

CURRICULUM VITAE

Yuta Yamane

Assistant Professor
Frontier Research Institute for Interdisciplinary Sciences
Tohoku University
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Nationality: Japan



Academic Appointments

- | | |
|---------------------------|--|
| since February 2020 | Assistant Professor
Tohoku University, Japan |
| April 2017 – January 2020 | JPSJ Postdoctoral Research Fellowship for Young Scientists
RIKEN, Japan |
| April 2014 – March 2017 | Postdoctoral Fellow (16-17)
JPSJ Postdoctoral Fellowship for Research Abroad (14-16)
Johannes Gutenberg University of Mainz, Germany |
| May 2013 – March 2014 | Visiting Scholar
Texas A&M University, USA |
| April 2012 – March 2014 | JPSJ DC2 Research Fellowship for Young Scientists
Japan Atomic Energy Agency (13-14)
Tohoku University, Japan (12-13) |
| April 2010 – March 2012 | Fellow of Advanced Science (Scholarship)
Japan Atomic Energy Agency |

Education

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| March 2013 | Ph.D. Physics , Tohoku University, Japan
Thesis advisors: Eiji Saitoh and Sadamichi Maekawa |
| March 2010 | M.Sc. Physics , Tohoku University, Japan
Thesis advisor: Sadamichi Maekawa |
| March 2008 | Bachelor of Economics , Tohoku University, Japan |

Honors, Awards and Recognitions

1. Young Scientist Award of the Physical Society of Japan (October 2021)
Physical Society of Japan
2. Prominent Research Fellow (July 2021 – June 2024)
Tohoku University
3. Young Researcher Award (March 2021)
ECEI, Tohoku University
4. Excellent Young Researcher in LEADER program (July 2019)
Japan Society for the Promotion of Science
5. Postdoctoral Research Fellowship for Young Scientists (April 2017 – January 2020)
Japan Society for the Promotion of Science
6. Postdoctoral Fellowship for Research Abroad (April 2014 – March 2016)
Japan Society for the Promotion of Science
7. Outstanding Ph.D. Thesis Award (February 2013)
Department of Physics, Tohoku University
8. DC2 Research Fellowship for Young Scientists (April 2012 – March 2014)
Japan Society for the Promotion of Science
9. Scholarship for Fellow of Advanced Science (April 2010 – March 2012)
Japan Atomic Energy Agency
10. Outstanding Master Thesis Award (February 2010)
Department of Physics, Tohoku University

Research Funding

1. Strategic Professional Development Program for Young Researchers, Tohoku Initiative for Fostering Global Researchers for Interdisciplinary Sciences
Agency: Japan Science and Technology Agency (JST)
Title: “Theoretical study on quantum relativistic inductance”
Role: Principal Investigator
Period: June 2022 – March 2027
2. Research Promotion
Agency: Murata Science Foundation
Title: “Theoretical proposal and experimental demonstration of quantum relativistic inductance”
Role: Principal Investigator
Amount and Period: 2,950,000 JPY, July 2021 – June 2022

3. Research Promotion [No.0331108-A]
Agency: Iketani Science and Technology Foundation
Title: “Electrical control of magnetic textures in noncollinear antiferromagnetic epitaxial thin films”
Role: Principal Investigator
Amount and Period: 1,500,000 JPY, April 2021 – March 2022
4. CSRN Grant for Collaborative Research Projects
Agency: Center for Spintronics Research Network (CSRN)
Title: “Theoretical study on spin-motive force aiming at its active applications in spintronics”
Role: Principal Investigator
Amount and Period: 400,000 JPY, April 2020 – March 2022
5. FRIS Internal Research Grant
Agency: Frontier Research Institute for Interdisciplinary Sciences (FRIS), Tohoku University
Role: Principal Investigator
Amount and Period: 7,920,000 JPY, February 2020 – March 2023
6. Grant-in-Aid for JSPS Fellows [No.17J03368]
Agency: Japan Society for the Promotion of Science (JSPS)
Title: “Theoretical research on antiferromagnetic spintronics”
Role: Principal Investigator
Amount and Period: 4,030,000 JPY, April 2017 – January 2020
7. Grant-in-Aid for JSPS Fellows [No.12J11208]
Agency: Japan Society for the Promotion of Science (JSPS)
Title: “Theoretical study on spin-motive force and spintronics phenomena”
Role: Principal Investigator
Amount and Period: 2,000,000 JPY, April 2012 – March 2014
8. Research Promotion
Agency: Murata Science Foundation
Title: “Study on spin wave-spin current interactions in magnetic nanostructures”
Role: Co-Investigator
Amount and Period: 1,000,000 JPY, July 2010 – June 2011

Invited Talks

1. “Theoretical study on electric response of noncollinear antiferromagnets”
[Physical Society of Japan 77th Annual Meeting](#)
Japan (Online), March 15 – 19, 2022.
2. “Theory of emergent inductance with spin-orbit effects”
[15th Joint MMM-Intermag Conference](#)
New Orleans, USA, January 10 – 14, 2022.

