

# Hao Xu (徐浩)

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Citizenship: China

## POSITIONS

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| DPhil student researcher, Nanoelectromechanics, <i>IEMN-CNRS</i> , France | 2020 – now |
| R.A., Physical optics, <i>Tsinghua University TBSI</i> , Shenzhen, China  | 09/2020    |

## EDUCATION

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

## RESEARCH INTERESTS

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His interests focus on nano-electromechanics (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

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| Academic Scholarships, <i>Xi'an Jiaotong University</i>                   | 2015 – 2018 |
| Excellent graduate student, <i>Xi'an Jiaotong University</i>              | 2016        |
| Outstanding Young Volunteer Award, <i>Xi'an Jiaotong University</i>       | 2016        |
| 3rd Prize of National Undergrad Math Contest, <i>China Math Soc (CMS)</i> | 2013        |

## CONFERENCES & TALKS

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|---|-------------|
| LIMMS-IEMN workshop on NEMS/MEMS (virtual meeting)                            | 12/2022     |
| Technologies for Neuroengineering (virtual Nature conferences)                | 10/2022     |
| Poster, Nanomechanics seminar at <i>University of Bordeaux</i> , France       | 10/2022     |
| Red wine & Cheese lunch talk at <i>University of Bordeaux</i> , France        | 10/2022     |
| Microsystems group meeting at <i>IEMN-CNRS</i> , Lille/Paris, France          | 02/2021     |
| Optics group meeting at <i>Tsinghua University TBSI</i> , Shenzhen, China     | 2018 – 2020 |
| Molecular imaging group meeting at <i>Peking University</i> , Beijing, China  | 05/2018     |
| Biomechanics group meeting at <i>Xi'an Jiaotong University</i> , Xi'an, China | 04/2017     |
| Juice & Snacks lunch talk at <i>University of California</i> , San Diego, USA | 02/2017     |
| Electronics group meeting at <i>Xi'an Jiaotong University</i> , Xi'an, China  | 2016 – 2018 |

## PUBLICATIONS

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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

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American Physical Society (APS)

American Physical Society - Condensed Matter Physics Division

The International Society for Optical Engineering (SPIE.)

## TECHNICAL SKILLS

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Developer Languages: C, Python, Jupyter notebook

Developer Libraries: Matplotlib, Numpy, Pandas

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

Languages: English (Fluent), French (Basic), Chinese mandarin (Native)

Hobbies: Full/semi- Marathon, Hiking, Guitar playing, Sketch painting, Origami etc

\*References can be provided upon request.