JingleiPing

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Professional Appointments

University of Massachusetts Amherst Department of Mechanical and Industrial Engineering	Associate Professor	Sep 2024 – date
University of Massachusetts Amherst Institute for Applied Life Sciences Center for Personalized Health Monitoring	Associated Faculty Member	Sep 2018 – date
University of Massachusetts Amherst Department of Biomedical Engineering	Adjunct Associate Professor	Sep 2024 – date
University of Massachusetts Amherst Department of Mechanical and Industrial Engineering	Assistant Professor	Sep 2018 – Sep 2024
University of Massachusetts Amherst Department of Biomedical Engineering	Adjunct Assistant Professor	May 2019 – Sep 2024
University of Pennsylvania	Research Associate	Dec 2015 – Sep 2018
University of Pennsylvania	Postdoctoral Researcher	Dec 2013 – Dec 2015
Monash University	Occupational Trainee	Jan 2013 – Jul 2013

Education

University of Maryland – College Park
Ph.D. Chemical Physics — Dec 2013

Thesis: Graphene Chemical-Vapor-Deposited on Platinum: Synthesis, Characterization and Magneto-Transport Properties
Thesis advisor: Michael S. Fuhrer
Committee members: Michael S. Fuhrer, Ellen D. Williams, Michael Fisher, John Cumings

Sun Yat-sen University
M. Phil. Condensed Matter Physics — Jun 2008
B.S. Materials Physics (with highest honor) — Jun 2003

Honors and Awards

a1. IMECE Rising Star, ASME, 2024
a2. CAREER Award, National Science Foundation, 2024
a3. Maximizing Investigators' Research Award (MIRA), National Institute of General Medical Sciences, 2023
a4. Trailblazer Award, National Institute of Biomedical Imaging and Bioengineering, 2021
a5. Young Investigator Program (YIP) Award, Air Force Office of Scientific Research, 2019

a6. Alexander Family Fellowship, University of Maryland – College Park, 2008, 2009

a7. Graduation with honor: Graduate Excellence Award, Sun Yat-sen University, 2003

a8. Yang Nai Ying Fellowship, Sun Yat-sen University, awarded to the top 1/30 student of the Material Physics Program, 2002

a9. The First Prize Scholarship, Sun Yat-sen University, 2000, 2001, 2003

a10. Lucent/Bell Laboratory Fellowship, Sun Yat-sen University, awarded to top 3/152 students, 1999-2003

Grants

External Grants

g1. *Highly Rapid and Sensitive Nanomechanoelectrical Detection of Nucleic Acids*
NSF, CAREER*
02/24 – 01/28
sole-PI
$550,000
***NSF's prestigious CAREER award**

g2. *Cell Control via Spatiotemporal Microenvironmental pH Modulation*
NIH NIGSM, Maximizing Investigators' Research Award*
09/23 – 09/28
sole-PI
$1,901,493
***NIGMS' prestigious career award**

g3. *Atomic-Scale Two-Dimensional Material Processing System*
DoD AFOSR, Defense University Research Instrumentation Program (DURIP)
09/23 – 08/24
sole-PI
$255,275

g4. *Control of Neurons and Astrocytes through Microelectrochemical Microenvironmental pH Modulation*
DoD AFOSR
09/23 – 08/26
sole-PI
$449,999

g5. *Highly Integrated Nucleic-Acid Analysis Using Graphene Bioelectronics*
NIH NIBIB, Trailblazer Award*
04/22 – 12/24
sole-PI
$587,773
***NIBIB's prestigious career award**

g6. *Thin-Film Processing System for Controllable Atomic-Scale Functionalization of Two-Dimensional Materials*
DoD AFOSR, Defense University Research Instrumentation Program (DURIP)
02/22 – 01/24
sole-PI
$144,995

g7. *Multiscale Electrical Mapping of Biosystems.*
DoD AFOSR, Young Investigator Program (YIP)*,**
07/20 – 12/23

sole-PI
$449,950
***DoD's prestigious career award**
****42 recipients recognized nationwide in this edition**

g8. *Portable Devices for Ultra-Sensitive Determination of Heavy Metals in Whole Blood*
DoD CDMRP, Peer Reviewed Medical Research Program (PRMRP) – Discovery Award
04/19 – 09/21
sole-PI
$272,581

g9. *Wireless Network of Smart Graphene Sensors for Large-Scale Monitoring of Water Heavy Metals*
USGS WRIP
06/19 – 12/21
sole-PI
$49,998

Internal Grants

g10. *Implantable Blood-Flow Sensor Based on Monolayer Graphene*
UMass IALS LGC
05/22 – 04/23
PI (co-PIs: Prof. Yossi Chait of UMass Amherst and Michael J. Germain, M.D. from Baystate Health)
$40,000

g11. *Multiplexed Analysis of Nucleic Acid*
UMass IALS Midigrant
03/21 – 02/22
sole-PI
$20,000

Publications

#Equal contribution

The names of Ping Lab members are underlined.