3. "Theory of current-driven non-collinear antiferromagnetic dynamics"
[1st Online RIEC International Workshop on Spintronics](#)
Sendai, Japan (Online), November 18, 2021.
4. "Theory of emergent inductances"
[Laboratory for Nanoelectronics and Spintronics Workshop](#)
Tohoku University, Japan, October 5, 2021.
5. "Emergent inductances in magnetic thin films with broken inversion symmetry"
[ATI \(Foundation Advanced Technology Institute\) 1st Spintronics Workshop in FY2020](#)
Tokyo, Japan (Online), February 18, 2021.
6. "Antiferromagnetic spintronics"
[Spintronics Lectures at National University of San Marcos \(UNI-PERU\) and National University of Engineering \(UNMSM-PERU\)](#)
Lima, Peru, October 16 – 19, 2019.
7. "Dynamics of noncollinear antiferromagnetic domain wall driven by spin current injection"
[The Korean Magnetism Society 2019 Summer Conference](#)
Busan, Korea, May 22 – 24, 2019.
8. "Noncollinear antiferromagnetic dynamics driven by spin current injection"
[RIEC Workshop on Nation-side Cooperative Research Projects](#)
Tohoku University, Japan, February 1, 2019.
9. "Electric voltage generation by antiferromagnetic dynamics"
[Workshop on Antiferromagnetic Spintronics](#)
Grenoble, France, October 25 – 27, 2017.
10. "Antiferromagnetic spintronics – spin-transfer torque and spin-motive force"
[Quantum Material Seminar](#)
Institute for Solid State Physics, The University of Tokyo, Japan, January 27, 2017.
11. "Spin-transfer torque and spin-motive force in antiferromagnets"
[Invited Seminar](#)
Max Planck Institutes Stuttgart, Germany, June 17, 2016.
12. "Current-driven motion of antiferromagnetic skyrmions in the presence of magnetic fields"
[Workshop on Spin Orbit Coupling and Spin Mechanics](#)
Mainz, Germany, October 23 – 24, 2015.
13. "Transport phenomena in ferromagnetic bubble systems"
[Spintronics Meeting Mainz-Lanna](#)
Vila Lanna, Prague, Czech Republic, June 11 – 12, 2015.
14. "Newtonian equation approach to transport phenomena in ferromagnets"
[25th ASRC International Workshop on New Insights in the Physics of Magnetic Nanostructures](#)
Tokai, Japan, January 27, 2015.

15. “Semiclassical approach to spintronics current induced effects”
[Spintronics Meeting Mainz-Lanna](#)
Budenheim, Germany, December 3 – 4, 2014.
16. “Theory of spinmotive force in ferromagnetic nanostructures”
[Ph.D. Thesis Award Winner Seminars](#)
Tohoku University, Japan, February 22, 2013.

Services to the Community

1. Committee Member of Physical Society of Japan (Division 3) ([October 2021 – September 2022](#))

Original Papers

1. H. Masuda, T. Seki, [Y. Yamane](#), R. Modak, K. Uchida, J. Ieda, Y.-C. Lau, S. Fukami, and K. Takanashi
“Large asymmetric interlayer exchange coupling enabling perpendicular magnetization switching by in-plane magnetic field”
[Physical Review Applied](#) **17**, 054036 (2022).
[doi.org/10.1103/PhysRevApplied.17.054036]
2. T. Uchimura, J.-Y. Yoon, Y. Sato, Y. Takeuchi, S. Kanai, R. Takechi, K. Kishi, [Y. Yamane](#), S. DuttaGupta, J. Ieda, H. Ohno, and S. Fukami
“Observation of domain structure in non-collinear antiferromagnetic Mn₃Sn thin films by magneto-optical Kerr effect”
[Applied Physics Letters](#) **120**, 172405 (2022).
[doi.org/10.1063/5.0089355]
3. [Y. Yamane](#), S. Fukami, and J. Ieda
“Theory of emergent inductance with spin-orbit coupling effects”
[Physical Review Letters](#) **128**, 147201 (2022).
[doi.org/10.1103/PhysRevLett.128.147201]
4. J.-Y. Yoon, Y. Takeuchi, S. DuttaGupta, [Y. Yamane](#), S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Correlation of anomalous Hall effect with structural parameters and magnetic ordering in Mn_{3+x}Sn_{1-x} thin films”
[AIP Advances](#) **11**, 065318 (2021).
[doi.org/10.1063/5.0043192]
5. Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Itoh, B. Jinnai, S. Kanai, J. Ieda, S. Fukami, and H. Ohno
“Chiral-spin rotation of non-collinear antiferromagnet by spin-orbit torque”
[Nature Materials](#) **20**, 1364-1370 (2021).
[doi.org/10.1038/s41563-021-01005-3]

