Publications

S. Ekwaro-Osire, N. Gandur, and C.A. Lopez-Salazar, “Incipient Fault Point Detection Based on Multiscale Diversity Entropy,” Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems. In Press.

Yasar Yanik, Stephen Ekwaro-Osire, João Paulo Dias, Edgard Haenisch Porto, Diogo Stuani Alves, Tiago Henrique Machado, Gregory Bregion Daniel, Helio Fiori de Castro and Katia Lucchesi Cavalca. " Verification and Validation of Rotating Machinery using Digital Twin." ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering 8, no. 2 (2023): 221072. In Press.

C. Yüce, O. Gecgel, O. Doğan, S. Dabetwar, O.C. Kalay, Y. Yanik, E. Karpat, F. Karpat, and S. EkwaroOsire*, “Prognostics and Health Management of Wind Energy Infrastructure Systems,” Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, Vol. 8, No. 2, 020801, Jun 2022.

O. Gecgel, S. Ekwaro-Osire, U. Gulbulak, and T.S. Morais, “Deep Convolutional Neural Network Framework for Diagnostics of Planetary Gearboxes Under Dynamic Loading With Feature-Level Data Fusion,” Journal of Vibration and Acoustics, Vol. 144, No. 3, 031003, Jun 2022.

S. Dabetwar, S. Ekwaro-Osire, and J.P. Dias, “Fatigue Damage Diagnostics of Composites Using Data Fusion and Data Augmentation with Deep Neural Networks,” Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems, Vol. 5, No. 2, 021004, May 2022.S.

Dabetwar, S. Ekwaro-Osire, J.P. Dias, G.R. Hübner, C.M. Franchi, and H. Pinheiro, “Mass Imbalance Diagnostics in Wind Turbines using Deep Learning with Data Augmentation,” Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, doi.org/10.1115/1.4054420, Apr 28, 2022.

N.N. Kulkarni, S. Ekwaro-Osire, and P. Egan*, “Fabrication, Mechanics, and Reliability Analysis for 3D Printed Lattice Designs,” Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, Vol. 8, No. 1, 011107, Mar 2022.

E. Asres, T. Ghebrab, and S. Ekwaro-Osire, “Framework for design of sustainable flexible pavement,” Infrastructures, Vol. 7, No. 1, 6, Jan 2022.

A. Nispel, S. Ekwaro-Osire, J.P. Dias, and A. Cunha Jr., “Uncertainty Quantification for Fatigue Life of Offshore Wind Turbine Structure,” Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, Vol. 7, No. 4, 040901, Dec 2021.

O. Gecgel, J.P. Dias, S. Ekwaro-Osire, D.S. Alves, T.H. Machado, G.B. Daniel, H.F. de Castro, and K.L. Cavalca, “Simulation-Driven Deep Learning Approach for Wear Diagnostics in Hydrodynamic Journal Bearings,” Journal of Tribology, Vol. 143, No. 8, 084501, Aug 2021.

S. Dabetwar, S. Ekwaro-Osire, and J.P. Dias, “Damage Classification of Composites Based on Analysis of Lamb Wave Signals Using Machine Learning,” Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, Vol. 5, No. 3, 011002, Mar 2021.

A. Bhuiyan, N. Shamim, and S. Ekwaro-Osire, “Magnetic Resonance Image (MRI) Based Computational Modeling for Anterior Cruciate Ligament Response at Low Knee Flexion Angle,” ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, Vol. 4, No. 1, 011001, Feb 2021. P. Chillakanti, S. Ekwaro-Osire*, and A. Ertas, “Evaluation of Technology Platforms for use in Transdisciplinary Research,” Education Sciences, Vol. 11, No. 1, 23, Jan 2021.

J. Yang, Y. Zeng, S. Ekwaro-Osire, A. Nispel, and H. Ge, “Environment-Based Life Cycle Decomposition (eLCD): Adaptation of EBD to Sustainable Design,” Journal of Integrated Design & Process Science, Vol. 24, No. 2, pp. 5-28, 2020.

O. Doğan, F. Karpat, O. Kopmaz, and S. Ekwaro-Osire, “Influences of Gear Design Parameters on Dynamic Tooth Loads and Time-Varying Mesh Stiffness of Involute Spur Gears,” Sadhana, Vol. 45, 258, Oct 2020.

G. Wanki, S. Ekwaro-Osire, J.P. Dias, and A. Cunha Jr., “Uncertainty Quantification with Sparsely Characterized Parameters: An Example Applied to Femoral Stem Mechanics,” Journal of Verification, Validation and Uncertainty Quantification, Vol. 5, No. 3, 031005, Sep 2020.

S. Denard, A. Ertas, S. Mengel, and S. Ekwaro-Osire, “Development Cycle Modeling: Process Risk,” Applied Sciences, Vol. 10, No. 15, 5082, Jul 2020.

S. Denard, A. Ertas, S. Mengel, and S. Ekwaro-Osire, “Development Cycle Modeling: Resource Estimation,” Applied Sciences, Vol. 10, No. 14, 5013, Jul 2020.

D.S. Alves, G.B. Daniel, H.F. de Castro, T.H. Machado, K.L. Cavalca, O. Gecgel, J.P. Dias, and S. EkwaroOsire, “Uncertainty Quantification in Deep Convolutional Neural Network Diagnostics of Journal Bearings with Ovalization Fault,” Mechanism and Machine Theory, Vol. 149, 103835, Feb 2020.

J.J. Muhammed, P.W. Jayawickrama, and S. Ekwaro-Osire, “Uncertainty Analysis in Prediction of Settlements for Spatial Prefabricated Vertical Drains Improved Soft Soil Sites,” Geosciences, Vol. 10, No. 2, 42, Jan 2020.

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