite due to moisture using strain, electromechanical impedance, and guided waves** [10600-17]

SESSION 4 CIVIL INFRASTRUCTURE MONITORING I

- 10600 OJ **High-speed non-contact ultrasound system for rail track integrity evaluation** [10600-18]
- 10600 OL **Shaking table tests for evaluating the damage features under earthquake excitations using smartphones** [10600-20]
- 10600 OM **Applying video magnification for vision-based operating deflection shape evaluation on a wind turbine blade cross-section** [10600-21]
- 10600 OO **MRI myocardium T^*_2 measurement by a new PCA-based object recognition algorithm** [10600-23]

SESSION 5 ADVANCED MODELING TECHNIQUES

- 10600 OP **Predictive 1D and 2D guided-wave propagation in composite plates using the SAFE approach** [10600-24]
- 10600 OQ **Computational wave modeling of multilayered anisotropic plates** [10600-25]
- 10600 OR **X-ray ray tracing simulation and flaw parameters for crack detection** [10600-26]

SESSION 6 MEDICAL/BIOMEDICAL APPLICATIONS

- 10600 OT **Identification of bone fracture in osseointegrated prostheses using Rayleigh wave methods** [10600-28]
- 10600 OU **Imaging platforms for registering and analyzing the skin microrelief structure** [10600-29]
- 10600 OV **Visualization of the scattering of focused ultrasonic waves at solid-fluid interfaces** [10600-30]
- 10600 OW **Characterization of dental tissue by reflection and transmission ultrasound microscopy** [10600-31]

10600 0X **Imaging the superficial vascular structure for mapping and identification** [10600-32]

SESSION 7 ELASTIC AND METAMATERIAL I

10600 11 **A new membrane-type metamaterial for multiple peaks absorption at low frequencies**
[10600-36]

10600 14 **Dispersion behavior of a hybrid phononic resonator** [10600-39]

10600 15 **Far-field superresolution imaging using shaped acoustic vortices** [10600-40]

SESSION 8A ELASTIC AND METAMATERIAL II

10600 1A **Numerical and experimental study of broadband elastic wave filtering in anisotropic pentamode material** [10600-45]

SESSION 8B MODELING/SIMULATION AND EXPERIMENT FOR NONLINEAR/LINEAR ULTRASONIC TECHNIQUES I

10600 1C **Quantitative evaluation of yield strength degradation by using nonlinear ultrasonic techniques** [10600-47]

10600 1D **Flexible multibody dynamics formulation by using Peridynamic theory** [10600-48]

SESSION 9A ELASTIC AND METAMATERIAL III

10600 1E **Inducing and tuning edge-states in a weak topological phononic waveguide** [10600-49]

10600 1H **Avoided crossings and band sorting in two-dimensional phononic crystals** [10600-52]

10600 1I **Reconfigurable metasurfaces for directional acoustic sensing** [10600-53]

10600 1J **Design of smart metamaterials for vibration control: extension of Bloch approach to handle finite system boundary conditions** [10600-54]

SESSION 9B COMPOSITE MONITORING

10600 1M **A damage index for identifying incipient delamination in CFRP laminated plates relying on 2D multi-resolution modal Teager-Kaiser energy** [10600-57]

10600 1N **Effect of multiscale precursor damage on wave propagation through modulated constitutive properties of composite materials** [10600-58]

10600 1O **Single-sensor acoustic emission source localization in plate-like structures: a deep learning approach** [10600-59]

10600 1Q **Mechanical characterization of bistable laminates for very small aircraft morphing applications** [10600-61]

10600 1R **Composite samples with different contaminations analysed with THz spectrometry** [10600-62]

SESSION 10A ELASTIC AND METAMATERIAL IV

10600 1T **Interpreting phononic Bragg band gaps through finite system dynamics and transfer functions** [10600-64]

10600 1X **Optimized phononic crystals for bandgap and metamaterial properties** [10600-68]

10600 1Y **Nanoscale surface phononic crystals for characterization of complex and periodic materials using extreme ultraviolet light** [10600-69]

SESSION 10B MODELING/SIMULATION AND EXPERIMENT FOR NONLINEAR/LINEAR ULTRASONIC TECHNIQUES II

10600 1Z **A spectral method for computing the effect of stress on guided modes in plates and rods** [10600-70]

10600 20 **Passive and active monitoring for defect detection and quantification in composites** [10600-71]

10600 23 **Non-destructive evaluation of a plantation eucalyptus** [10600-75]

