

Masahiro Ishigami
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(a) Professional Preparation

Massachusetts Institute of Technology	Cambridge, MA	Physics	BS 1997
University of California, Berkeley	Berkeley, CA	Physics	PhD 2004
University of Maryland, College Park	College Park, MD	Physics	2007

(b) Appointments

Associate Professor, Department of Physics and Nanoscience and Technology Center, University of Central Florida (2014-Present)

Assistant Professor, Department of Physics and Nanoscience and Technology Center, University of Central Florida (2008-2014)

Postdoctoral Fellow, Department of Physics, University of Maryland, College Park (2004-2007)

(c) Products

(i) List up to five (5) publications/products that are the **most current** ones related to your field

1. B.T. Blue, S.D. Lough, D. Le, J.E. Thompson, T.S. Rahman, R. Sankar, and M. Ishigami, Scanning Tunneling Microscopy and Spectroscopy of NiTe₂, Surface Science (2022) [doi: 10.1016/j.susc.2022.122099]

2.J. Thomas, A. Rossi, **D. Smalley**, L. Francaviglia, Z. Yu, T. Zhang, S. Kumari, J. Robinson, M. Terrones, **M. Ishigami**, E. Rotenberg, E. Barnard, A. Raja, E. Wong, D. Frank Ogletree, M. Noack and A. Weber-Bargioni, Autonomous Scanning Probe Microscopy Investigations over WS₂ and Au (111), NPJ Computational Materials, 8, 99 (2022) [doi: 10.1038/s41524-022-00777 9]

3. Brandon T. Blue, G. Jernigan, D. Le, J. Fonseca, **S. Lough, J. Thompson, D. Smalley**, T. Rahman, J. Robinson, **M. Ishigami**, Metallicity of 2H-MoS₂ induced by Au hybridization, 2D Materials (IOP) 7 025021 (2020). [DOI:10.1088/2053-1583/ab6d34]

4. Michael S. Lodge, Guoqing Chang, Cheng-Yi Huang, Bahadur Singh, Jack Hellerstedt, Mark T. Edmonds, Dariusz Kaczorowski, Md. Mofazzel Hosen, Madhab Neupane, Hsin Lin, Michael S. Fuhrer, Bent Weber, and **Masahiro Ishigami**, **Observation of Effective Pseudospin**

Scattering in ZrSiS, Nano Letters, 17, 7213, (2017).
[https://doi.org/10.1021/acs.nanolett.7b02307].

5.M.S. Lodge, C. Tang, **B.T. Blue**, W.A. Hubbard, A. Martini, **B.D. Dawson**, and **M. Ishigami**, Lubricity of gold nanocrystals on graphene measured using quartz crystal microbalance, Scientific Reports, 6, 31837 (2016).

(ii) List up to five (5) other significant publications/products.

1.B.T. Blue, **R. Tsuchikawa**, A. Ahmadi, Z. Zhang, **D. Heligman**, **S.D. Lough**, J. Hone, E. R. Mucciolo, **M. Ishigami**, Observation of Wigner Cusps in a Metallic Carbon Nanotube, Solid State Communications 353, 1148234, (2022) [doi: 10.1016/j.ssc.2022.114834]

2.J. Thomas, A. Rossi, **D. Smalley**, L. Francaviglia, Z. Yu, T. Zhang, S. Kumari, J. Robinson, M. Terrones, **M. Ishigami**, E. Rotenberg, E. Barnard, A. Raja, E. Wong, D. Frank Ogletree, M. Noack and A. Weber-Bargioni, Autonomous Scanning Probe Microscopy Investigations over WS₂ and Au (111), NPJ Computational Materials, 8, 99 (2022) [doi: 10.1038/s41524-022-00777 9]

3.J.J. Fonseca, A.L. Yeats, **Brandon T. Blue**, M. Zalautdinov, T. Brintlinger, B.S. Simpkins, D.C. Ratchford, J.C. Culbertson, J.Q. Grim, S.G. Carter, **M. Ishigami**, R.M. Stroud, C.D. Cress, J.T. Robinson, Enabling remote quantum emission in 2D semiconductors via porous metallic networks, Nature Communications, 11, 5 (2020).

4.R. Tsuchikawa, **D. Heligman**, **B.T. Blue**, Z.Y. Zhang, A. Ahmadi, E.R. Mucciolo, J. Hone and **M. Ishigami**, Scattering strength of potassium on a carbon nanotube with known chirality, Physical Review B, 94, 045408 (2016).

5.J. Katoch, D. Le, S. Singh, R. Rao, T.S. Rahman, and **M. Ishigami**, Scattering strength of the scatterer inducing variability in graphene on silicon oxide, Journal of Physics Condensed Matter, 28, 115301 (2016).

(d) Graduate teaching experience

Classical Mechanics, Fall 2022

(e) Graduate students mentored (to completion, if applicable)

- List up to 5 most recent- Chair of thesis/dissertation committees, overall number, names of students, degree, year graduated
 1. Michael Lodge (8/11-8/18), Ph.D., Postdoctoral Fellow, Nanyang Technological Univ.
 2. Jon Edmiston (8/11-5/13), Masters
 3. Cameron Glasscock (6/14-12/15), Masters
 4. Brandon Blue (8/15-5/20), Ph.D., Research Scientist, NanoCBN
 5. Jesse Thompson (5/17-5/22), Ph.D., Research Scientist, KBR

- List up to 5 most recent- Member of thesis/dissertation committees, overall number, names of students, degree, year graduated
 1. Nagendra Dhakal (Stolbov, Physics, UCF, Ph.D. in 2017)
 2. Rachel Evans (Peale, Physics, UCF, M.S. in 2018)
 3. Seth Calhoun (Peale, Physics, UCF, Ph.D. in 2019)
 4. Cameron Nickle (Del Barco, Physics, UCF, Ph.D. in 2020)
 5. Riffat Munir (Nakajima, Physics, UCF, Ph.D. in 2021)
- List total number of graduate students mentored on thesis/dissertation committees over the course of your career.

12 students

(f) Other synergistic activities related to Graduate Education

- Developed and taught graduate core classical mechanics
- Mentored a student with mobility impairment due to paraplegia.
- Chaired APS march meeting programming committee for a major category for a number of years.