6. J. Ieda and Y. Yamane
“Intrinsic and extrinsic tunability of Rashba spin-orbit coupled emergent inductors”
Physical Review B **103**, L100402 (2021). [Editors’ Suggestion]
[doi.org/10.1103/PhysRevB.103.L100402]
7. S. A. Obadero, Y. Yamane, C. A. Akosa, and G. Tatara
“Current-driven nucleation and propagation of antiferromagnetic skyrmionium”
Physical Review B **102**, 014458 (2020).
[doi.org/10.1103/PhysRevB.102.014458]
8. S. Sugimoto, Y. Nakatani, Y. Yamane, M. Ikhlas, K. Kondou, M. Kimata, T. Tomita, S. Nakatsuji, and Y. Otani
“Electrical nucleation, displacement, and detection of antiferromagnetic domain walls in the chiral antiferromagnet Mn₃Sn”
Communications Physics **3**, 111 (2020).
[doi.org/10.1038/s42005-020-0381-8]
9. Y. Yamane and J. Ieda
“Skyrmion-generated spinmotive force in inversion broken ferromagnets”
Journal of Magnetism and Magnetic Materials **491**, 165550 (2019).
[doi.org/10.1016/j.jmmm.2019.165550]
10. Y. Yamane, O. Gomonay, and J. Sinova
“Dynamics of noncollinear antiferromagnetic textures driven by spin current injection”
Physical Review B **100**, 054415 (2019).
[doi.org/10.1103/PhysRevB.100.054415]
11. Y. Yamane
“Spin-motive force due to domain-wall motion in the presence of Dzyaloshinskii-Moriya interaction”
Physical Review B **98**, 174434 (2018).
[doi.org/10.1103/PhysRevB.98.174434]
12. Y. Yamane, O. Gomonay, H. Velkov, and J. Sinova
“Combined effect of magnetic field and charge current on antiferromagnetic domain-wall dynamics”
Physical Review B **96**, 064408 (2017).
[doi.org/10.1103/PhysRevB.96.064408]
13. Y. Yamane and J. Sinova
“Skyrmion-number dependence of spin-transfer torque on magnetic bubbles”
Journal of Applied Physics **120**, 233901 (2016).
[doi.org/10.1063/1.4971868]
14. Y. Yamane, J. Ieda, and J. Sinova
“Spin-transfer torques in antiferromagnetic textures: Efficiency and quantification method”
Physical Review B **94**, 054409 (2016).
[doi.org/10.1103/PhysRevB.94.054409]

15. Y. Yamane, J. Ieda, and J. Sinova
“Electric voltage generation by antiferromagnetic dynamics”
Physical Review B **93**, 180408(R) (2016).
[doi.org/10.1103/PhysRevB.93.180408]
16. Y. Yamane, S. Hemmatiyani, J. Ieda, S. Maekawa, and J. Sinova
“Spinmotive force due to motion of magnetic bubble arrays driven by magnetic field gradient”
Scientific Reports **4**, 6901 (2014).
[doi.org/10.1038/srep06901]
17. Y. Yamane, J. Ieda, and S. Maekawa
“Spinmotive force with static and uniform magnetization induced by a time-varying electric field”
Physical Review B **88**, 014430 (2013).
[doi.org/10.1103/PhysRevB.88.014430]
18. J. Ieda, S. Maekawa, and Y. Yamane
“Real-time analysis of the spinmotive force due to domain wall motion”
Journal of Korean Physical Society **62**, 1802 (2013).
[doi.org/10.3938/jkps.62.1802]
19. Y. Yamane, J. Ieda, and S. Maekawa
“Stability of spinmotive force in perpendicularly magnetized nanowires under high magnetic fields”
Applied Physics Letters **100**, 162204 (2012).
[doi.org/10.1063/1.4703933]
20. M. Hayashi, J. Ieda, Y. Yamane, J. Ohe, Y. K. Takahashi, S. Mitani, and S. Maekawa
“Time-domain observation of the spinmotive force in permalloy nanowires”
Physical Review Letters **108**, 147202 (2012).
[doi.org/10.1103/PhysRevLett.108.147202]
21. Y. Yamane, K. Sasage, T. An, K. Harii, J. Ohe, J. Ieda, S. E. Barnes, E. Saitoh, and S. Maekawa
“Continuous generation of spinmotive force in a patterned ferromagnetic film”
Physical Review Letters **107**, 236602 (2011).
[doi.org/10.1103/PhysRevLett.107.236602]
22. Y. Yamane, J. Ieda, J. Ohe, S. E. Barnes, and S. Maekawa
“Spinmotive force due to intrinsic energy of ferromagnetic nanowires”
Applied Physics Express **4**, 093003 (2011).
[doi.org/10.1143/APEX.4.093003]
23. Y. Yamane, J. Ieda, J. Ohe, S. E. Barnes, and S. Maekawa
“Equation-of-motion approach of spin-motive force”
Journal of Applied Physics **109**, 07C735 (2011).
[doi.org/10.1063/1.3565398]