SESSION 11A ELASTIC AND METAMATERIAL V

10600 24 **Challenges and constraints in the application of resonance-based metamaterials for vibration isolation** [10600-76]

SESSION 11B MODELING/SIMULATION AND EXPERIMENT FOR NONLINEAR/LINEAR ULTRASONIC TECHNIQUES III

10600 28 **Analysis of S0/A0 guided wave mode conversion phenomenon** [10600-80]

10600 2B **SHM of aerospace bonded structures with improved techniques based on NEWS** [10600-96]

SESSION 12A CIVIL INFRASTRUCTURE MONITORING II

10600 2C **Monitoring-based decision support system for optimal management of Colle Isarco viaduct** [10600-85]

- 10600 2D **The conditional value of information of SHM: what if the manager is not the owner?**
[10600-87]
- 10600 2H **On-line safety monitoring of pressure-retaining equipment in power plants: a review**
[10600-91]
- 10600 2I **Optical fiber sensor for monitoring the strain of concrete which is subject to freezing and thawing test** [10600-92]

SESSION 12B EMERGING AND FUTURISTIC TECHNIQUES

- 10600 2J **Statistical damage detection based on full-field covariance of circumferential scan ultrasonic measurement** [10600-93]
- 10600 2K **Structural operating deflection shape estimation via a hybrid computer-vision algorithm**
[10600-94]
- 10600 2N **Identifying structural damage with data driven impedance response calibration**
[10600-98]
- 10600 2O **Structural health monitoring based on omni-directional SH wave piezoelectric transducers**
[10600-99]
- 10600 2P **Improved statistical damage classification in an experimental wind turbine blade based on vector autoregressive coefficients and sequential projection pursuit** [10600-100]
- 10600 2R **Reliability of surface response to excitation method for data-driven prognostics using Gaussian process regression** [10600-102]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Abad, B., 1Y
Acernese, Fausto, 0O
Al Ba'ba'a, H., 14, 1T
Alnuaimi, Hamad N., 0F
Ameduri, S., 0H
Amjad, Umar, 0F, 0W
Amrithanath, Abhishek K., 03
Anthony, Brian, 0U, 0X
Babino, Giovanni, 0O
Badding, J., 1Y
Balch, Dorian K., 08
Banerjee, Sourav, 0Q, 1N
Barone, Fabrizio, 0O
Bereiter-Hahn, Jürgen, 0F, 0W
Billon, K., 1J
Blase, Christopher, 0F, 0W
Blume, Maximilian, 0W
Boffa, N. D., 0D
Bolognani, Denise, 2C, 2D
Brown, Matthew, 0V
Bucciarelli, F., 11
Bursi, Oreste S., 2C
Calvo, David C., 11
Cao, M. S., 1M
Cao, Pei, 2N
Cappello, Carlo, 2C, 2D
Capriotti, Margherita, 0J
Carrino, S., 2B
Cesnik, Carlos E. S., 07
Chandarana, Neha, 20
Chen, W., 1Y
Cheng, H., 1Y
Chong, See Yenn, 2J
Collet, M., 1J
Concilio, A., 0H
Conway, John F., 08
Crespi, V., 1Y
Dabo, I., 1Y
Dao, Cac M., 0F
DePauw, D., 14
Du, Xian, 0U
Dubuc, Brennan, 1Z
Durgesh, Vibhav, 0V
Ebrahimkhanlou, Arvin, 1O, 1Z
Fekrmandi, H., 2R
Frazer, T., 1Y
Fromme, Paul, 0C, 0G
Giebink, N., 1Y
Giordano, Gerardo, 0O
Giurgiutiu, Victor, 0B, 0P
Glisic, Branko, 2D
Gopalan, V., 1Y
Grede, A., 1Y
Gresil, Matthieu, 20
Guild, Matthew D., 15, 11
Gwon, Y. S., 2R
Hafezi, Mohammad Hadi, 1D, 23
Han, Ruicong, 0L
Hernandez-Charpak, J., 1Y
Hoell, Simon, 2P
Hong, Erin, 0E
Howden, Stephen, 0B
Hu, Gengkai, 1A
Huan, Qiang, 2O
Iervolino, O., 11
Ikei, Alec K., 11
Jhang, Kyung-Young, 1C
Jia, Jiuhong, 2H
Johnson, William R., 24
Joseph, Roshan, 0B
Jurek, Michal, 02
Kapteyn, H., 1Y
Kazemi, Omid, 1D
Kim, Chang-Soo, 1C
Kim, Jongbeom, 1C
Knobloch, J., 1Y
Kong, Xianglong, 2I
Koshti, Ajay M., 0R
Krishnaswamy, Sridhar, 03
Kudela, Paweł, 28
Kundu, Ina, 0U, 0X
Kundu, Tribikram, 0D, 0F, 0W, 23
Lanza di Scalea, Francesco, 0J
Lauper, Michael, 0G
Li, Faxin, 2O
Li, Jinke, 0L
Liang, Albert, 0J
Liao, Kaixing, 2I
Lie, Jinke, 0L
Lin, Bin, 0B
Liu, Ting-Wei, 1E
Liu, Xiaoning, 1A
Liu, Xuecheng, 2H
Loh, Kenneth J., 0L
Lu, Yan, 1H, 1X
Lv, Haifeng, 2I
Lynch, Jerome P., 0T
Ma, Qian, 1A

