Junliang "Julian" Tao

PhD, Associate Professor

Curriculum Vitae
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Education

PhD	Civil Engineering	Case Western Reserve University	Cleveland, US	2013
MS	Civil Engineering	Tongji University	Shanghai, China	2009
BS	Civil Engineering	China University of Geosciences	Wuhan, China	2006

Experiences

2022	**Guest Professor**, Institute of Geotechnical Engineering, University of Natural Resources and Life Sciences (BOKU)
2018–	**Associate Professor**, School of Sustainable Engineering and the Built Environment, Arizona State University
2013–2018	**Assistant Professor**, Department of Civil Engineering, University of Akron

Selected awards and honours

2017 CAREER Award, National Science Foundation
2017 Young Engineer of the Year Award, American Society of Civil Engineers, Akron Section

Professional Membership and Service

Associate Member	American Society of Civil Engineers (ASCE) Geo-Institute
Member	Institute of Electrical and Electronics Engineers (IEEE)
Member	International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)
Member	Society for Integrative and Comparative Biology (SICB)

I have participated in organizing or chairing 19 technical conferences or sessions, served on 12 technical committees, and reviewed for 30 journals, 3 funding agencies. I also volunteered in 14 outreach activities.

Patents, Publications, and Invited Talks

Since 2009 I have authored 111 research publications, including 40 journal papers, 65 conference papers, and 5 technical reports, co-edited 3 books, and filed 2 patents. I also have delivered 32 invited talks to universities, local, national and international conferences. As of April 18, 2023, my h-index is 17 and i10-index is 27, with total citations of 1,152.

1. Y Zhong, S Huang, and J Tao. Minimalistic Horizontal Burrowing Robots. *Journal of Geotechnical and Geoenvironmental Engineering* **149**(4) (2023), 02823001. DOI: 10.1061/JGGEFK.GTENG-11468.
2. Y Tang and J Tao. Multiscale Analysis of Rotational Penetration in Shallow Dry Sand and Implications for Self-Burrowing Robot Design. *Acta Geotechnica* **17** (2022), 4233–4252. DOI: 10.1007/s11440-022-01492-x.
3. Y Zhong and J Tao. Bio-Inspired Vibrational Wireless Underground Communication System. *Journal of Rock Mechanics and Geotechnical Engineering* **14** (2022). DOI: 10.1016/j.jrmge.2022.06.005.
4. J Tao. Burrowing Soft Robots Break New Ground. *Science Robotics* **6**(55) (2021). DOI: 10.1126/scirobotics.abj3615.
5. S Huang, Y Tang, H Bagheri, D Li, A Ardente, D Aukes, H Marvi, and J Tao. Effects of Friction Anisotropy on Upward Burrowing Behavior of Soft Robots in Granular Materials. *Advanced Intelligent Systems* **2**(6) (2020), 1900183. DOI: 10.1002/aisy.201900183.
6. J Tao, S Huang, and Y Tang. SBOR: A Minimalistic Soft Self-Burrowing-out Robot Inspired by Razor Clams. *Bioinspiration & Biomimetics* **15**(5) (2020), 055003. DOI: 10.1088/1748-3190/ab8754.
7. J Tao, S Huang, and Y Tang. Bioinspired Self-Burrowing-Out Robot in Dry Sand. *Journal of Geotechnical and Geoenvironmental Engineering* **145**(12) (2019), 02819002. DOI: 10.1061/(ASCE)GT.1943-5606.0002177.
8. J Tao and X Yu. Hair Flow Sensors: From Bio-Inspiration to Bio-Mimicking—a Review. *Smart Materials and Structures* **21**(11) (2012), 113001. DOI: 10.1088/0964-1726/21/11/113001.