Xin YANG

Department of Mechanical Engineering & Division of Mechatronic System Dynamics (LMSD), KU Leuven

CONTACT

- Personal page: https://xinyang-kul.github.io/;
- Work email: xin.yang@kuleuven.be; Personal email: xinyangcqu@gmail.com;
- Building G Room 106, Ghent and Aalst Campuses, Gebroeders De Smetstraat 1, 9000 Gent, Belgium;

EDUCATION

KU Leuven — Gent, Belgium
Ph.D. student (23'-), supervised by Prof. Dimitrios Chronopoulos — *Feb. 2023 - Present*

Tongji University — Shanghai, China
M.S. in Vehicle Engineering — *Sept. 2019 - Mar. 2022*
- **Cumulative GPA: 4.67/5.00**;
- **Scholarships and awards:** Graduate Entry Award, 2019; Outstanding Student Award (2021);
- **Course:** Vehicle dynamics@TJU, Modern Control Theory@TJU, Nonlinear Control Theory@TJU;

Chongqing University — Chongqing, China
B.S. in Vehicle Engineering — *Sept. 2015 - Jun. 2019*
- **Cumulative GPA: 3.68/4.00 (Ranking 5/144)**;
- **Scholarships and awards:** National Encouragement Scholarship, 2017; Outstanding Graduate of Chongqing University, 2019 ; Outstanding Student Award (top 3%), 2017 and 2018; Selected to Excellent Student Program (top 5%, on basis of outstanding academic performance);

JOURNALS

[1] **Yang, X.**[*], Fang, C., Kundu, P., Yang, J., Chronopoulos, D. (2024). A decision-level sensor fusion scheme integrating ultrasonic guided wave and vibration measurements for damage identification. *Mechanical Systems and Signal Processing*, 219, 111597. doi:10.1016/j.ymssp.2024.111597. [paper]

[2] **Yang, X.**[*], Farrokhabadi, A., Rauf, A., Liu, Y., Talemi, R., Kundu, P., Chronopoulos, D. (2024). Transfer learning-based Gaussian process classification for lattice structure damage detection. *Measurement*, 238, 115387. doi:10.1016/j.measurement.2024.115387. [paper]

[3] Fang, C., **Yang, X.**, Gryllias, K., Vandepitte, D., Liu, X., Zhang, L., Chronopoulos, D. (2025). Using removable sensors in structural health monitoring: A Bayesian methodology for attachment-to-attachment uncertainty quantification. *Mechanical Systems and Signal Processing*, 224, 111973. doi:10.1016/j.ymssp.2024.111973. [paper]

[4] Lu, H., Chinchilla, S., **Yang, X.**[*], Gryllias, K., Chronopoulos, D. (2024). Deep learning uncertainty quantification for ultrasonic damage identification in composite structures. *Composite Structures*, 338, 118087. doi:10.1016/j.compstruct.2024.118087. [paper]

[5] Farrokhabadi, A., Lu, H., **Yang, X.**, Rauf, A., Talemi, R., Chronopoulos, D. (2024). Energy Absorption Assessment of Recovered Shapes in 3D-Printed Star Hourglass Honeycombs: Experimental and Numerical Approaches. *Composite Structures*, 347, 118444. doi:10.1016/j.compstruct.2024.118444. [paper]

[6] Hu, X., **Yang, X.**, Feng, F., Liu, K., Lin, X. (2021). A particle filter and long short-term memory fusion technique for lithium-ion battery remaining useful life prediction. *Journal of Dynamic Systems, Measurement, and Control*, 143 (6), 061001. doi:10.1115/1.4049234. [paper]

CONFERENCES

[1] **_Yang, X._**, Mardanshahi, A., Chronopoulos, D. (2024). A novel fusion approach by integrating ultrasonic guided waves and vibration measurements for damage location: a numerical investigation. _International Conference on Recent Advances in Structural Dynamics (RASD)._

[2] **_Yang, X._**, Chen, F. (2022). Deep Uncertainty Quantification of Prognostic Techniques for Proton Exchange Membrane Fuel Cell. _Vehicle Electrification and Powertrain Diversification Technology Forum Part II._ [paper]

[3] **_Yang, X._**, Chen, F., Jiao, J., Liu, S. (2021). Machine learning-based voltage degradation prediction with uncertainty quantifications for PEMFC. _2021 5th CAA International Conference on Vehicular Control and Intelligence (CVCI)._ [paper]

UNDER REVIEW PAPER

[1] UltraImgDiff: Multimodal fusion for ultrasonic image generation based on conditional diffusion probabilistic model.

[2] A review of sensing techniques for accurate damage assessment in structural health monitoring: Evaluation criteria and discussion on new generation technologies.

ACADEMIC ACTIVITIES

- Journal Reviewer:

  - Mechanical Systems and Signal Processing

  - Expert Systems with Applications

  - Engineering Applications of Artificial Intelligence

  - Measurement

  - Composite Structures

WORKING EXPERIENCE

NIO Inc.   Shanghai, China
Intern @ Vehicle Chasis Control Group   _Feb. 2022 - Jun.2022_
- Lane centering control, Hardware in-the-loop testing, Ethernet/CAN communication protocol

Holomatic Inc.   Shanghai, China
Intern @ Perception Group for Autonomous Driving   _Sep. 2021 - Nov.2021_
- 3D object detection, Driving lane detection/segmentation

OTHER SKILLS

Coding: Python (Pytorch), MATLAB (Simulink), C++/C (LeetCode 300+), Linux(Ubuntu), Labview...

Languages: Mandarin, English (IELTS 7.0), Dutch (A2)

Expertise: Defect Detection, Deep/Transfer Learning, Data Analysis & Learning, Simulink System Modelling & Control...