Book Chapters

2019

b1. *Scalable Arrays of Chemical Vapor Sensors Based on DNA-Decorated Graphene.* **Jinglei Ping** and A.T. Charlie Johnson, *Biomimetic Sensing*, 2019, Springer

Peer-Reviewed Journal Papers

2025

j1. *High-Precision Micro-Total Analysis of Sodium Ions in Breast Milk.*
Huilu Bao, Xiao Fan, Xiaoyu Zhang, Xin Zhang, Katie Kivlighan, Sallie S. Schneider, Jianghong Liu, Charlie Johnson, Kathleen F. Arcaro, **Jinglei Ping**, Sensors and Actuators B: Chemical 422, 136652 (2025).*****
***Reported by media.**

2024

j2. *Spatiotemporal Cell Control via High-Precision Electronic Regulation of Microenvironmental pH.*
Xiaoyu Zhang, Xin Zhang, Sizhe Cheng, Xiao Fan, Huilu Bao, Shuang Zhou, **Jinglei Ping**, Nano Letters 24, 15645 (2024).*****

***Reported by Scilight and other media.**

j3. *Neural Network–Enabled, All-Electronic Control of Non-Newtonian Fluid Flow.*
Huilu Bao,[#] Xin Zhang,[#] Xiaoyu Zhang, J. William Boley, **Jinglei Ping**, Applied Physics Letters 125, 164105 (2024).***, ****
***Selected as a Featured Article in the journal.**
****Reported by Scilight and other media.**

j4. *On-Chip Microscale Isoelectric Focusing Enhances Protein Detection Limit.*
Xiao Fan, Xiaoyu Zhang, Huilu Bao, **Jinglei Ping**, Applied Physics Letters 124, 103701 (2024).***, ****
***Selected as a Featured Article in the journal.**
****Reported by Scilight and other media.**

2023

j5. *Nanomechanoelectrical Approach to Highly Sensitive and Specific Label-Free DNA Detection.*
Xiaoyu Zhang, Xiao Fan, Huilu Bao, **Jinglei Ping**, PNAS 12, e2306130120 (2023).***, ****
***Reported by media including Nanowerk, phys.org, Science Daily, etc.**
****Compared to 24,577,646 research outputs tracked by Altmetric, this paper is in the 98th percentile: it's in the top 5% of all research outputs ever tracked.**

j6. *Defect Healing in Graphene via Rapid Thermal Annealing with Polymeric "Nanobandage".*
Claire Senger, Xiao Fan, James Nicolas Pagaduan, Xiaoyu Zhang, **Jinglei Ping**, Reika Katsumata, Small 19, 2206295 (2023).

2022

j7. *Microscale Molecule Focusing and Sensing between Graphene Microelectrodes.******
Xiao Fan, Xiaoyu Zhang, **Jinglei Ping**, ACS Nano 16, 10852 (2022).
***Reported by media including Nanowerk, phys.org, Science Daily, etc.**

j8. *Electrical Contactless Microfluidic Flow Quantification.*
Xiaoyu Zhang, Xiao Fan, **Jinglei Ping**, Applied Physics Letters 120, 044102 (2022).

2021

j9. *Flow-Sensory Contact Electrification of Graphene.****, ****
Xiaoyu Zhang, Eric Chia[#], Xiao Fan[#], **Jinglei Ping**, Nature Communications 12, 1755 (2021).
***Reported by media including Nanowerk, phys.org, Science Daily, Institution of Mechanical Engineers, etc.**
****This article is in the 96th percentile (ranked 15,618th) of the 426,413 tracked articles of a similar age in all journals, as of May 2023.**

2020

j10. *Attomolar detection of ssDNA without amplification and capture of long target sequences with graphene biosensors.*
Ramya Vishnubhotla, Adithya Sriram, Olivia Dickens, Srinivas Mandyam, **Jinglei Ping**, Emmeline Adu-Beng, A. T. Charlie Johnson, IEEE Sensors Journal 20, 5720 (2020).