Review Articles and Other Publications

1. Y. Yamane and J. Ieda
“Spin torques and electrical voltage generation in antiferromagnetic nanotextures”
Magnetics Japan [まぐね in Japanese] **13**(5), 235-241 (2018).
2. J. Ieda, Y. Yamane, and S. Maekawa
“Spinmotive force in magnetic nanostructures”
SPIN **03**, 1330004 (2013).
[doi.org/10.1142/S2010324713300041]
3. Y. Yamane, K. Sasage, T. An, K. Harii, J. Ohe, J. Ieda, S. E. Barnes, E. Saitoh, and S. Maekawa
“Highlights from the Asia Pacific Region: Continuous generation of spinmotive force in a patterned ferromagnetic film”
Asia Pacific Physics Newsletter **1**(2), 26-27 (2012).
[doi.org/10.1142/S2251158X12000239]
4. Y. Yamane
“Theory of spin-motive force in ferromagnetic thin films (Master thesis picked in the magazine)”
Bussei Kenkyu [物性研究 in Japanese] **94**(6), 714-744 (2010).

Contributed Presentations & Invited Talks presented by Collaborators

1. Y. Sato, Y. Takeuchi, Y. Yamane, J.-Y. Yoon, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Dot size dependence of thermal stability in non-collinear antiferromagnet Mn₃Sn”
83rd Japan Society of Applied Physics Autumn Meeting 2022
Tohoku University, Japan, September 20 – 23, 2022. [Oral]
2. Y. Yamane, H. Masuda, T. Seki, and J. Ieda
“Extended Stoner-Wohlfarth model for synthetic ferrimagnetic films”
Physical Society of Japan Autumn Meeting 2022
Tokyo Institute of Technology, Japan, September 12 – 15, 2022. [Oral]
3. Y. Yamane, S. Fukami, and J. Ieda
“Theory of spin-orbit emergent inductance”
24th International Colloquium on Magnetic Films and Surfaces (ICMFS-2022)
Okinawa, Japan, July 10 – 15, 2022. [Oral]
4. T. Uchimura, J.-Y. Yoon, Y. Sato, Y. Takeuchi, S. Kanai, R. Takechi, K. Kishi, Y. Yamane, S. DuttaGupta, J. Ieda, H. Ohno, and S. Fukami
“Magneto-optical Kerr effect study for non-collinear antiferromagnetic Mn₃Sn thin films”
24th International Colloquium on Magnetic Films and Surfaces (ICMFS-2022)
Okinawa, Japan, July 10 – 15, 2022. [Poster]
5. T. Uchimura, J.-Y. Yoon, Y. Sato, Y. Takeuchi, S. Kanai, R. Takechi, K. Kishi, Y. Yamane, S. DuttaGupta, J. Ieda, H. Ohno, and S. Fukami

“Observation of non-collinear antiferromagnetic domain structure in epitaxial Mn_3Sn thin films”
[69th Japan Society of Applied Physics Spring Meeting](#)
Aoyama Gakuin University, Japan, March 22 – 26, 2022. [Oral]

6. H. Masuda, T. Seki, [Y. Yamane](#), R. Modak, K. Uchida, J. Ieda, Y.-C. Lau, S. Fukami, and K. Takanashi
“Large antisymmetric interlayer exchange coupling in Pt/Co/Ir/Co/Pt with in-plane spatial inversion symmetry breaking”
[5th Summit of Materials Science \(SMS\) and the 2022 Global Institute for Materials Research Tohoku \(GIMRT\) User Meeting](#)
Sendai, Japan, March 2 – 3, 2022. [Poster]
7. Y. Takuechi, [Y. Yamane](#), J.-Y. Yoon, R. Itoh, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Chiral-spin rotation of non-collinear antiferromagnetic Mn_3Sn by spin-orbit torque”
[15th Joint MMM-Intermag Conference](#)
New Orleans, USA, January 10 – 14, 2022. **[Invited Talk]**
8. K. Kishi, Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Takeuchi, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Determination of spin-orbit torque efficiency in non-collinear antiferromagnet/heavy metal heterostructures”
[15th Joint MMM-Intermag Conference](#)
New Orleans, USA, January 10 – 14, 2022. [Oral]
9. J.-Y. Yoon, Y. Takeuchi, [Y. Yamane](#), R. Itoh, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Sputter-deposited epitaxial non-collinear antiferromagnetic Mn_3Sn thin films and spin-orbit torque driven chiral-spin rotation”
[Invited Seminar](#)
KAIST, Korea, January 7, 2022. **[Invited Talk]**
10. H. Masuda, T. Seki, [Y. Yamane](#), R. Modak, K. Uchida, J. Ieda, Y.-C. Lau, S. Fukami, and K. Takanashi
“Antisymmetric interlayer exchange coupling in Pt/Co/Ir/Co/Pt with in-plane spatial inversion breaking”
[141st Institute for Materials Research Workshop](#)
Tohoku University, Japan, November 30 – December 1, 2021. [Poster]
11. Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Itoh, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Chiral-spin rotation driven by spin-orbit torque in non-collinear antiferromagnetic Mn_3Sn ”
[1st Online RIEC International Workshop on Spintronics](#)
Sendai, Japan (Online), November 18, 2021. **[Invited Talk]**
12. Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Itoh, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Electrical control of antiferromagnetic order”
[Japan Society of Applied Physics Workshop on Antiferromagnetic Spintronics](#)
Japan (Online), November 12, 2021. **[Invited Talk]**
13. J.-Y. Yoon, Y. Takeuchi, S. DuttaGupta, [Y. Yamane](#), S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Anomalous Hall effect of non-collinear antiferromagnetic Weyl semimetal $Mn_{3+x}Sn_{1-x}$ thin films: correlation with crystalline, magnetic, and electronic structures”
[Joint Conference EP2DS-24/MSS-20](#)

