

Yusuke Iguchi, PhD

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Education

2013/4 – 2018/3 **PhD & MS** in Basic Science, University of Tokyo, Tokyo, Japan
(Advisor: Yoshinori Onose)
2009/4 – 2013/3 **BS** in Physics, Tokyo University of Science, Tokyo, Japan
(Advisor : Setsuo Mitsuda)

Employment history/work experience

2020/7 – *current* **Senior Research Scientist-Physical**, Geballe Laboratory for
Advanced Materials, Stanford University, California
2018/4 – 2020/6 **Postdoctoral Research Fellow**, Department of Applied Physics,
Stanford University, California (Advisor: Kathryn Ann Moler)
2016/4 – 2018/3 **Research Fellow (DC2)** of Japan Society for the Promotion of Science

Honors and Awards

2018/4 Overseas Research **Fellowship** of Japan Society for the Promotion of Science
2017/1 Journal of Physics Society of Japan **Papers of Editors' choice**
2016/4 Research **Fellowship (DC2)** of Japan Society for the Promotion of Science
2015/3 **Incentive award**, Graduate School of Arts and Sciences, University of Tokyo

Grant Awards

2016/4 – 2018/3 **Principal Investigator**, Grant-in-Aid for Japan Society for the
Promotion of Science Fellows, 16J10076, *Study of relativistic
Magnonics by using microfabricated microwave circuit*, \$13k for 2 yrs.

Teaching Experience

2013-2014 Material Science Experiment II/III, University of Tokyo, Japan,
Teaching Assistant
Summer 2012 Physics, Kumagaya High school, Japan, **Guest Lecturer**, prepared and
delivered lectures

Professional Activities

2019/12 **Session chair**, 32nd International Symposium on Superconductivity (Kyoto)
Reviewers, npj Quantum Materials, Scientific Reports, Science Progress

Peer Reviewed Journal Articles

(Researcher ID: [C-7829-2014](#), [Google Scholar](#))

- [9] **Y. Iguchi**, I. P. Zhang, E. D. Bauer, F. Ronning, J. R. Kirtley, and K. A. Moler
Local observation of linear- T superfluid density and anomalous vortex dynamics in URu₂Si₂
Phys. Rev. B(Letter) 103, L220503 (2021).
- [8] I. P. Zhang, J. C. Palmstrom, H. Noad, L. B.-V. Horn, **Y. Iguchi**, Z. Cui, E. Mueller, J. R. Kirtley, I. R. Fisher, and K. A. Moler
Imaging anisotropic vortex dynamics in FeSe
Phys. Rev. B 100, 024514 (2019).
- [7] **Y. Iguchi**, Y. Nii, M. Kawano, H. Murakawa, N. Hanasaki, and Y. Onose
Microwave non-reciprocity of magnon excitations in a non-centrosymmetric antiferromagnet Ba₂MnGe₂O₇
Phys. Rev. B 98, 064416 (2018).
- [6] **Y. Iguchi**, Y. Nii, and Y. Onose
Magnetoelectrical control of nonreciprocal microwave response in a multiferroic helimagnet
Nature Communications 8, 15252 (2017).
- [5] Y. Nii, R. Sasaki, **Y. Iguchi**, and Y. Onose
Microwave Magneto-Chiral Effect in a Noncentro-symmetric Magnet CuB₂O₄
J. Phys. Soc. Jpn. 86, 024707 (2017). **Editors' choice**
- [4] R. Sasaki, Y. Nii, **Y. Iguchi**, and Y. Onose
Nonreciprocal propagation of surface acoustic wave in Ni/LiNbO₃
Phys. Rev. B(Rapid Communications) 95, 020407(R) (2017).
- [3] Y. Kinoshita, N. Kida, M. Sotome, T. Miyamoto, **Y. Iguchi**, Y. Onose, and H. Okamoto
Terahertz Radiation by Subpicosecond Magnetization Modulation in the Ferrimagnet LiFe₅O₈
ACS photonics 3, 1170 (2016).
- [2] **Y. Iguchi**, S. Uemura, K. Ueno, and Y. Onose
Nonreciprocal magnon propagation in a noncentrosymmetric ferromagnet LiFe₅O₈
Phys. Rev. B 92, 184419 (2015).
- [1] T. Nakajima, **Y. Iguchi**, H. Tamatsukuri, S. Mitsuda, Y. Yamasaki, H. Nakao, and N. Terada
Uniaxial-Pressure Effects on Spin-Driven Lattice Distortions in Geometrically Frustrated Magnets CuFe_{1-x}Ga_xO₂ ($x=0, 0.035$)
J. Phys. Soc. Jpn. 82, 114711 (2013).