2019

j11. *Characterization of an engineered water-soluble variant of the full-length human mu opioid receptor.*
Jin Xi, Jie Xiao, Jose Manuel Perez-Aguilar, **Jinglei Ping**, A.T. Charlie Johnson, Jeffery G. Saven, Renyu Liu, Journal of Biomolecular Structure and Dynamics 38, 4364 (2019).

2018

j12. *DNA nano-tweezers and graphene transistor enable label-free genotyping.*

Michael T. Hwang[#], Zejun Wang[#], **Jinglei Ping**[#], Deependra Kumar Ban[#], Zi Chao Shiah, Leif Antonschmidt, Joon Lee, Yushuang Liu, Abhijith G. Karkisaval, A. T. Charlie Johnson, Chunhai Fan, Gennadi Glinsky, Ratnesh Lal, Advanced Materials 30, 18802440 (2018).

j13. *Detection of sub-fM DNA with target recycling and self-assembly amplification on graphene field effect biosensors.*
Zhaoli Gao[#], Han Xia[#], Jonathan Zauberman, Maurizio Tomaiuolo, **Jinglei Ping**, Qicheng Zhang, Pedro Ducos, Sheng Wang, Huacheng Ye, Xinping Yang, Fahmida Lubna, Zhengtang Luo, Lawrence F. Brass, A. T. Charlie Johnson, Nano Letters 18, 3509 (2018).

j14. *All-electronic quantification of neuropeptide-receptor interaction using a bias-free functionalized graphene microelectrode.*
Jinglei Ping, Jin Xi, Ramya Vishnubhotla, Pedro Ducos, Jeffery G. Saven, Renyu Liu, A. T. Charlie Johnson, ACS Nano 12, 4218 (2018).

j15. *Single-crystal bilayer graphene with controlled stacking from Ni-Cu gradient alloy.*
Zhaoli Gao, Qicheng Zhang, Carl H. Naylor, Youngkuk Kim, Irfan Haider Abidi, **Jinglei Ping**, Pedro Ducos, Jonathan Zauberman, Mengqiang Zhao, Andrew M. Rappe, Ying-Jun Wang, Zhengtang Luo, Li Ren, A. T. Charlie Johnson, ACS Nano 12, 2275 (2018).

j16. *Scalable graphene aptasensors for drug quantification.**
Ramya Vishnubhotla[#], **Jinglei Ping**[#], Abigail Lee, A. T. Charlie Johnson, AIP Advances 7, 115111 (2017).
***Featured article, highlighted by Scilight**

j17. *An aptamer-based biosensor for the azole class of antifungal drugs.*
Gregory Wiedman, Yunan Zhao, Arkadv Mustaev, **Jinglei Ping**, Ramya Vishnubhotla, A. T. Charlie Johnson, and David Perlin, mSphere 2, e00274-17 (2017).

j18. *pH sensing properties of flexible, bias-free graphene microelectrodes in complex fluids: from phosphate buffer solution to human serum.*
Jinglei Ping, Jacquelyn E. Blum, Ramya Vishnubhotla, Amey Vrudhula, Carl Naylor, Zhaoli Gao, Jeffery, G. Saven, A. T. Charlie Johnson, Small 13, 1700564 (2017).

j19. *Structural-functional analysis of engineered protein-nanoparticle assemblies using graphene microelectrode.**
Jinglei Ping, Katherine W. Pulsipher, Ramya Vishnubhotla, Jose A. Villegas, Tacey L. Hicks, Stephanie Honig, Jeffery G. Saven, Ivan J. Dmochowski, A. T. Charlie Johnson, Chemical Science 8, 5329 (2017).
***Featured on Chemical Science HOT articles and reported by myScience, Penn News, etc.**

j20. *Quantifying the effect of ionic screening with protein-decorated graphene transistors.*
Jinglei Ping, Jin Xi, Jeffery G. Saven, Renyu Liu and A. T. Charlie Johnson, Biosensors and Bioelectronics 89, 689 (2017).

j21. *Scalable production of sensor arrays based on high mobility hybrid graphene field effect transistors.*
Zhaoli Gao, Hojin Kang, Carl Naylor, Frank Streller, Pedro Ducos, Madeline D. Serrano, **Jinglei Ping**, Jonathan Zauberman, Rajesh, Robert Carpick, Ying-Jun Wang, Yung W. Park, Zhengtang Luo, Li Ren, A. T. Charlie Johnson, ACS Applied Materials & Interfaces 8, 27546 (2016).