Maffezzoli, A., 1Q
Mahale, P., 1Y
Maio, L., 0D, 0H
Majewska, Katarzyna, 02, 1R
Malinowski, Paweł, 04, 0I, 28
Mallouk, T., 1Y
Mao, Zhu, 0M, 2K
Mariani, Stefano, 0J
Martin, Theodore P., 15
Masserey, Bernard, 0G
McGovern, Megan E., 08
Mei, Hanfei, 0P
Memmolo, V., 0D, 0H
Mendoza, E., 0D
Meo, M., 1I
Miao, Hongchen, 1A
Mieloszyk, Magdalena, 02, 1R
Mokhtari, Amir Ashkan, 1X
Monaco, E., 0D, 0H
Murnane, M., 1Y
Nicassio, F., 1Q, 2B
Niezrecki, Christopher, 0M
Nouh, M., 14, 1T
Omenzetter, Piotr, 2P
Orientale, Antonio, 0O
Orris, Gregory J., 15, 1I
Ostachowicz, Wieslaw, 02, 04, 0I, 1M, 1R, 28
Ou, Jinping, 0L
Ouisse, M., 1J
Poozesh, Peyman, 0M
Qing, Xinlin P., 05
Quigley, John, 2D
Radziński, M., 1M
Reis, Henrique, 08
Ricci, F., 0D, 0H
Robyr, Jean-Luc, 0G
Rogers, Jeffrey S., 15, 1I
Rohde, Charles A., 15, 1I
Romano, Rocco, 0O
Ruzzene, Massimo, 24
Saadatzi, Mohammadsadegh, 1N
Sader, Robert, 0W
Sadoulet-Reboul, E., 1J
Safisamghabadi, Mehran, 0V
Salamone, Salvatore, 1O, 1Z
Sarraf, Aral, 0M, 2K
Scarselli, G., 1Q, 2B
Schaal, Christoph, 0E, 0V
Semperlotti, Fabio, 1E
Shao, Jianbo, 05
Shen, Yanfeng, 0A
Shrestha, Sajjan, 0Q, 1N
Singh, T., 1T
Soman, Rohan, 04, 0I
Song, Dong-Gi, 1C
Soutis, Constantinos, 20
Srivastava, Ankit, 1H, 1X
Sternini, Simone, 0J
Su, Zhongqing, 09
Sun, Changsen, 2I
Sun, Hu, 05
Talreja, D., 1Y
Tang, J., 2N
Taskhiri, Mohammad Sadegh, 23
Tavaf, Vahid, 1N
Todd, Michael D., 2J
Tonelli, Daniel, 2C, 2D
Tu, Shantung, 2H
Tu, Yu, 2H
Turner, Paul, 23
Verzobio, Andrea, 2C, 2D
Wandowski, Tomasz, 04, 28
Wang, Junzhen, 0A
Wang, Kai, 09
Wang, Wentao, 0T
Wang, Yishou, 05
Wei, Heming, 03
Wilson, Robert, 0J
Xie, Botao, 0L
Xiong, Y., 1Y
Xu, W., 1M
Xu, Wu, 0A
Yang, Xueling, 2H
Yu, Lingyu, 0B
Yuan, Shenfang, 09
Zhang, Hui, 07
Zhao, Xuefeng, 0L, 2I
Zheng, Mingye, 1A
Zhu, Rui, 1A
Zhu, Xuan, 0J
Zonta, Daniele, 2C, 2D

