

JingleiPing

Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst
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Professional Appointments

University of Massachusetts Amherst

Department of Mechanical and Industrial Engineering Assistant Professor Sep 2018 – 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 Assistant Professor May 2019 – date

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. CAREER Award, National Science Foundation, 2024
- a2. Maximizing Investigators' Research Award (MIRA), National Institute of General Medical Sciences, 2023
- a3. Trailblazer Award, National Institute of Biomedical Imaging and Bioengineering, 2021
- a4. Young Investigator Program (YIP) Award, Air Force Office of Scientific Research, 2019
- a5. Alexander Family Fellowship, University of Maryland – College Park, 2008, 2009
- a6. Graduation with honor: Graduate Excellence Award, Sun Yat-sen University, 2003
- a7. Yang Nai Ying Fellowship, Sun Yat-sen University, awarded to the top 1/30 student of the Material Physics Program, 2002

- a8. The First Prize Scholarship, Sun Yat-sen University, 2000, 2001, 2003
- a9. 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 NIGMS, 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 Midgrant

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

In preparation/Submitted

- j1. *All-Electronic High-Precision Control of Microenvironmental pH*.
Xiaoyu Zhang, Xin Zhang, Xiao Fan, Huilu Bao, **Jinglei Ping**, submitted.
- j2. *Graphene with As-Grown Carbon Nanotube Whiskers: Achieving High Electrical Conductivity and Electrochemical Activity*.
Xiao Fan, Jieun Park, Huilu Bao, Xiaoyu Zhang, Xin Zhang, Stephen Nonnenmann, **Jinglei Ping**, submitted.
- j3. *High-Precision Micro Total Analysis of Sodium Ions in Breast Milk*.
Huilu Bao, Xiao Fan, Xiaoyu Zhang, Xin Zhang, Olivia Dickens, Jianghong Liu, Charlie Johnson, Kathleen Arcaro, **Jinglei Ping**, submitted.
- j4. *Closed-Loop Control of Non-Newtonian Fluid Flow Using Machine Learning*.
Xin Zhang[#], Huilu Bao[#], Xiaoyu Zhang, Xiao Fan, William Boley, **Jinglei Ping**, submitted.
- j5. *Shear-Flow Stimulation of Embryoid Differentiation*.
Xiaoyu Zhang, Jamar Hawkins, Yubing Sun, **Jinglei Ping**, *et al.*, in preparation.

2024

- j6. *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.**

2023

- j7. *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.**
- j8. *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

- j9. *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.**
- j10. *Electrical Contactless Microfluidic Flow Quantification.*
Xiaoyu Zhang, Xiao Fan, **Jinglei Ping**, Applied Physics Letters 120, 044102 (2022).

2021

- j11. *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

- j12. *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

- j13. *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

- j14. *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).
- j15. *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).
- j16. *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).
- j17. *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).
- j18. *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**
- j19. *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).
- j20. *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).
- j21. *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.**
- j22. *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).
- j23. *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).
- j24. *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).
- j25. *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**
- j26. *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).

- j27. *Monolayer single-crystal 1T'-MoTe₂ 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).
- j28. *Seeded growth of highly crystalline molybdenum 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).
- j29. *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**
- j30. *Carbon impurities on graphene synthesized by chemical vapor deposition on platinum.*
Jinglei Ping and Michael S. Fuhrer, Journal of Applied Physics. 116, 044303 (2014).
- j31. *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).
- j32. *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. *Sensing and Actuation Based on Two-Dimensional Materials*