j22. *Scalable production of high-sensitivity, label-free DNA biosensors based on back-gated graphene field-effect transistors.*
Jinglei Ping[#], Ramya Vishnubhotla[#], Amey Vrudhula, and A. T. Charlie Johnson, ACS Nano 10, 8700 (2016).

j23. *Quantifying the intrinsic surface charge density and charge-transfer resistance of the graphene-solution interface through bias-free low-level charge measurement.**
Jinglei Ping and A. T. Charlie Johnson, Applied Physics Letters 109, 013103 (2016).
***Editor's pick**

j24. *Genetically engineered antibody functionalized platinum nanoparticles modified CVD-graphene nanohybrid transistor for the detection of breast cancer biomarker, HER3.*
Rajesh, Zhaoli Gao, Ramya Vishnubhotla, Madeline D. Serrano, **Jinglei Ping**, M. K. Robinson, and A. T. Charlie Johnson, Advanced Materials Interface 3, 1600124 (2016).

j25. *Monolayer single-crystal 1T'-$MoTe_2$ grown by chemical vapor deposition exhibits weak antilocalization effect.*
Carl H. Naylor, William Parkin, **Jinglei Ping**, Zhaoli Gao, Yu Ren Zhou, Youngkuk Kim, Frank Streller, Robert Carpick, Andrew M. Rappe, Marija Drndic, James M. Kikkawa, and A. T. Charlie Johnson, Nano Letters 16, 4297 (2016).

j26. *Seeded growth of highly crystalline mobybdenum disulphide monolayers at controlled locations.*
Gang H. Han, Nicholas J. Kybert, Carl H. Naylor, Bum S. Lee, **Jinglei Ping**, Joo H. Park, Jisoo Kang, Si Y. Lee, Young H. Lee, Ritesh Agarwal and A. T. Charlie Johnson, Nature Communications 6, 6128 (2014).

j27. *Disorder induced magnetoresistance in a two dimensional electron system.**
Jinglei Ping, Indra Yudhistira, Navneeth Ramakrishnan, Sungjae Cho, Shaffique Adam, and Michael S. Fuhrer, Physics Review Letters 113, 047206 (2014).
***Editor's suggestion**

j28. *Carbon impurities on graphene synthesized by chemical vapor deposition on platinum.*
Jinglei Ping and Michael S. Fuhrer, Journal of Applied Physics. 116, 044303 (2014).

j29. *Measuring the thickness of few-layer graphene by laser scanning microscopy.*
Behnood Ghamsari, Jacob Tosado, A. Zhuravel, Mahito Yamamoto, Daniel Lenski, **Jinglei Ping**, Michael S. Fuhrer, and Steven Anlage, IEEE Xplore, doi:10.1109/CPEM.2012.6251000 (2012).

j30. *Layer number and stacking sequence imaging of few-layer graphene by transmission electron microscopy.**
Jinglei Ping and Michael S. Fuhrer, Nano Letters 12, 4635 (2012).
***Top 20 most downloaded paper of the month**

Patents

f1. *Nanodevices and methods for measuring biofluidic flow using a graphene-based microelectrode.* **Jinglei Ping** and Xiaoyu Zhang, US Patent App. 63/311,123

f2. *Scalable back-gated functionalized graphene field effect transistors for detection of DNA and other target molecules.* A. T. Charlie Johnson, **Jinglei Ping**, and Ramya Vishnubhotla, US Patent App. 17/934,540

f3. *pH sensing technique based on graphene electrodes.* A. T. Charlie Johnson and **Jinglei Ping**, US Patent 11,327,041

f4. *Multiplexed detection of toxins using graphene-based aptasensors.* A. T. Charlie Johnson, **Jinglei Ping**, Chengyu Wen, and Steven Vitale, US Patent App. 16/299,615

