

| ONLINE SESSION I |  |               |
|------------------|--|---------------|
| TIME (Pacific)   | WEDNESDAY, SEPTEMBER 13  | SUBMISSION ID |
| 10:20~10:40      | <b>On metrics for information value quantification</b>   | 458           |
|                  | Sebastian Thöns, Michael D. Todd, Mayank Chadha, Zhen Hu<br>[Lund University, UC San Diego, University of Michigan-Dearborn]   |               |
| 10:40~11:00      | <b>Development of a Fiber-Shaped ML-Perovskite Sensor for Structural Health Monitoring in Composites</b>   | 229           |
|                  | Lucas Braga Carani [Florida State University]  |               |
| 11:00~11:20      | <b>Impact Of Spectral Shift Quality (SSQ) On Fibre Optic Sensor Readings In Reinforced Concrete Beams</b>  | 37            |
|                  | Minol Jayawickrema [University of Southern Queensland]   |               |
| 11:20~11:40      | <b>Lamb Wave Actuation and Sensing Using Flexoelectric Transducers</b>   | 72            |
|                  | Suraj Kumar Rout [ Indian Institute of Technology Delhi]   |               |
| 11:40~12:00      | <b>Metal-Organic Frameworks-Based Sensors for Detection of Toxic Environmental Contaminants</b>  | 271           |
|                  | Sarah Clouse [University of North Alabama]   |               |
| 12:00~12:20      | <b>Enhancement of Structural Health Monitoring Framework on Beams based on k-Nearest Neighbor algorithm</b>  | 462           |
|                  | Wael Altabey, Mohammad Noori, Zhishen Wu, Ramin Ghiasi, Tianyu Wang, Sin-Chi Kuok, Ahmed Siliq, Nabeel Farhan, Vasilis Sarhosis [Southeast University (Nanjing), Alexandria University, California Polytechnic State University] |               |

| ONLINE SESSION II |   | SUBMISSION ID |
|-------------------|---|---------------|
| TIME (Pacific)    | WEDNESDAY, SEPTEMBER 13   |               |
| 14:00~14:20       | <b>Efficient lifecycle reliability assessment of offshore wind turbines using digital twin</b>                            | 361           |
|                   | Arash Noshadravan [Texas A&M University]  |               |
| 14:20~14:40       | <b>Gen III Piezoelectric PMN-PZT Single Crystal Sensors and Actuators for Structural Health Monitoring Application</b>    | 8             |
|                   | Ho-Yong Lee, Moon-Chan Kim, Hyun-Jae Joo<br>[Sunmoon University]  |               |
| 14:40~15:00       | <b>Wave-based damage identification in composite strips and 2D solids using inverse multiresolution wavelet methods</b>   | 121           |
|                   | Dimitris Dimitriou [University of Patras]   |               |
| 15:00~15:20       | <b>A few-shot learning method for rotor unbalance and shaft crack fault diagnostic based on physics-informed CNN-LSTM</b> | 128           |
|                   | Weikun DENG, Thi Phuong Khanh NGUYEN, Christian GOGU, Kamal MEDJAHHER, Jérôme Morio<br>[INP-ENIT]                         |               |
| 15:20~15:40       | <b>High Sensitivity Wireless Strain Sensor for SHM Applications</b>   | 41            |
|                   | Hassan Mahmoud [King Abdullah University of Science and Technology]   |               |
| 15:40~16:00       | <b>A real-time framework for Structural Health Monitoring based on the Internet of Things - An experimental study</b>     | 114           |
|                   | Ishna Jain, Ajay Sreerama, Prafulla Kalapatapu, Venkata Dilip Kumar Pasupuleti [Mahindra University]                      |               |

| ONLINE SESSION III |   |               |
|--------------------|---|---------------|
| TIME (Pacific)     | THURSDAY, SEPTEMBER 14  | SUBMISSION ID |
| 14:00~14:20        | <b>Meta-Transfer-Learning based Damage Detection of CFRP Composite Structures</b>   | 480           |
|                    | Yan Chen, Cheng Liu [City University of Hong Kong]  |               |
| 14:20~14:40        | <b>Delamination Damage Detection of CFRP Composite Structures using DSAN-based Deep Transfer Learning Approach</b>                                      | 481           |
|                    | Xuebing Xu, Cheng Liu [City University of Hong Kong]  |               |
| 14:40~15:00        | <b>Recent Progress in Screen-Printed Smart Skin for Real-Time Load Detection in Structures</b>  | 272           |
|                    | Yu-Jin Jung [Hanyang university]  |               |
| 15:00~15:20        | <b>Least-square support vector regression for the prognosis of the deteriorating structure under the seismic excitations using autoregressive model</b> | 53            |
|                    | Shivam Ojha, Amit Shelke, Anowarul Habib [Indian Institute of Technology Guwahati]  |               |
| 15:20~15:40        | <b>Sensor location optimization for Efficient Structural Health Monitoring through Intelligent Design</b>   | 130           |
|                    | Chethan Rao Boinipalli, Vinesh Reddy Vancha, Govardhan Polepally, Prafulla Kalapatapu, Venkata Dilip Kumar Pasupuleti [Mahindra University]             |               |

| ONLINE SESSION IV |   |               |
|-------------------|---|---------------|
| TIME (Pacific)    | THURSDAY, SEPTEMBER 14  | SUBMISSION ID |
| 16:00~16:20       | <b>Quasi-static component generation of guided waves and its applications on damage detection</b>                     | 486           |
|                   | Weibin Li, Chang Jiang, Mingxi Deng, Xinlin Qing [Xiamen University]  |               |
| 16:20~16:40       | <b>Damage Diagnosis of Complex Connection Structures of Aircraft Fuselage Stringers with Guided Wave-based Method</b> | 81            |
|                   | Yusen Xu, Jian Chen Shenfang Yuan Yahui Yang Zhen Qin [Nanjing University of Aeronautics and Astronautics]            |               |
| 16:40~17:00       | <b>Assessment of intermetallic compounds within dissimilar joints using nonlinear guide wave</b>                      | 322           |
|                   | Mirna Mansour, Mohammad Ali Fakhri, Fadi Al-Badour, Samir Mustapha [American University of Beirut]                    |               |
| 17:00~17:20       | <b>Physics-Informed Neural Network for Analyzing Elastic Beam Behavior</b>  | 490           |

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|-------------|---|-----|
|             | Soheil Heidarian Radbakhsh, Kamyab Zandi, Mazdak Nik-Bakht  |     |
| 17:20~17:40 | <b>Design and analysis of nonlinear acoustical devices based on multiple scattering systems</b>           | 455 |
|             | Jacek Filar, Angelis Karlos, Pawel Packo [AGH University of Science and Technology]                       |     |
| 17:40~18:00 | <b>Experimental and Numerical Studies of an Acoustic Coupler for Multiplexing of Guided Waves for SHM</b> | 32  |
|             | Cameron Marashi, Jee Myung Kim, Kara Peters [North Carolina State University]                             |     |