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- 1 Distributed Sensors for SHM
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Paul Fromme, University College London (United Kingdom)
- 2 Nonlinear Ultrasonic Techniques
Paul Fromme, University College London (United Kingdom)
Hu Sun, Xiamen University (China)
- 3 Guided Wave for SHM/NDE
Ernesto Monaco, Università degli Studi di Napoli Federico II (Italy)
Zhongqing Su, The Hong Kong Polytechnic University
(Hong Kong, China)
- 4 Civil Infrastructure Monitoring I
Christopher Niezrecki, University of Massachusetts Lowell
(United States)
Tadeusz Uhl, AGH University of Science and Technology (Poland)
- 5 Advanced Modeling Techniques
Sourav Banerjee, University of South Carolina (United States)
Ajay M. Koshfi, NASA Johnson Space Center (United States)
- 6 Medical/Biomedical Applications
Piervincenzo Rizzo, University of Pittsburgh (United States)
Xiaoning Jiang, North Carolina State University (United States)

- 7 Elastic and Metamaterial I
Hussein Nassar, University of Missouri (United States)
Jinkyu Yang, University of Washington (United States)
- 8A Elastic and Metamaterial II
Jinkyu Yang, University of Washington (United States)
Guoliang Huang, University of Missouri (United States)
- 8B Modeling/Simulation and Experiment for Nonlinear/Linear Ultrasonic Techniques I
Hadi Hafezi, The University of Arizona (United States)
Kyung-Young Jhang, Hanyang University (Korea, Republic of)
- 9A Elastic and Metamaterial III
Hussein Nassar, University of Missouri (United States)
Jinkyu Yang, University of Washington (United States)
- 9B Composite Monitoring
Wieslaw M. Ostachowicz, The Szewalski Institute of Fluid-Flow Machinery (Poland)
Sridhar Krishnaswamy, Northwestern University (United States)
- 10A Elastic and Metamaterial IV
Fabio Semperlotti, Purdue University (United States)
Mostafa A. Nouh, University at Buffalo (United States)
- 10B Modeling/Simulation and Experiment for Nonlinear/Linear Ultrasonic Techniques II
Kyung-Young Jhang, Hanyang University (Korea, Republic of)
Hadi Hafezi, The University of Arizona (United States)
- 11A Elastic and Metamaterial V
Zhongqing Su, The Hong Kong Polytechnic University (Hong Kong, China)
Yanfeng Shen, Shanghai Jiao Tong University (China)
- 11B Modeling/Simulation and Experiment for Nonlinear/Linear Ultrasonic Techniques III
Hadi Hafezi, The University of Arizona (United States)
Mohammad Sadegh Taskhiri, University of Tasmania (Australia)
- 12A Civil Infrastructure Monitoring II
Henrique L. Reis, University of Illinois (United States)
Victor Giurgiutiu, University of South Carolina (United States)

12B Emerging and Futuristic Techniques

Paul Fromme, University College London (United Kingdom)

Zhu Mao, University of Massachusetts Lowell (United States)

Introduction

In the year 2001, the SPIE conference on Health Monitoring of Structural and Biological Systems brought engineers, materials scientists, medical doctors, and biologists together to exchange their ideas on this important topic. After a positive experience at that conference, yearly conferences were organized on the same topic, and the next one has been planned for the year 2019. Proceedings volume 10600 contains papers presented at the 2018 conference. Papers presented in the earlier conferences can be found in Proceedings volumes: #4335 (2001), #4702 (2002), #5047 (2003), #5394 (2004), #5768 (2005), #6177 (2006), #6532 (2007), #6935 (2008), #7295 (2009), #7650 (2010), #7984 (2011), #8348 (2012), #8695(2013), #9064(2014), #9438 (2015), #9805 (2016), and #10170(2017).

The emphasis of this conference is to recognize that nondestructive sensing, sensor array design, signal acquisition and transmission, signal processing, energy harvesting, etc., are integral parts of health monitoring for both structural and biological systems. I believe that biological and physical science communities are learning from one another by coming to this conference and exchanging ideas. Some of the recent advances in the science and technology of health monitoring techniques that go beyond the traditional nondestructive testing for internal flaw detection are presented in these proceedings. New diagnosis, prognosis, and rehabilitation techniques applied to engineering structures made of metal, concrete, and composites, as well as biological systems are included. The papers published here cover a wide range of technologies. It is hoped that this conference will stimulate further interactions between physical and life science communities resulting in newer development of more innovative techniques for health monitoring applications.

I am thankful to the program committee members, authors, session chairs, and the SPIE staff for putting together this excellent conference.

Tribikram Kundu