Toyama, Japan (Online), October 31 – November 5, 2021. [Oral]

14. K. Kishi, Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Takechi, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Effect of spin-orbit torque on non-collinear antiferromagnet Mn_3Sn ”
[The 5th Symposium for core Research Clusters for Materials Science and Spintronics, and the 4th Symposium on International Joint Graduate Program in Materials Science](#)
Japan (Online), October 25 – 28, 2021. [Poster]
15. J.-Y. Yoon, Y. Takeuchi, [Y. Yamane](#), R. Itoh, S. DuttaGupta, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Properties and functionalities of non-collinear antiferromagnetic $Mn_{3+x}Sn_{1-x}$ thin films”
[The 5th Symposium for core Research Clusters for Materials Science and Spintronics, and the 4th Symposium on International Joint Graduate Program in Materials Science](#)
Japan (Online), October 25 – 28, 2021. [Poster]
16. K. Kishi, Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Takechi, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Spin-orbit torque efficiency in non-collinear antiferromagnet/heavy metal heterostructures”
[40th Electronic Materials Symposium](#)
Japan (Online), October 11 – 13, 2021. [Poster]
17. T. Uchimura, Y. Sato, Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Takechi, K. Kishi, S. Kanai, H. Ohno, and S. Fukami
“Anomalous Hall effect and magneto-optical Kerr effect in non-collinear antiferromagnetic Mn_3Sn thin films”
[40th Electronic Materials Symposium](#)
Japan (Online), October 11 – 13, 2021. [Poster]
18. [Y. Yamane](#) and J. Ieda
“Frequency characteristics of spin-orbit emergent inductance”
[Physical Society of Japan Autumn Meeting 2021](#)
Japan (Online), September 20 – 23, 2021. [Oral]
19. J. Ieda and [Y. Yamane](#)
“Emergent inductance due to domain wall motion in periodic potential”
[Physical Society of Japan Autumn Meeting 2021](#)
Japan (Online), September 20 – 23, 2021. [Oral]
20. [Y. Yamane](#) and J. Ieda
“Electromagnetic induction of spin-orbit coupling origin”
[82nd Japan Society of Applied Physics Autumn Meeting 2021](#)
Japan (Online), September 10 – 13, 2021. [Oral]
21. K. Kishi, Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Takechi, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Spin-orbit torque efficiency in non-collinear antiferromagnet/heavy metal heterostructures”
[82nd Japan Society of Applied Physics Autumn Meeting 2021](#)
Japan (Online), September 10 – 13, 2021. [Oral]

22. Y. Takeuchi, [Y. Yamane](#), J.-Y. Yoon, R. Itoh, B. Jinnai, S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Spin-orbit torque induced chiral-spin rotation of non-collinear antiferromagnet”
[82nd Japan Society of Applied Physics Autumn Meeting 2021](#)
Japan (Online), September 10 – 13, 2021. [Oral]
23. H. Masuda, T. Seki, [Y. Yamane](#), R. Modak, K. Uchida, J. Ieda, Y.-C. Lau, S. Fukami, and K. Takanashi
“Antisymmetric interlayer exchange coupling in Pt/Co/Ir/Co/Pt with in-plane spatial inversion breaking”
[82nd Japan Society of Applied Physics Autumn Meeting 2021](#)
Japan (Online), September 10 – 13, 2021. [Oral]
24. H. Masuda, T. Seki, [Y. Yamane](#), R. Modak, K. Uchida, J. Ieda, Y.-C. Lau, S. Fukami, and K. Takanashi
“Antisymmetric interlayer exchange interaction in Pt/Co/Ir/Co/Pt with in-plane spatial inversion breaking”
[45th Annual Conference on Magnetism in Japan](#)
Japan (Online), August 31 – September 2, 2021. [Oral]
25. [Y. Yamane](#)
“Quantum Relativistic Inductor”
[2nd FRIS/DIARE Joint Workshop FY2021](#)
Tohoku University, Japan (Online), June 8, 2021. [Poster]
26. [Y. Yamane](#) and J. Ieda
“Emergent inductance in magnetic thin films with broken inversion symmetry”
[Physical Society of Japan 76th Annual Meeting](#)
Japan (Online), March 12 – 15, 2021. [Oral]
27. J.-Y. Yoon, Y. Takeuchi, [Y. Yamane](#), S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Anomalous Hall effect in Mn-Sn thin films – correlation with structural parameters and magnetic ordering”
[The 4th International Symposium for the Core Research Cluster for Spintronics](#)
Japan (Online), February 24 – 25, 2021. [Poster]
28. [Y. Yamane](#)
“Control of antiferromagnetic nanostructures by electric current”
[3rd FRIS/DIARE Joint Workshop FY2020](#)
Tohoku University, Japan (Online), December 10, 2020. [Poster]
29. J.-Y. Yoon, Y. Takeuchi, [Y. Yamane](#), S. Kanai, J. Ieda, H. Ohno, and S. Fukami
“Anomalous Hall effect in Mn-Sn thin films – correlation with crystal structure”
[65th Annual Conference on Magnetism and Magnetic Materials \(MMM2020\)](#)
USA (Online), November 2 – 6, 2020. [Poster]
30. J. Ieda and [Y. Yamane](#)
“Spin-orbit emergent inductor”
[Physical Society of Japan Autumn Meeting 2020](#)
Japan (Online), September 8 – 11, 2020. [Oral]
31. J.-Y. Yoon, Y. Takeuchi, R. Itho, [Y. Yamane](#), S. Kanai, S. Fukami, and H. Ohno
“Dependence of anomalous Hall effect in epitaxial Mn-Sn alloy thin films on the composition and