Invited Presentations

t1. *Nanomechanoelectrical detection of DNA*
Worcester Polytechnic Institute, Worcester MA, 2024

t2. *Nanomechanoelectrical detection of DNA*
University of Massachusetts Amherst, Department of Polymer Science and Engineering, Amherst MA, 2024

t3. *Nanomechanoelectrical detection of DNA*
University of Maryland – College Park, College Park MD, 2023

t4. *Atom-Thin Interfaces to Biosystems*
NANO KOREA, Seoul Korea, 2023

t5. *Atomically Thin Interfaces to Biosystems*
Boston University, Boston MA, 2022

t6. *Contact Electrification at Graphene/Bio Interfaces*
New Jersey Institute of Technology, Newark NJ, 2021

t7. *Contact Electrification at Graphene/Bio Interfaces*
Rutgers University, Piscataway NJ, 2020

t8. *2D-Materials Biosensors.*
Amherst College, Amherst MA, 2019

t9. *2D-Materials Biosensors.*
Massachusetts Center for Autonomous Materials, Amherst MA, 2018

t10. *Scalable 2D-Biosensors.*
University of Massachusetts, Department of Mechanical and Industrial Engineering, Amherst MA, 2018

t11. *Spontaneous Faradaic Charge Transfer at Bio-Graphene Interface.*
University of Massachusetts, Physics Department, Amherst MA, 2018

t12. *Marrying Bio with 2D Bits.*
Southern University of Science and Technology, Shenzhen GD, China, 2018

t13. *Electrical Biosensing Devices and Systems Based on 2D Materials.*
McMaster University, Hamilton ON, Canada, 2017

t14. *Electrical Biosensors Based on 2D Materials.*
Boston College, Boston, MA 2017

t15. *Electrical Biosensors Based on Two Dimensional Nanomaterials.*
BioDirection, Inc., Santa Fe, NM 2017

t16. *Electrical Biosensing Science and Technology Based on Two Dimensional Nanomaterials.*
University of Delaware, Newark DE, 2017

t17. *Biosensors and bioelectronics based on two-dimensional nanomaterials.*
APS March Meeting, Baltimore MD, 2016

t18. *Graphene chemical-vapor-deposited on platinum: the glamour of imperfection.*
Penn State University, University Park PA, 2013

Conference Presentations

c1. *Highly Rapid and Sensitive Nanomechanoelectrical Detection of Nucleic Acids.*
Jinglei Ping, IMECE, 2024

c2. *All-Electronic Extracellular pH Control.*
Xiaoyu Zhang, Xin Zhang, Xiao Fan, Huilu Bao, Jinglei Ping, APS, 2024

c3. *Highly Controllable Growth of Carbon Nanotube–Functionalized Graphene.*
Xiao Fan, Jieun Park, Huilu Bao, Xiaoyu Zhang, Xin Zhang, Stephen Nonnenmann, Jinglei Ping, APS, 2024

c4. *A Miniaturized Non-Invasive Real-Time Flow Rate Detection System for Non-Newtonian Fluid.*
Huilu Bao, Xin Zhang, Xiao Fan, Jinglei Ping, APS, 2024

c5. *Closed-Loop Control of Non-Newtonian Fluid Flow Using Machine Learning.*
Xin Zhang, Huilu Bao, Xiaoyu Zhang, Xiao Fan, Jinglei Ping, APS, 2024

c6. *Highly Integrated System for Micro-Total Analysis of Metal Ions.*
Huilu Bao, Xiao Fan, Xiaoyu Zhang, Xin Zhang, Jinglei Ping, BMES, 2023

c7. *Nanomechanoelectrical Approach to Ultra-High Sensitivity and Specificity DNA Quantification.**
Xiaoyu Zhang, Xiao Fan, Huilu Bao, Jinglei Ping, BMES, 2023
***Oral presentation, acceptance rate ~16%**

c8. *Ultra-Sensitive Protein Detection Enabled by Micro Isoelectric Focusing.*
Xiao Fan, Xiaoyu Zhang, Huilu Bao, Jinglei Ping, BMES, 2023

c9. *Sub-Micrometer/Second Biofluidic Flow-Velocity Quantification.*
Xiaoyu Zhang, Jinglei Ping, MRS, accepted, 2021

c10. *Biofluidic Flow-Velocity Quantification Using a Monolayer-Graphene Single-Electrode.*
Xiaoyu Zhang, Eric Chia, Xiao Fan, Jinglei Ping, BMES, accepted, 2020

c11. *Rapid Detection of Bloodborne Heavy Metal Using a Microfluidic Filtration-Detection Device.*
Xiao Fan, Eric Chia, Xiaoyu Zhang, Jinglei Ping, BMES, accepted, 2020

