Zhiyi Tang

Ph.D. student   73 Huang-he Road
Harbin Institute of Technology   Nan-gang District
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Objective

My research studies structural health monitoring (SHM) for civil infrastructures. I am currently interested in developing computationally efficient and statistical guaranteed methods that learn structural behavior and performance under modern deep learning architectures to meet the practical demand from large-scale multimodal SHM data processing.

Education

Ph.D. student, Engineering Mechanics   Since September 2016
Harbin Institute of Technology, Harbin, China
  - Advisor: Yuequan Bao

Master of Science, Civil Engineering   Sep 2014 – July 2016
Harbin Institute of Technology, Harbin, China
  - Thesis: Blind Source Separation of Bridge Multi-Vibration
  - Advisor: Hui Li

Bachelor of Science, Theoretical and Applied Mechanics   Sep 2009 – July 2013
Harbin Institute of Technology, Harbin, China
  - Thesis: Long-Span Bridge Aerodynamic Damping Analysis
  - Advisor: Hui Li

Publications

1. Bao Yuequan, Chen Zhicheng, Wei Shiyin, Xu Yang, **Tang Zhiyi**, and Li Hui. "The State of the Art of Data Science and Engineering in Structural Health Monitoring." *Engineering*. 2019.

2. Bao Yuequan, **Tang Zhiyi**, Li Hui. "Compressive-Sensing Data Reconstruction for Structural Health Monitoring: A Machine-Learning Approach". *Structural Health Monitoring (SHM)*. 2018. Accepted.

3. **Tang Zhiyi**, Chen Zhicheng, Bao Yuequan and Li Hui. "Convolutional neural network-based data anomaly detection method using multiple information for structural health monitoring". *Structural Control and Health Monitoring (SCHM)*. 2018.

4. Bao Yuequan, **Tang Zhiyi**, Li Hui and Zhang Yufeng. "Computer vision and deep learning–based data anomaly detection method for structural health monitoring". *Structural Health Monitoring (SHM)*. 2018.

Work Experience

Asia-Pacific-Euro Summer School (APESS) on Smart Structures Technology, Qingdao, China   July – Aug 2018
Volunteer
  - Curriculum Planning, Daily Life Support, Final Group Project TA
    (https://github.com/dawnnao/APESS2018_Steel_Girder_Crack_ID_dataset)
  - Manager: Hui Li

Tibetan Traditional Medical College, Lahsa, China   Aug 2013 – July 2014
Volunteer Teacher
    - English Teaching, Non-Profit Public Service Activities
    - Manager: Tsering

Teaching Experience

Harbin Institute of Technology, Harbin, China   Sep – Nov 2016
Teaching Assistant
    - Developed course material and assignments for structural health monitoring of civil infrastructure
    - Instructors: Hui Li, Yuequan Bao

Honors

    - 1st Prize Innovation Scholarship of Ministry of Industry and Information Technology   2019
      (teamwork, 10 persons or teams over 30000 yearly)
    - Excellent paper of WTC 2018 (74 over 1829): "Artificial Intelligence-based Data Anomaly   2018
      Detection Method for Structural Health Monitoring", Beijing
    - Best Performance Award - 2nd Prize (8 groups) in APESS 2017, Yokohama   2017
    - JSTI co. Structural Health Monitoring Graduate Fellowship (3 over 200+ yearly)   2016
    - HIT Graduate Scholarship   2014 – 2016
    - Source of Love Scholarship for Volunteers   2014
    - HIT Best Thesis for Undergraduate (100 over 6,000+ yearly)   2013
    - Xianzi Zeng Scholarship for distinguished undergraduates   2010 – 2013
    - HIT Dong Liang Scholarship for top grades undergraduates   2010

Computer Skills

Python, MATLAB, TensorFlow, PyTorch, LaTeX, R, ANSYS, JavaScript, HTML, CSS, Linux, Mac

Acdemic Activities

Reviewer for *Structural Health Monitoring*, ASCE student member, IEEE student member