

Hao Xu

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RESEARCH EXPERIENCE

PhD researcher, Optomechanics, <i>CNRS-IEMN, France</i>	01/2024
R.A., Materials optics, <i>Tsinghua University, TBSI, Shenzhen, China</i>	10/2020
Advisor: Bilu Liu, Baofu Ding	

EDUCATION

PhD in Microsystems sensors, <i>Universite de Lille, Lille, France</i>	03/2024
Advisor: Didier Théron, Xin Zhou	
M.Eng. in Electronics, <i>Xi'an Jiaotong University, Xi'an, China</i>	06/2018
Advisor: Wenhui Yi	
Visiting grad student, <i>University of California, San Diego, USA</i>	03/2017
B.Sc. in Optics, <i>Harbin University of Sci and Tech, Harbin, China</i>	06/2014

RESEARCH INTERESTS

His interests focus on MEMS/NEMS sensors, including

- Advanced manufacturing (nano-scale device model, LayoutEditor design)
- Nano-electromechanical modelling (theory, FEM simulation analysis)
- Microwave/optical characterization, optomechanics, scanning probe microscopy

AWARDS & HONORS

Doctoral scholarship, Centre National de la Recherche Scientifique	2021 – 2023
Academic scholarship, Xi'an Jiaotong University	2015 – 2018
Excellent graduate student, Xi'an Jiaotong University	11/2016
Outstanding Young Volunteer Award, Xi'an Jiaotong University	11/2016
3rd Award (province) of National Undergraduate Mathematical Contest, Chinese Mathematical Society (CMS)	11/2013

CONFERENCES & TALKS

Frontiers of Nanomechanical Systems (FNS), Delft, The Netherlands	06/2023
LIMMS-IEMN workshop on NEMS/MEMS (virtual meeting)	12/2022
Technologies for Neuroengineering (virtual Nature conferences)	10/2022
Nanomechanics and optomechanics seminar, Bordeaux, France	10/2022

CONFERENCES & TALKS

Red wine & Cheese lunch talk at University of Bordeaux, France	10/2022
Microsystems group meeting at CNRS-IEMN, Lille/Paris, France	12/2021
Optics group meeting at Tsinghua University TBSI, Shenzhen, China	2018 – 2020
Molecular imaging group meeting at Peking University, Beijing, China	05/2018
Biomechanics group meeting at Xi'an Jiaotong University, Xi'an, China	04/2017
Juice & Snacks lunch talk at University of California, San Diego, USA	02/2017
Electronics group meeting at Xi'an Jiaotong University, Xi'an, China	2015 – 2018

PUBLICATIONS

[Fabrication of silicon nitride membrane nanoelectromechanical resonator](#)

[Xu, H.](#), Venkatachalam, S., et al.

2023, *Microelectronic Engineering*, 280 (2023) 112064.

[Capacitively coupled distinct mechanical resonators for room temperature phonon-cavity electromechanics](#)

Pokharel, A., [Xu, H.](#), Venkatachalam, S., et al.

2022, *Nano Letters*, 22 (18), 7351-7357.

[Magnetically tunable and stable deep-ultraviolet birefringent optics using two-dimensional hexagonal boron nitride](#)

[Xu, H.](#), Ding, B., Xu, Y., Huang, Z., et al.

2022, *Nature Nanotechnology*, 17, 1091-1096.

[A 2D material-based transparent hydrogel with engineerable interference colours](#)

Ding, B., Zeng, P., Huang, Z., Dai, L., Lan, T., [Xu, H.](#), et al.

2022, *Nature communications*, 13(1), 1-8.

[High-q silicon nitride drum resonators strongly coupled to gates](#)

Zhou, X., Venkatachalam, S., Zhou, R., [Xu, H.](#), et al.

2021, *Nano Letters*, 21(13), 5738-5744.

[Obtaining high mechanical performance silk fibers by feeding purified carbon nanotube/lignosulfonate composite to silkworms](#)

[Xu, H.](#), Yi, W., Li, D., et al.

2019, *RSC Advances*, 9(7), 3558-3569.

[Supramolecular interactions of poly \[\(9, 9-dioctylfluorenyl-2, 7-diyl\)-co-thiophene\] with single-walled carbon nanotubes](#)

Zhang, P., Yi, W., [Xu, H.](#), et al.

2018, *Nanotechnology Reviews*, 7(6), 487-495.

TECHNICAL SKILLS

Developer Languages: Python (Matplotlib, Numpy, Pandas)

Developer Tools: COMSOL, Mathematica (Maple), Origin, \LaTeX (Overleaf), Github etc

Hobbies: Full/semi-Marathon, Kayaking, Guitar playing, Sketch painting, Cooking