Invited Talks

- [5] **73rd Berkeley Japanese Academic Network**, UC Berkeley CA(online), 2021
- [4] **32nd International Symposium on Superconductivity** (Kyoto, 2019), PC1-1-INV
- [3] **11th Stanford Visitors Meetup**, Stanford University CA, 2019
- [2] **56th Berkeley Japanese Academic Network**, UC Berkeley CA, 2019
- [1] **JSPS Researcher Gatherings**, Berkeley CA, 2019

Selected Oral Presentations

- [12] **Y. Iguchi**, J.A. Straquadine, J.R. Kirtley, A. Singh, I.R. Fisher, and K.A. Moler
Non BCS-like superfluid density in a disordered charge density wave material: Pd-intercalated ErTe₃
American Physical Society March Meeting 2021(Online), Session A47.00008
- [11] **Y. Iguchi**, J.A. Straquadine, J.R. Kirtley, A. Singh, I.R. Fisher, and K.A. Moler
Non BCS-like superfluid density in a disordered charge density wave material: Pd-intercalated ErTe₃
The Physical Society of Japan 76th Annual Meeting(Online),Division 6,14aF1-1
- [10] **Y. Iguchi**
Local rotational symmetry breaking of superconducting phase in URu₂Si₂
Canadian Institute of Foundation for Advanced Research Quantum Materials Summer school 2019 (University of British Columbia)
- [9] **Y. Iguchi**, I.P. Zhang, E.D. Bauer, F. Ronning, J.R. Kirtley, and K.A. Moler
Study of chiral d-wave superconductor candidate URu₂Si₂ by using scanning SQUID microscopy
American Physical Society March Meeting 2019 (Boston), X08.00010
- [8] **Y. Iguchi**, I.P. Zhang, E.D. Bauer, F. Ronning, J.R. Kirtley, and K.A. Moler
Study of chiral d-wave superconductor candidate URu₂Si₂ by using scanning SQUID microscopy
The Physical Society of Japan 74th Annual Meeting (Kyushu Univ.) (2019), Division 8, 14aS302-8
- [7] **Y. Iguchi**, Y. Nii, H. Murakawa, N. Hanasaki, and Y. Onose
Non-reciprocal microwave response of antiferromagnetic magnons in a multiferroic Ba₂MnGe₂O₇
American Physical Society March Meeting 2018 (Los Angeles), H23.00009
- [6] **Yusuke Iguchi**, Yoichi Nii, and Yoshinori Onose
Microwave response to antiferromagnetic resonance in multiferroics Ba₂MnGe₂O₇
The Physical Society of Japan Autumn Meeting 2017 (Iwate Univ.), Division 8, 23aE31-8
- [5] **Y. Iguchi**, Y. Nii, and Y. Onose
Magnetoelectrical control of nonreciprocal microwave response in a multiferroic helimagnet
American Physical Society March Meeting 2017 (New Orleans), F50.00008

- [4] **Y. Iguchi**, Y. Nii, and Y. Onose
Electric control of nonreciprocal microwave response in ferroelectric spiral magnet
The Physical Society of Japan Autumn Meeting 2016 (Kanazawa Univ.), Division 3, 13aAA-8
- [3] **Y. Iguchi**, S. Uemura, K. Ueno, and Y. Onose
Nonreciprocal magnon propagation in a noncentrosymmetric ferromagnet LiFe_5O_8
American Physical Society March Meeting 2016 (Baltimore), B6.00002
- [2] **Y. Iguchi**, S. Uemura, K. Ueno, and Y. Onose
Nonreciprocal microwave response on large wave number magnon modes in a noncentrosymmetric ferromagnet LiFe_5O_8
The Physical Society of Japan Annual (70th) Meeting (Waseda Univ.) (2015), Division 3, 24aAD-6
- [1] **Y. Iguchi** and Y. Onose
Microwave response of noncentrosymmetric magnet LiFe_5O_8
The Physical Society of Japan Annual (69th) Meeting (Tokai Univ.) (2014), Division 3 and 8, 29pAY-6

Poster presentations

- [3] **Y. Iguchi**
Local rotational symmetry breaking of superconducting phase in URu_2Si_2
Canadian Institute of Foundation for Advanced Research Quantum Materials Summer school 2019 (University of British Columbia)
- [2] **Y. Iguchi**
Microwave response of antiferromagnetic magnons in a multiferroic $\text{Ba}_2\text{MnGe}_2\text{O}_7$
Junjiro Kanamori Memorial International Symposium 2017(Tokyo), P56
- [1] **Y. Iguchi**
Magnetolectrical control of nonreciprocal microwave response in a multiferroic helimagnet, (Poster)
CEMS-QPEC Symposium on Emergent Quantum Materials 2017 (Tokyo), P29