process temperature”

[Online Meeting of Spintronics Research Network of Japan \(Spin-RNJ\) for Young Researchers Japan \(Online\)](#), June 3 – 4, 2020. [Oral]

32. [Y. Yamane](#), O. Gomonay, and J. Sinova
“Dynamics of noncollinear antiferromagnetic domain walls driven by spin current injection”
[International Workshop Spintronics](#)
Ollantaytambo, Peru, October 20 – 25, 2019. [Oral]
33. [Y. Yamane](#) and J. Ieda
“Spin-motive force in systems with broken inversion symmetry”
[Physical Society of Japan 74th Annual Meeting](#)
Kyushu University, Japan, March 14 – 17, 2019. [Poster]
34. [Y. Yamane](#) and J. Ieda
“Enhancement of spin-motive force in systems with broken inversion symmetry”
[APS March Meeting 2019](#)
Boston, USA, March 4 – 8, 2019. [Oral]
35. [Y. Yamane](#), O. Gomonay, and J. Sinova
“Theory of spin injection into noncollinear antiferromagnets”
[9th Joint European Magnetic Symposia \(JEMS2018\)](#)
Mainz, Germany, September 3 – 7, 2018. [Poster]
36. [Y. Yamane](#), O. Gomonay, and J. Sinova
“Theory of spin injection into noncollinear antiferromagnets”
[21st International Conference on Magnetism \(ICM2018\)](#)
San Francisco, USA, July 16 – 20, 2018. [Poster]
37. S. Sugimoto, M. Kimata, M. Ikhlas, T. Tomita, [Y. Yamane](#), S. Nakatsuji, Y. Nakatani, and Y. Otani
“Observation of spin-transfer torque in Kagome antiferromagnet Mn_3Sn ”
[Physical Society of Japan 73rd Annual Meeting](#)
Tokyo University of Science, Japan, March 22 – 25, 2018. [Oral]
38. [Y. Yamane](#), O. Gomonay, and J. Sinova
“Theoretical study on spin current injection into noncollinear antiferromagnets”
[Physical Society of Japan 73rd Annual Meeting](#)
Tokyo University of Science, Japan, March 22 – 25, 2018. [Oral]
39. [Y. Yamane](#), O. Gomonay, and J. Sinova
“Theory of spin injection into noncollinear antiferromagnets”
[Status Meeting in Nano Spin Conversion 2018](#)
Kyoto University, Japan, March 12 – 13, 2018. [Poster]
40. J. Ieda, [Y. Yamane](#), J. Sinova, and S. Maekawa
“Antiferromagnetic magnetization control utilizing electron spin”
[65th Workshop on Spin Electronics – Antiferromagnetic Spintronics](#)
Chuo University, Japan, November 22, 2017. **[Invited Talk]**

