Eric Mai

List of Publications

Transportation and data visualization:

1. Eric Mai, Rob Hranac, "Twitter interactions as a data source for transportation incidents," Transportation Research Board (2012).
2. Eric Mai, George List PhD, PE, Rob Hranac, "Simulating the travel time impact of missed transit connections," Transportation Research Board (2011).
3. Eric Mai, Mark Backman, Rob Hranac, "Visualizing bus schedule adherence and passenger load through marey graphs," ITS World Congress (2011).
4. Jerald Jariyasunant, Eric Mai, Raja Sengupta, "Algorithm for finding optimal paths in a public transit network with real-time data," Transportation Research Board (2010).

Neural network initialization for structural health monitoring:

1. "Constructing multilayer feedforward neural networks to approximate nonlinear functions in engineering mechanics applications", Pei, J.S., and Mai, E.C., ASME Journal of Applied Mechanics (JAM-06-1201)
2. "An Experimental Investigation of Applying Mica2 Motes in Pavement Condition Monitoring", Pei, J.S., Ivey, Richard A., Lin, Hung Jr., Landrum, Aaron R., Sandburg, Colby J., Ferzli, Nadim, King, Timothy, Musharraf M. Zaman, Rafei, Hazem H., Mai, Eric C., Journal of Intelligent Material Systems and Structures
3. "Mapping Some Basic Functions and Operations to Multilayer Feedforward Neural Networks for Modeling Nonlinear Dynamical Systems and Beyond", Pei, J.S., Mai, E.C., Wright, J.P., and Masri, S.F. Nonlinear Dynamics (accepted 2012).
4. "Neural network initialization for modeling nonlinear functions in engineering mechanics", Pei, J.S., and Mai, E.C., The 24th International Modal Analysis Conference (IMAC XXIV). St. Louis MO, January 30 – February 2, 2006.
5. "A heuristic neural network initialization scheme for modeling nonlinear functions in engineering mechanics", Pei, J.S., and Mai, E.C., SPIE International Symposia Smart Structures & Materials/NDE. San Diego CA, February 15 – 17, 2006.
6. "Constructing multilayer feedforward neural networks to model nonlinear functions in engineering mechanics applications", Pei, J.S., and Mai, E.C., The 15th U.S. National Congress on Theoretical and Applied Mechanics (USNCTAM). Boulder CO, June 25 – 30, 2006.
7. "Multilayer Feedforward Neural Network Initialization Methodology for Modeling Nonlinear Restoring Forces and Beyond", Pei, J.S., Mai, E.C., and Piyawat, K., The 4th World Conference on Structural Control and Monitoring (4WCSCM), Paper No. 306. San Diego CA, July 11 – 13, 2006. [Presenter].

8. "Constructing multilayer feedforward neural networks to approximate nonlinear functions - examples and justifications", Pei, J.S., and Mai, E.C., IMAC-XXV: A Conference & Exposition on Structural Dynamics, Orlando, FL, February 19 – 22, 2007. [Co-Presenter].

9. "A Heuristic Neural Network Initialization Scheme for Modeling Nonlinear Restoring Forces – Continuous Development", Pei, J.S., and Mai, E.C. SPIE International Symposia Smart Structures & Materials/NDE. San Diego CA, March 18 – 22, 2007.

10. "Monitoring pavement condition using "Smart Dust" under surge time synchronization", Pei, J.S., Ivey, R.A., Lin, H., Landrum, A., Sandburg, C.J., King, T., Zaman, M.M., Refai, H.H., Mai, E.C., Oshlake, O., Heriba, A., Hurt, E., SPIE International Symposia Smart Structures & Materials/NDE. San Diego CA, March 18 – 22, 2007.

11. "Initialization of multilayer feedforward neural networks to approximate nonlinear functions in engineering mechanics applications", Pei, J.S., and Mai, E.C. World Forum on Smart Materials and Smart Structures Technology (SMSST). Chongquing & Nanjing, China, May 22 – 27, 2007.

12. "Neural network initialization with prototypes – function approximation in engineering mechanics applications", Pei, J.S., Mai, E.C., Wright, J. P., and Smyth, A.W., International Joint Conference on Neural Networks (IJCNN). Orlando FL, August 12 – 17, 2007.

13. "Mapping elementary functions and a numerical method to neural networks", Wright, J.P., Pei, J.S., and Mai, E.C., The 26th International Modal Analysis Conference (IMAC XXVI). Orlando FL, February 4 – 7, 2008.

14. "Design and testing of small timber models to demonstrate nonlinear dynamics", Mai, E.C., Sugeng, Y.P., Pei, J.S., Piyawat, K., Zimmermann, S.M., Borchard, C.V., and Li, Y., The 26th International Modal Analysis Conference (IMAC XXVI). Orlando FL, February 4 – 7, 2008.

Musical Compositions:

1. The Neighborhood. "The Beginnings and Endings EP". Norman: Self-released, 2005.
2. The Neighborhood. "Our Voices Choked With Fireworks". Norman: Crystal Lake, 2007.
3. Hundredsomethings. "Getwell". Norman: Self-released, 2008.
4. Sister Grizzly. "Women of Colour". Oakland: Self-released, 2014.
5. Sister Grizzly. "Truth & Consequence". Oakland: Self-released, 2014.
6. Sister Grizzly. "Pray Tell". Oakland: Mountain Range Records, 2016.
7. Sister Grizzly. "Extra Medium". Oakland: Mountain Range Records, 2019.