Curriculum Vitae

Jun'ichi Ieda

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Education

April 2002 – March 2005	Doctor of Science (D.Sc.) Department of Physics, Graduate School of Science, The University of Tokyo, Japan Dissertation title: "Study of Matter-Wave Solitons in Spinor Bose-Einstein Condensates" Principal advisor: Prof. Miki Wadati
April 2000 – March 2002	Master of Science (MS) Department of Physics, Graduate School of Science, The University of Tokyo, Japan
April 1996 – March 2000	Bachelor of Science (BS) Department of Physics, Faculty of Science, The University of Tokyo, Japan

Employment

April 2024– present	Group Leader
April 2022 – March 2024	Group Manager
July 2018 – present	Principal Scientist, Advanced Science Research Center, Japan Atomic Energy Agency
April 2020 – March 2021	Visiting Professor, RIEC, Tohoku University
August 2015 – March 2016	Guest Professor, SPICE, JGU Mainz

July 2013 – June2018	Senior Scientist Advanced Science Research Center, Japan Atomic Energy Agency
April 2010 – June 2013	Scientist Advanced Science Research Center, Japan Atomic Energy Agency
July 2007 – March 2010	Assistant Professor, Institute for Materials Research, Tohoku University
April 2005 – June 2007	Postdoctoral Fellow, Institute for Materials Research, Tohoku University
April 2004 – March 2005	Research Assistant 21st COE program for Quantum Extreme Systems and Their Symmetries from MEXT, Japan

Activities

October 2022 – present	Member of the Magnetics Society of Japan
April 2020 – present	Head Editor of the J. Phys. Soc. Jpn
April 2020 – March 2022	Member of Science & Technology Experts Network
April 2018 – March 2024	Committee Member of the Foundation Adv. Tech. Inst.
April 2016 – March 2020	Associate Editor of the J. Phys. Soc. Jpn
October 2013 – September 2014	Division 3 (Magnetism) committee of JPS
February 2006 – present	Member of the American Physical Society
May 2000 – present	Member of the Physical Society of Japan

Awards

1 JPSJ Outstanding Referee (Journal of the Physical Society of Japan) 2022.

2 ASRC Director General's Award (Advanced Science Research Center) 2021.

3 The Young Scientists' Prize of the Commendation for Science and Technology (the Minister of Education, Culture, Sports, Science and Technology) 2016.

4 ASRC Director General's Award (Advanced Science Research Center) 2013.

5 President Research Award (Japan Atomic Energy Agency) 2011.

6 Fuju-kai Award (Foundation Iwanami Fuju-kai) 2004.

Journal Papers

1 S. Shamoto, M. Akatsu, L.-J. Chang, Y. Nemoto, and J. Ieda, “Inelastic neutron scattering study of magnon excitation by ultrasound injection in yttrium iron garnet,” Applied Physics Letters **124**, 112402(5) (2024).

2 Y. Araki and J. Ieda, “Emergence of Inductance and Capacitance from Topological Electromagnetism, ” Journal of the Physical Society of Japan **92**, 074705(9) (2023).

3 K. Harii, M. Umeda, H. Arisawa, T. Hioki, N. Sato, S. Okayasu, and J. Ieda, “Magnetic Hysteresis Induction with Nanocolumnar Defects in Magnetic Insulators, ” Journal of the Physical Society of Japan **92**, 073701(4) (2023).

4 H. Masuda, Y. Yamane, T. Seki, K. Raab, T. Dohi, R. Modak, K. Uchida, J. Ieda, M. Kläui, and K. Takanashi, Magnetization switching process by dual spin–orbit torque in interlayer exchange-coupled systems,” Applied Physics Letters **122**, 162402(7) (2023).

5 Y. Sato, Y. Takeuchi,Y. Yamane, J.-Y. Yoon, S. Kanai, J. Ieda, H. Ohno, and S. Fukami, “Thermal stability of non-collinear antiferromagnetic Mn_3Sn nanodot, Applied Physics Letters **122**, 122404(5) (2023).