41. [Y. Yamane](#) and J. Sinova
“Skyrmion number dependence of magnetic bubble dynamics”
[Physical Society of Japan Autumn Meeting 2017](#)
Iwate University, Japan, September 21 – 24, 2017. [Poster]
42. [Y. Yamane](#), J. Ieda, and J. Sinova
“Electric detection of antiferromagnetic dynamics”
[SpinTECH IX](#)
Fukuoka, Japan, June 4 – 8, 2017. [Poster]
43. [Y. Yamane](#), J. Ieda and J. Sinova
“Electric voltage generation by antiferromagnetic dynamics”
[8th Joint European Magnetic Symposia \(JEMS2016\)](#)
Glasgow, UK, September 21 – 26, 2016. [Oral]
44. J. Ieda, [Y. Yamane](#), and J. Sinova
“Spin-motive force due to antiferromagnetic dynamics”
[Physical Society of Japan Autumn Meeting 2016](#)
Kanazawa University, Japan, September 13 – 16, 2016. [Oral]
45. [Y. Yamane](#), J. Ieda, and J. Sinova
“Current-induced spin-wave Doppler effect in antiferromagnets”
[Physical Society of Japan Autumn Meeting 2016](#)
Kanazawa University, Japan, September 13 – 16, 2016. [Oral]
46. J. Ieda, [Y. Yamane](#), and J. Sinova
“Spin transport in metallic antiferromagnetic textures; Interplay of inter-sublattice mixing and s-d exchange interaction”
[9th International Conference on Physics and Applications of Spin-Related Phenomena in Solids \(PASPS 2016\)](#)
Kobe, Japan, August 8 – 11, 2016.
47. [Y. Yamane](#), S. Hemmatiyani, J. Ieda, S. Maekawa, and J. Sinova
“Relation between dynamics of magnetic bubbles and electron transport”
[20th International Conference on Magnetism \(ICM2015\)](#)
Barcelona, Spain, July 5 – 10, 2015. [Poster]
48. [Y. Yamane](#), S. Hemmatiyani, J. Ieda, S. Maekawa, and J. Sinova
“Spin-transfer torque and spin-motive force in magnetic bubble systems”
[2nd International Conference on Recent Trends in Nanomagnetism, Spintronics and their Applications \(RTNSA2015\)](#)
Ordizia, Spain, June 30 – July 3, 2015. [Oral]
49. J. Ieda, [Y. Yamane](#), S. Hemmatiyani, J. Sinova, and S. Maekawa
“Spinmotive force due to magnetic bubble array motion driven by magnetic field gradient”
[Physical Society of Japan 70th Annual Meeting](#)
Waseda University, Japan, March 21 – 24, 2015. [Oral]
50. [Y. Yamane](#), S. Hemmatiyani, J. Ieda, S. Maekawa, and J. Sinova
“Spinmotive force induced by magnetic bubble motion”

[Spin Caloritronics VI](#)

Irsee, Germany, July 16 – 18, 2014. [Poster]

51. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Magnetic power inverter using domain wall motion in patterned nanowires”
[8th International Symposium on Metallic Multilayers \(MML2013\)](#)
Kyoto, Japan, May 19 – 24, 2013. [Oral]
52. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Electric-field-induced spin injection via spinmotive force”
[21st International Colloquium on Magnetic Films and Surfaces \(ICMFS2012\)](#)
Fudan University, China, September 24 – 28, 2012.
53. [Y. Yamane](#), J. Ieda, and S. Maekawa
“Spinmotive force induced by domain wall motion in ferromagnetic metals and dilute magnetic semiconductors”
[IUMRS-ICEM 2012](#)
Yokohama, Japan, September 23 – 28, 2012. [Poster]
54. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Generation of ac spin-motive force by dc magnetic field in modulated magnetic nanowires”
[Physical Society of Japan Autumn Meeting 2012](#)
Yokohama National University, Japan, September 18 – 21, 2012. [Oral]
55. [Y. Yamane](#), J. Ieda, and S. Maekawa
“Spin current injection utilizing electric field effects”
[Physical Society of Japan Autumn Meeting 2012](#)
Yokohama National University, Japan, September 18 – 21, 2012. [Oral]
56. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Spinmotive forces in patterned nanowires with perpendicular magnetic anisotropy”
[6th Joint European Magnetic Symposia \(JEMS 2012\)](#)
Parma, Italy, September 9 – 14, 2012.
57. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Real time analysis of spinmotive forces due to domain wall motion”
[The 19th International Conference on Magnetism \(ICM2012\)](#)
Busan, Korea, July 8 – 13, 2012. [Oral]
58. [Y. Yamane](#), J. Ieda, and S. Maekawa
“Spinmotive forces in spin-orbit coupling systems”
[The 19th International Conference on Magnetism \(ICM2012\)](#)
Busan, Korea, July 8 – 13, 2012. [Oral]
59. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Real time analysis of spinmotive force due to domain wall motion”
[Physical Society of Japan 67th Annual Meeting](#)
Kwansei Gakuin University, Japan, March 24 – 27, 2012. [Oral]