c12. *Single-Crystal Bilayer Graphene with Controlled Stacking from Ni-Cu Gradient Alloy.*
Zhaoli Gao, Qicheng Zhang, Carl Naylor, Youngkuk Kim, Irfan Abidi, Jinglei Ping, Pedro Ducos, Jonathan Zauberman, Mengqiang Zhao, Andrew Rappe, Ying-Jun Wang, Zhengtang Luo, Li Ren, A.T. Charlie Johnson, APS, Los Angeles CA, 2018

c13. *Attending Attomolar Detection and Long Target Capture of Single Strand DNA with Graphene Biosensors.*
Ramya Vishnubhotla, Jinglei Ping, Olivia Dickens, Adithya Sriram, Srinivas Mandyam, A.T. Charlie Johnson, APS, Los Angeles CA, 2018

c14. *Chemical Vapor Deposition of Large-Area 2D Hexagonal Diamond.*
Ying Liu, Jinglei Ping, Wei Tan, A.T. Charlie Johnson, APS, Los Angeles CA, 2018

c15. *Multiplexed Detection of Toxins in Tap Water Using a Graphene Aptasensor System.*
Jinglei Ping, A.T. Charlie Johnson, APS, Los Angeles CA, 2018

c16. *Scalable Production of Biosensors Based on Aptamer-Functionalized Graphene for Detection of the HIV drug Tenofovir.*
Ramya Vishnubhotla, Jinglei Ping, A.T. Charlie Johnson, APS, New Orleans LA, 2017

c17. *Non-Perturbative Quantification of Ionic Charge Transfer through nm-Scale Protein Pores Using Graphene Microelectrodes.*
Jinglei Ping, A.T. Charlie Johnson, APS, New Orleans LA, 2017

c18. *Biosensors Based on DNA-Functionalized Graphene.*
Ramya Vishnubhotla, Jinglei Ping, Amey Vrudhula, A.T. Charlie Johnson, APS, Baltimore MD, 2016

c19. *Seeded Growth of Highly Crystalline Molybdenum Disulphide Monolayers at Controlled Locations.*
Carl Naylor, Gang Hee Han, Nicholas Kybert, Jinglei Ping, A.T. Charlie Johnson, APS, San Antonio TX, 2015

c20. *Graphene Decorated with mu-Opioid Receptor: the Ionic Screening Effect and Detection of Enkephalin.*
Jinglei Ping, A.T. Charlie Johnson, Renyu Liu, APS, San Antonio TX, 2015

c21. *Theoretical Study of Disorder Induced Magnetoresistance in Graphene.*
Shaffique Adam, Jinglei Ping, Indra Yudhistira, Navneeth Ramakrishnan, Sungjae Cho, Michael S. Fuhrer, APS, Denver CO, 2014

c22. *Magnetoresistance Induced by Inhomogeneity in Graphene.*
Jinglei Ping, Indra Yudhistira, Navneeth Ramakrishnan, Sungjae Cho, Shaffique Adam, Michael S. Fuhrer, APS, Denver CO, 2014

c23. *Linear Magnetoresistance of Graphene in Contact with Inhomogeneous Disordered Graphitic Carbon.*
Jinglei Ping, Michael S. Fuhrer, APS, Baltimore MD, 2013

c24. *Laser Scanning Microscopy for Quantitative Measurement of the Local Microwave-Photonic Properties of Advanced Materials and Devices.*
Behnood Ghamsari, Jacob Tosado, Mahito Yamamoto, Jinglei Ping, Daniel Lenski, Michael S. Fuhrer, Steven Anlage, APS, Boston MA, 2012

c25. *Layer Number and Stacking Order Imaging of Few-Layer Graphene by Transmission Electron Microscopy.*
Jinglei Ping, Michael S. Fuhrer, APS, Boston MA, 2012

c26. *Characterization of graphene by TEM.*
Jinglei Ping, Michael S. Fuhrer, CNAM Seminar, College Park MD, 2012

