Hao Xu (徐浩)

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POSITIONS

D.Phil. cand. researcher, Nanoelectromechanics, *IEMN-CNRS*, France 2020 –
R.A., Physical optics, *Tsinghua University TBSI*, Shenzhen, China 09/2020

EDUCATION

D.Phil. candidate in Microsystems sensors, *University of Lille 1*, France 2020 –
Visiting grad student, *University of California*, San Diego, USA 03/2017
M.Eng. in Electronics, *Xi'an Jiaotong University*, Xi'an, China 06/2018
B.Sc. in Optics, *Harbin University of Sci and Tech*, China 06/2014

RESEARCH INTERESTS

I have broad interests in nanoelectromechanics (NEMS), including

- Advanced manufacturing (nano-scale device model, design etc)
- NEMS physical theory modelling (numerical simulation analysis)
- RF device verification and measurements (Zurich instruments etc)

AWARDS & HONORS

Academic Scholarship (every year), Xi'an Jiaotong University 2015 – 2018
Excellent graduate student, Xi'an Jiaotong University 2016
Third-class Prize of National Undergrad Mathematics Contest, China 2013

CONFERENCES & TALKS

LIMMS-IEMN workshop on NEMS/MEMS (virtual meeting) 12/2022
Technologies for Neuroengineering (virtual Nature conferences) 10/2022
Poster, Nanomechanics seminar at University of Bordeaux, France 10/2022

Microsystems group meeting at IEMN-CNRS, Lille-Paris, France 02/2021
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
Class presentation at University of California, San Diego, USA 02/2017
Electronics group meeting at Xi'an Jiaotong University, Xi'an, China 2016 – 2018

PUBLICATIONS

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.

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.

MEMBERSHIPS

American Physical Society (APS)
American Physical Society - Condensed Matter Physics Division
The International Society for Optical Engineering (SPIE.)

TECHNICAL SKILLS

Developer Languages: C/C++, Python, Jupyter notebook
Developer Libraries: Matplotlib, Numpy, Pandas
Developer Tools: Maple, Origin, LaTeX (Overleaf), Github (HTML/CSS/Markdown)
Languages: English (Fluent), French (Basic), Chinese mandarin (Native)
Hobbies: Full/semi- Marathon, Hiking, Guitar playing, 3ds Max painting etc

*References can be provided upon request.