Air Force Office of Scientific Research, Fairfax VA, 2021

- t7. *Contact Electrification at Graphene/Bio Interfaces*
New Jersey Institute of Technology, Newark NJ, 2021
- t8. *Contact Electrification at Graphene/Bio Interfaces*
Rutgers University, Piscataway NJ, 2020
- t9. *2D-Materials Biosensors.*
Amherst College, Amherst MA, 2019
- t10. *2D-Materials Biosensors.*
Massachusetts Center for Autonomous Materials, Amherst MA, 2018
- t11. *Scalable 2D-Biosensors.*
University of Massachusetts, Department of Mechanical and Industrial Engineering, Amherst MA, 2018
- t12. *Spontaneous Faradaic Charge Transfer at Bio-Graphene Interface.*
University of Massachusetts, Physics Department, Amherst MA, 2018
- t13. *Marrying Bio with 2D Bits.*
Southern University of Science and Technology, Shenzhen GD, China, 2018
- t14. *Electrical Biosensing Devices and Systems Based on 2D Materials.*
McMaster University, Hamilton ON, Canada, 2017
- t15. *Electrical Biosensors Based on 2D Materials.*
Boston College, Boston, MA 2017
- t16. *Electrical Biosensors Based on Two Dimensional Nanomaterials.*
BioDirection, Inc., Santa Fe, NM 2017
- t17. *Electrical Biosensing Science and Technology Based on Two Dimensional Nanomaterials.*
University of Delaware, Newark DE, 2017
- t18. *Biosensors and bioelectronics based on two-dimensional nanomaterials.*
APS March Meeting, Baltimore MD, 2016
- t19. *Graphene chemical-vapor-deposited on platinum: the glamour of imperfection.*
Penn State University, University Park PA, 2013

Conference Presentations

- c1. *All-Electronic Extracellular pH Control.*
Xiaoyu Zhang, Xin Zhang, Xiao Fan, Huilu Bao, Jinglei Ping, APS, accepted, 2024
- c2. *Highly Controllable Growth of Carbon Nanotube-Functionalized Graphene.*
Xiao Fan, Jieun Park, Huilu Bao, Xiaoyu Zhang, Xin Zhang, Stephen Nonnenmann, Jinglei Ping, APS, accepted, 2024
- c3. *A Miniaturized Non-Invasive Real-Time Flow Rate Detection System for Non-Newtonian Fluid.*
Huilu Bao, Xin Zhang, Xiao Fan, Jinglei Ping, APS, accepted, 2024
- c4. *Closed-Loop Control of Non-Newtonian Fluid Flow Using Machine Learning.*
Xin Zhang, Huilu Bao, Xiaoyu Zhang, Xiao Fan, Jinglei Ping, APS, accepted, 2024
- c5. *Highly Integrated System for Micro-Total Analysis of Metal Ions.*
Huilu Bao, Xiao Fan, Xiaoyu Zhang, Xin Zhang, Jinglei Ping, BMES, 2023
- c6. *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%**

- c7. *Ultra-Sensitive Protein Detection Enabled by Micro Isoelectric Focusing.*
Xiao Fan, Xiaoyu Zhang, Huilu Bao, Jinglei Ping, BMES, 2023
- c8. *Sub-Micrometer/Second Biofluidic Flow-Velocity Quantification.*
Xiaoyu Zhang, Jinglei Ping, MRS, accepted, 2021
- c9. *Biofluidic Flow-Velocity Quantification Using a Monolayer-Graphene Single-Electrode.*
Xiaoyu Zhang, Eric Chia, Xiao Fan, Jinglei Ping, BMES, accepted, 2020
- c10. *Rapid Detection of Bloodborne Heavy Metal Using a Microfluidic Filtration-Detection Device.*
Xiao Fan, Eric Chia, Xiaoyu Zhang, Jinglei Ping, BMES, accepted, 2020
- c11. *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
- c12. *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
- c13. *Chemical Vapor Deposition of Large-Area 2D Hexagonal Diamond.*
Ying Liu, Jinglei Ping, Wei Tan, A.T. Charlie Johnson, APS, Los Angeles CA, 2018
- c14. *Multiplexed Detection of Toxins in Tap Water Using a Graphene Aptasensor System.*
Jinglei Ping, A.T. Charlie Johnson, APS, Los Angeles CA, 2018
- c15. *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
- c16. *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
- c17. *Biosensors Based on DNA-Functionalized Graphene.*
Ramya Vishnubhotla, Jinglei Ping, Amey Vrudhula, A.T. Charlie Johnson, APS, Baltimore MD, 2016
- c18. *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
- c19. *Graphene Decorated with μ -Opioid Receptor: the Ionic Screening Effect and Detection of Enkephalin.*
Jinglei Ping, A.T. Charlie Johnson, Renyu Liu, APS, San Antonio TX, 2015
- c20. *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
- c21. *Magnetoresistance Induced by Inhomogeneity in Graphene.*
Jinglei Ping, Indra Yudhistira, Navneeth Ramakrishnan, Sungjae Cho, Shaffique Adam, Michael S. Fuhrer, APS, Denver CO, 2014
- c22. *Linear Magnetoresistance of Graphene in Contact with Inhomogeneous Disordered Graphitic Carbon.*
Jinglei Ping, Michael S. Fuhrer, APS, Baltimore MD, 2013
- c23. *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