6 T. Funatsu, S. Kanai, J. Ieda, S. Fukami, and H. Ohno, “Local bifurcation with spin-transfer torque in superparamagnetic tunnel junctions,” Nature Communications **13**, 4079(8) (2022).

7 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(9) (2022).

8 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 Mn_3Sn thin films by magneto-optical Kerr effect,” Applied Physics Letters **120**, 172405(5) (2022).

9 M. Yamanouchi, Y. Araki, T. Sakai, T. Uemura, H. Ohta, and J. Ieda, “Observation of topological Hall torque exerted on a domain wall in the ferromagnetic oxide $SrRuO_3$,” Science Advances **8**, eabl6192(6) (2022).

10 Yuta Yamane, Shunsuke Fukami, and Jun’ichi Ieda, “Theory of Emergent Inductance with Spin-Orbit Coupling Effects,” Physical Review Letters **128**, 147201(6) (2022).

11 S. Shamoto, M. Akatsu, M. Matsuura, S. Ohira-Kawamura, K. Harii, M. Ono, L.-J. Chang, T. U. Ito, Y. Nemoto, and J. Ieda, “Magnetic Bragg peak enhancement under ultrasound injection,” Physical Review Research **4**, 013245(7) (2022).

12 Y. Araki and J. Ieda, “Intrinsic torques emerging from anomalous velocity in magnetic textures,” Physical Review Letters **127**, 277205(7) (2021).

13 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(6) (2021).

14 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).

15 J. Ieda and Y. Yamane, “Intrinsic and extrinsic tunability of Rashba spin-orbit coupled emergent inductors,” Physical Review B **103**, L100402(5) (2021). [Editors’ suggestion]

16 S. Shamoto, H. Yamauchi, K. Ikeuchi, R. Kajimoto, and J. Ieda, “Broken C4 symmetry in the tetragonal state of uniaxial strained $BaCo_{0.9}Ni_{0.1}S_{1.9}$,” Physical Review Research **3**, 013169(9) (2021).

17 H. Matsuoka, S.E. Barnes, J. Ieda, S. Maekawa, M. Saeed Bahramy, B.K. Saika, Y. Takeda, H. Wadati, Y. Wang, S. Yoshida, K. Ishizaka, Y. Iwasa, and M. Nakano, “Spin-orbit-induced Ising ferromagnetism at a van der Waals interface,” Nano Letters **21**, 1807-1814 (2021).

18 S. Okayasu, K. Harii, M. Kobata, K. Yoshii, T. Fukuda, M. Ishida, J. Ieda, and E. Saitoh “Tolerance of spin-Seebeck thermoelectricity against irradiation by swift heavy ions,” Journal of Applied Physics **128**, 083902 (2020).

19 S. Shamoto, Y. Yasui, M. Matsuura, M. Akatsu, Y. Kobayashi, Y. Nemoto, and J. Ieda “Ultralow-energy magnon anomaly in yttrium iron garnet,” Physical Review Research **2**, 033235 (2020).

20 T. Koyama, J. Ieda, and D. Chiba, “Electric field effect on the magnetic domain wall creep velocity in Pt/Co/Pd structures with different Co thicknesses,” Applied Physics Letters **116**, 092405(5) (2020).

21 W. Zhou, T. Seki, H. Imamura, J. Ieda, and K. Takanashi, “Spinmotive force in the out-of-plane direction generated by spin wave excitation in an exchange-coupled bilayer element,” Physical Review B **100**, 094424(5) (2019).

22 Y. Yamane and J. Ieda, “Skyrmion-generated spinmotive forces in inversion broken ferromagnets,” Journal of Magnetism and Magnetic Materials **491**, 165550 (2019).

23 M. Yamanouchi, T. Oyamada, K. Sato, H. Ohta, J. Ieda, “Current-Induced Modulation of Coercive Field in the Ferromagnetic Oxide $SrRuO_3$,” IEEE Transactions on Magnetics **56**, 1400604(4) (2019).

