

Yasuyuki Nakajima

Assistant Professor

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(a) Professional Preparation

Undergraduate Institution	University of Tokyo, Tokyo, Japan	Physics	B.S. 2002
Graduate Institution	University of Tokyo, Tokyo, Japan	Physics	M.S. 2004, Ph.D. 2007
Postdoctoral Institution	University of Tokyo, Tokyo, Japan	Physics	2007-12
	University of Maryland, College Park, MD	Physics	2012-16

(b) Appointments

2016-pr. Assistant Professor, University of Central Florida, Orlando, FL 32816

(c) Publications

(i) Five (5) publications that are the most current ones related to your field

1. Q.-P. Ding, C. Dissanayake, S. Pakhira, W.J. Newsome, F. Uribe-Romo, D.C. Johnston, Y. Nakajima, and Y. Furukawa, *Slow spin dynamics in the hyperhoneycomb lattice $[(C_2H_5)_3NH]_2Cu_2(C_2O_4)_3$ revealed by 1H NMR studies*, Phys. Rev. B **105**, L100405 (2022). DOI: 10.1103/PhysRevB.105.L100405.
2. R. Munir, KAM H. Siddiquee, C. Dissanayake, K. Kumarasinghe, Xi. Hu, Y. Takano, E.S. Choi, and Y. Nakajima, *Unusual superconductivity in the topological nodal-line semimetal candidate $Sn_xNbSe_{2-\delta}$* , J. Phy. Conf. Ser. **2164**, 012008 (2022). DOI:10.1088/1742-6596/2164/1/012008.
3. H. Siddiquee, R. Munir, C. Dissanayake, P. Vaidya, C. Nickle, E. Del Barco, G. Lamura, C. Baines, S. Cahen, C. Hérold, P. Gentile, T. Shiroka, and Y. Nakajima, *Nematic superconductivity in the topological semimetal $CaSn_3$* , Phys. Rev. B **105**, 094508 (2022). DOI: 10.1103/PhysRevB.105.094508.
4. R. Munir, KAM H. Siddiquee, C. Dissanayake, Xi. Hu, Y. Takano, E.S. Choi, and Y. Nakajima, *Unusual upper critical fields of the topological nodal-line semimetal candidate $Sn_xNbSe_{2-\delta}$* , J. Phy. Condens. Matter **33**, 23LT01 (2021). DOI: 10.1088/1361-648x/abf386.
5. KAM H. Siddiquee, R. Munir, C. Dissanayake, Xi. Hu, S. Yadav, Y. Takano, E.S. Choi, D. Le, T.S. Rahman, and Y. Nakajima, *Fermi surfaces of the topological semimetal $CaSn_3$ probed through de Haas van Alphen oscillations*, J. Phy. Condens. Matter **33**, 17LT01 (2021). DOI: 10.1088/1361-648x/abe0e2.

(ii) Five (5) other significant publications

1. Y. Nakajima, T. Metz, C. Eckberg, K. Kirshenbaum, A. Hughes, R. Wang, L. Wang, S.R. Saha, I-Lin Liu, N. P. Butch, D. Campbell, Y.S. Eo, D. Graf, Z. Liu, S.V. Borisenko, P.Y.

- Zavalij, and J. Paglione, *Quantum-critical scale invariance in a transition metal alloy*, Commun. Phys. **3**, 181 (2020). DOI:10.1038/s42005-020-00448-5.
2. H. Kim, K. Wang, Y. Nakajima, R. Hu, S. Ziemak, P. Syers, L. Wang, H. Hodovanets, J. D. Denlinger, P. M. R. Brydon, D. F. Agterberg, M. A. Tanatar, R. Prozorov, and J. Paglione, *Beyond Spin-Triplet: Nodal Topological Superconductivity in a Noncentrosymmetric Semimetal*, Sci. Adv. **4**, eaao4513 (2018). DOI:10.1126/sciadv.aao4513.
 3. Y. Nakajima, P. Syers, X. Wang, R. Wang, and J. Paglione, *One-dimensional edge state transport in a topological Kondo insulator*, Nat. Phys. **12**, 213 (2016). DOI:10.1038/nphys3555.
 4. Y. Nakajima, R. Hu, K. Kirshenbaum, A. Hughes, P. Syers, X. Wang, K. Wang, R. Wang, S. Saha, D. Pratt, J. W. Lynn, and J. Paglione, *Topological RPdBi half-Heusler semimetals: a new family of non-centrosymmetric magnetic superconductors*, Sci. Adv. **1**, e1500242 (2015). DOI: 10.1126/sciadv.1500242.
 5. Y. Nakajima, R. Wang, T. Metz, X. Wang, L. Wang, H. Cynn, S. T. Wier, J. R. Jeffries, and J. Paglione, *High-temperature superconductivity stabilized by electron-hole interband coupling in collapsed tetragonal phase of KFe_2As_2 under high pressure*, Phys. Rev. B **91**, 060508(R) (2015). DOI:10.1103/PhysRevB.91.060508.

(d) Graduate teaching experience

- PHY7980: Dissertation Research (Fall 2017 – Spring 2023)
- PHY6918: Directed Research (Fall 2017 – Fall 2018, Fall 2020 – Spring 2022, Spring 2023)
- PHY6908: Independent Study (Summer 2021, Fall 2021)

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

- **Most recent-Chair of thesis/dissertation committees**
 1. Kapila Kumarasinghe, Ph.D., Physics (Chair)
 2. Charuni Dissanayake, Ph.D., Physics (Co-Chair)
 3. Riffat Munir, Ph.D. Physics, 2021 (Co-Chair)
 4. Hasan Siddiquee, Ph.D., Physics, 2021 (Co-Chair)
- **Most recent-Member of thesis/dissertation committees**
 1. Sabin Regmi, Ph.D., Physics, 2022
 2. Gyan Khatri, Ph.D., Physics, 2022
 3. Gyanendra Dhakal, Ph.D., Physics, 2022
 4. Firoza Kabir, Ph.D., Physics, 2021
 5. John Beetar, Ph.D., Physics, 2020
- **Total number of graduate students mentored on thesis/dissertation committees over the course of your career: 12**

(f) Other synergistic activities related to Graduate Education

1. Recent invited talks on related work at the International Conference on Strongly Correlated Electron Systems (SCES) 2019 in Okayama, Japan, September 2019.
2. Session chair, Magnetic Frontier Quantum Technology, Orlando, FL, 2023.
3. Program sorter, American Physical Society March Meeting, 2014, 2016.
4. Physical Society of Japan program sorting committee 2011 - 2012.
5. Broadening the participation of groups underrepresented in STEM.