Research Advising Activities

Postdoctoral Researcher

m1. Jiawang Chen, 04/29/2024 – present

m2. Xiao Fan, 09/20/2024 – present

Advisor Doctoral

m3. Huilu Bao, MIE, PhD candidate, 09/05/2021 – present

m4. Xin Zhang, MIE, PhD candidate, 09/06/2022 – present

m5. Lin Feng, MIE, PhD student, 09/02/2024 – present

m6. Thomas Estella, BME, PhD student, 09/02/2024 – present

m7. Xiao Fan, MIE, PhD, 09/03/2019 – 09/01/2024

m8. Xiaoyu Zhang, MIE, PhD, 09/03/2019 – 09/01/2024

m9. Eric Chia, MIE, graduate student, 01/22/2019 – 09/05/2021

Advisor Master

m10. Sharath Chandan Reddy Patlolla, MIE, MS, 09/2018 – 05/2019

Advisor Undergraduate Students

m11. Larry Jin, MIE, undergraduate, 10/2024 – present

m12. Cristian Clewis, Physics, undergraduate, independent study, 09/2022 – 12/2022

m13. Henry Chow, BME, undergraduate, independent study, 09/2021 – 05/2022

m14. Noah Doerr, MIE, undergraduate, 09/2018 – 12/2019

m15. Jiahui Zhao, MIE, undergraduate, 09/2018 – 05/2019

Students Awards

s1. Lin Feng, Dean's Fellowship, 2025

s2. Xiaoyu Zhang, Departmental Travel Award, 2023

s3. Xin Zhang, Departmental Doctoral Fellowship, 2023

s4. Huilu Bao, Departmental Doctoral Fellowship, 2022

Teaching Activities

Statics (MI-ENG 210, CE-ENGIN 240): Undergraduate Core

Strength of Materials (MI-ENG 590C, MI-ENG 609, ChE-ENG 590C): Undergraduate Core

Mechanical Properties of Materials (MI-ENG 211): Graduate Core

Fundamentals of Physics, Chemistry, and Engineering for Sensor Science and Technology (MI-ENG 619): Elective

(Formerly: Nanomaterials and Sensors (MI-ENG 619, BMED-ENG 519))

- Statics, Spring 2025
- Strength of Materials, Spring 2025
- Fundamentals of Physics, Chemistry, and Engineering for Sensor Science and Technology, Fall 2024
- Strength of Materials, Spring 2024
- Nanomaterials and Sensors, Fall 2023
- Statics, Spring 2023
- Statics, Spring 2022
- Nanomaterials and Sensors, Fall 2021
- Statics, Spring 2021
- Mechanical Properties of Materials, Fall 2020
- Statics, Spring 2020
- Mechanical Properties of Materials (MI-ENG 590C, MI-ENG 609, ChE-ENG 590C), Fall 2019
- Mechanical Properties of Materials (MI-ENG 609), Spring 2019
- Statics (MI-ENG 210, CE-ENGIN 240), Fall 2018

Scholarly Services

- Topic Editor, MDPI Biosensors (Impact Factor 5.74)
- Editor of Special Issue "Biosensors Based on Two Dimensional Materials", MDPI Biosensors
- Journal Reviewer: Nature Communications, IEEE Sensors, Nano Letters, Advanced Materials, Chemical Science, ACS Advanced Materials Interfaces, Applied Physics Letters, APL Materials, AIP Advances, Chinese Physics Letters
- Membership
  - Biomedical Engineering Society
  - American Physics Society
  - American Chemistry Society
  - Materials Research Society
  - American Society of Mechanical Engineering
- Chairing & Organizing
  - Chair of Session P33 (focused session) of APS March Meeting 2017, New Orleans, LA
  - Chair of Session J1 (focused session) and Y26 of APS March Meeting 2015, San Antonio, TX
  - Chapter Member of EPS Young Minds – Section Maryland 2012
  - Organizer and chair of Chemical Physics Seminar, 2009-2010, University of Maryland, MD

University Services

- Union Membership: Massachusetts Society of Professors (MSP), 2019 – date
- MIE Graduate Committee, Member, 2023 – date
- MIE Lab Committee, Member, 2023 – 2024
- IALS Translational Graduate Student Fellowship, ad hoc reviewer, 2023
- UMass Armstrong Funds for Science, ad hoc reviewer, 2023
- MIE Ad Hoc Faculty Search Committee, Member, 2023
- MIE Seminar Committee, Chair, 2022 – 2023
- MIE Seminar Committee, Member, 2021 – 2022
- MIE Department Personnel Committee, Member, 2020 – 2021
- MIE Remote Teaching Committee, Member, 2019 – 2020
- Eureka! Workshop, Program Facilitator, 2019
- MIE Graduate Committee, Member, 2019 – 2020
- BME Faculty Search Committee, Member 2019 – 2020
- Discussion Panel of the Program "Expectations of the Crow—Adjusting to the American Education System", Faculty Representative, 2018
- MIE Graduate Committee, Member 2018 – 2019