60. [Y. Yamane](#), J. Ieda, and S. Maekawa
“Spinmotive force due to domain wall motion in magnetic nanowires with perpendicular anisotropy”
[Physical Society of Japan 67th Annual Meeting](#)
Kwansei Gakuin University, Japan, March 24 – 27, 2012. [Oral]
61. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Spinmotive force due to domain wall motion in high field regime”
[APS March Meeting 2012](#)
Boston, USA, February 27 – March 2, 2012. [Oral]
62. [Y. Yamane](#), K. Sasage, T. An, K. Harii, J. Ohe, J. Ieda, S. E. Barnes, E. Saitoh, and S. Maekawa
“Continuous dc spinmotive force in a patterned ferromagnetic film”
[APS March Meeting 2012](#)
Boston, USA, February 27 – March 2, 2012. [Oral]
63. J. Ieda, [Y. Yamane](#), and S. Maekawa
“Spinmotive force due to domain wall motion in shape-modulated nanowires”
[2nd ASRC International Workshop on Magnetic Materials and Nanostructures](#)
Tokai, Japan, January 10 – 13, 2012. [Poster]
64. [Y. Yamane](#), J. Ieda, J. Ohe, S. E. Barnes, and S. Maekawa
“Numerical study on spinmotive force induced by domain wall motion”
[2nd ASRC International Workshop on Magnetic Materials and Nanostructures](#)
Tokai, Japan, January 10 – 13, 2012. [Poster]
65. J. Ieda, [Y. Yamane](#), J. Ohe, and S. Maekawa
“Spin-motive force due to magnetic domain wall motion in shaped nanostripes”
[2nd Nanotoday Conference](#)
Hawaii, USA, December 11 – 15, 2011.
66. [Y. Yamane](#), J. Ieda, J. Ohe, and S. Maekawa
“Spinmotive force due to intrinsic energy of magnetic nanowires”
[Physical Society of Japan Autumn Meeting 2011](#)
University of Toyama, Japan, September 21 – 24, 2011. [Oral]
67. [Y. Yamane](#), J. Ieda, J. Ohe, S. E. Barnes, and S. Maekawa
“Wire shape effect on spinmotive force”
[SPINTECH6](#)
Matsue, Japan, August 1 – 5, 2011. [Poster]
68. J. Ieda, [Y. Yamane](#), J. Ohe, and S. Maekawa
“Spin-motive force due to intrinsic magnetic energy difference of a domain wall in a shaped nanostripe”
[5th International Workshop on Spin Currents](#)
Sendai, Japan, July 25 – 28, 2011. [Poster]
69. [Y. Yamane](#), K. Sasage, T. An, K. Harii, E. Saitoh, J. Ohe, J. Ieda, and S. Maekawa
“Generation of dc spin-motive force in a patterned ferromagnetic film”
[5th International Workshop on Spin Currents](#)

Sendai, Japan, July 25 – 28, 2011. [Poster]

70. [Y. Yamane](#), J. Ieda, J. Ohe, and S. Maekawa
“Spinmotive force due to domain wall motion driven by wire-shape effects II”
[Physical Society of Japan 66th Annual Meeting](#)
Niigata University, Japan, March 25 – 28, 2011. [Oral] (Cancelled due to the earthquake.)
71. [Y. Yamane](#), J. Ieda, J. Ohe, and S. Maekawa
“Spinmotive force due to domain wall motion driven by wire-shape effects”
[Creation and Control of Spin Current](#)
The University of Tokyo, Japan, January 6 – 7, 2011. [Poster]
72. [Y. Yamane](#), J. Ieda, J. Ohe, S. E. Barnes, and S. Maekawa
“Equation of motion approach of spin-motive force”
[55th Conference on Magnetism and Magnetic Materials \(MMM2010\)](#)
Atlanta, USA, November 14 – 18, 2010. [Oral]
73. [Y. Yamane](#), J. Ieda, J. Ohe, and S. Maekawa
“Spinmotive force due to domain wall motion driven by wire-shape effects”
[Physical Society of Japan Autumn Meeting 2010](#)
Osaka Prefecture University, Japan, September 23 – 26, 2010. [Oral]
74. [Y. Yamane](#), J. Ohe, J. Ieda, and S. Maekawa
“Effects of spin injection into spin wave resonance states”
[Physical Society of Japan 65th Annual Meeting](#)
Okayama University, Japan, March 20 – 23, 2010. [Oral]
75. [Y. Yamane](#), J. Ohe, and S. Maekawa
“Spin motive force in an asymmetrically-shaped permalloy thin film”
[Next-Generation Integrated Nanoscience Simulation Software 4th Open Symposium](#)
Okazaki Conference Center, National Institutes of Natural Science, Japan, March 3 – 4, 2010. [Poster]
76. [Y. Yamane](#), J. Ohe, S. Maekawa, K. Sasage, and E. Saitoh
“Spin motive force in an asymmetrically-shaped thin permalloy film”
[4th International Workshop on Spin Currents & 2nd International Workshop on Spin Caloritronics](#)
Sendai, Japan, February 8 – 10, 2010. [Poster]
77. [Y. Yamane](#), J. Ohe, and S. Maekawa
“Spin-motive force in asymmetrically-shaped permalloy”
[Physical Society of Japan Autumn Meeting 2009](#)
Kumamoto University, Japan, September 25 – 28, 2009. [Oral]
78. [Y. Yamane](#), J. Ohe, and S. Maekawa
“Numerical study on spin-motive force in asymmetrically-shaped permalloy thin films”
[Creation and Control of Spin Current](#)
Hokkaido University, Japan, August 9 – 11, 2009. [Poster]