c24. *Layer Number and Stacking Order Imaging of Few-Layer Graphene by Transmission Electron Microscopy.*
Jinglei Ping, Michael S. Fuhrer, APS, Boston MA, 2012

c25. *Characterization of graphene by TEM.*
Jinglei Ping, Michael S. Fuhrer, CNAM Seminar, College Park MD, 2012

Research Advising Activities

Advisor Doctoral

- m1. Xiao Fan, MIE, PhD candidate, 09/03/2019 – present, expected thesis defense in 2024
- m2. Xiaoyu Zhang, MIE, PhD candidate, 09/03/2019 – present, expected thesis defense in 2024
- m3. Huilu Bao, MIE, PhD student, 09/05/2021 – present
- m4. Xin Zhang, MIE, PhD student, 09/06/2022 – present
- m5. Lin Feng, MIE, PhD student, to join in Fall 2024
- m6. Thomas Estella, BME, PhD student, to join in Fall 2024
- m7. Eric Chia, MIE, graduate student, 01/22/2019 – 09/05/2021

Advisor Master

- m8. Sharath Chandan Reddy Patlolla, MIE, MS, 09/2018 – 05/2019

Advisor Undergraduate Students

- m9. Jong Park, Chemical Engineering, undergraduate, 10/2023 – present
- m10. Caleb Carpenter, BME, undergraduate, 09/2023 – present
- m11. Lucy Zhang, Computer Science, undergraduate, 10/2022 – present
- m12. Cristian Clewis, Physics, undergraduate, independent study, 09/2022 – present
- m13. Diya Asawa, BME, undergraduate, 04/2023 – present
- m14. Olivia Watson, Cornell BME, undergraduate, summer 2023
- m15. Henry Chow, BME, undergraduate, independent study, 09/2021 – 05/2022
- m16. Charlotte LaGasse, BME, undergraduate, 09/2021 – 12/2022
- m17. Anisha Prathi, Computer Science, undergraduate, 02/2022 – 12/2022
- m18. Noah Doerr, MIE, undergraduate, 09/2018 – 12/2019
- m19. Ashwini Allada, MIE, undergraduate, 01/2019 – 12/2019
- m20. Jiahui Zhao, MIE, undergraduate, 09/2018 – 05/2019
- m21. Samuel Worrell, ECE, undergraduate, 01/2019 – 05/2019

Students Awards

- s1. Xiaoyu Zhang, Departmental Travel Award, 2023
- s2. Xin Zhang, Departmental Doctoral Fellowship, 2023
- s3. Huilu Bao, Departmental Doctoral Fellowship, 2022

Teaching Activities

Statics: Undergraduate Core

Mechanical Properties of Materials: Graduate Core

Nanomaterials and Sensors: New

- Nanomaterials and Sensors (MI-ENG 619, BMED-ENG 519), Fall 2023
- Statics (MI-ENG 210, CE-ENGIN 240), Spring 2023
- Statics (MI-ENG 210, CE-ENGIN 240), Spring 2022
- Nanomaterials and Sensors (MI-ENG 597NS/697NS, BMED-ENG 597NS), Fall 2021
- Statics (MI-ENG 210, CE-ENGIN 240), Spring 2021
- Mechanical Properties of Materials (MI-ENG 590C, MI-ENG 609, ChE-ENG 590C), Fall 2020
- Statics (MI-ENG 210, CE-ENGIN 240), 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
- 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 – date
- 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
***An innovative five-year program that addresses the gender gap in STEM**
- 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