

# Zhiyi Tang

Ph.D. student, HIT

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## Research Interests

Structural Health Monitoring, Signal Processing, Machine Learning, Optimization

## Education

Harbin Institute of Technology Ph.D., Engineering Mechanics - Advisor: Yuequan Bao	Harbin, China	Sep 2016 –
Harbin Institute of Technology M.S., Civil Engineering - Thesis: Blind Source Separation of Bridge Multi-Vibration - Advisor: Hui Li	Harbin, China	Sep 2014 – July 2016
Harbin Institute of Technology B.S., Theoretical and Applied Mechanics - Thesis: Long-Span Bridge Aerodynamic Damping Analysis - Advisor: Hui Li	Harbin, China	Sep 2009 – July 2013

## Journal Publications

- 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.
- Bao Yuequan, **Tang Zhiyi**, Li Hui. "Compressive-Sensing Data Reconstruction for Structural Health Monitoring: A Machine-Learning Approach". *Structural Health Monitoring (SHM)*. 2018. Under review.
- 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.
- 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 Volunteer - Curriculum Planning, Daily Life Support, Final Group Project TA ( <a href="https://github.com/dawnnao/APESS2018_Steel_Girder_Crack_ID_dataset">https://github.com/dawnnao/APESS2018_Steel_Girder_Crack_ID_dataset</a> ) - Manager: Hui Li	Qingdao & Harbin, China	16 July – 5 Aug 2018
Tibetan Traditional Medical College Volunteer Teacher	Lhasa, China	Aug 2013 – July 2014

- English Teaching, Non-Profit Public Service Activities
- Manager: Tsering

## Teaching Experience

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

## Award and Honors

1st Prize Innovation Scholarship of Ministry of Industry and Information Technology (teamwork, 10 persons or teams over ~30000 yearly)	2019
Excellent paper of WTC 2018 (74 over 1829): "Artificial Intelligence-based Data Anomaly Detection Method for Structural Health Monitoring", Beijing	2018
Best Performance Award - 2nd Prize (8 groups) in APES 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, TensorFlow, MATLAB, JavaScript, R, ANSYS, HTML, CSS, Linux, Mac

## Academic activities

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