24 T. Koyama, Y. Nakatani, J. Ieda, and D. Chiba, “Electric field control of magnetic domain wall motion via modulation of the Dzyaloshinskii-Moriya interaction,” Science Advances **4**, eaav0265(5) (2018).

25 Jun’ichi Ieda, Stewart. E. Barnes, and Sadamichi Maekawa, “Magnetic Anisotropy by Rashba Spin–Orbit Coupling in Antiferromagnetic Thin Films,” Journal of the Physical Society of Japan **87**, 053703(4) (2018).

26 Y. Yamane, J. Ieda, and J. Sinova, “Spin-transfer torques in antiferromagnetic textures: efficiency and quantification method,” Physical Review B **94**, 054409(8) (2016).

27 Y. Yamane, J. Ieda, and J. Sinova, “Electric voltage generation by antiferromagnetic dynamics,” Physical Review B **93**, 180408(R)(5) (2016).

28 R. Takahashi, M. Matsuo, M. Ono, K. Harii, H. Chudo, S. Okayasu, J. Ieda, S. Takahashi, S. Maekawa, and E. Saitoh, “Spin hydrodynamic generation,” Nature Physics **12**, 52-56 (2016).

29 M. Ono, H. Chudo, K. Harii, S. Okayasu, M. Matsuo, J. Ieda, R. Takahashi, S. Maekawa, and E. Saitoh, “Barnett effect in paramagnetic states,” Physical Review B **92**, 174424(4) (2015).

30 M. Matsuo, J. Ieda, and S. Maekawa, “Mechanical generation of spin current,” Frontier in Physics **3**, 54(10) (2015).

31 Satoshi Haku, Takaharu Tashiro, Hiroyasu Nakayama, Jun'ichi Ieda, Shiro Entani, Seiji Sakai, and Kazuya Ando, "Spin pumping blocked by single-layer graphene," Applied Physics Express **8** 073009(3) (2015).

32 S. Fukami, J. Ieda, and H. Ohno, "Thermal stability of a magnetic domain wall in nanowires," Physical Review B **91**, 235401(7) (2015).

33 K. Harii, H. Chudo, M. Ono, M. Matsuo, J. Ieda, S. Okayasu, S. Maekawa, and E. Saitoh, "Line splitting by mechanical rotation in nuclear magnetic resonance," Japanese Journal of Applied Physics **54**, 050302(3) (2015).

34 H. Chudo, K. Harii, M. Matsuo, J. Ieda, M. Ono, S. Maekawa, and E. Saitoh, "Rotational Doppler Effect and Barnett Field in Spinning NMR," Journal of Physical Society of Japan **84**, 043601(1-4) (2015).

35 Y. Yamane, S. Hemmatiyan, 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(1-5) (2014).

36 H. Chudo, M. Ono, K. Harii, M. Matsuo, J. Ieda, R. Haruki, S. Okayasu, S. Maekawa, H. Yasuoka, and E. Saitoh, "Observation of Barnett fields in solids by nuclear magnetic resonance," Applied Physical Express **7**, 063004(1-4) (2014).

37 S. Kasai, S. Hirayama, Y. K. Takahashi, S. Mitani, K. Hono, H. Adachi, J. Ieda, and S. Maekawa, "Thermal engineering of non-local resistance in lateral spin valves," Applied Physical Letters **104**, 162410(1-4) (2014).

38 S. E. Barnes, J. Ieda, and S. Maekawa, "Rashba Spin-Orbit Anisotropy and the Electric Field Control of Magnetism," Scientific Reports **4**, 4105(1-5) (2014).

39 J. Ieda, M. Matsuo, and S. Maekawa, "Theory of mechanical spin current generation via spin-rotation coupling," Solid State Communications **192**, 52-56 (2014).

40 M. Matsuo, J. Ieda, and S. Maekawa, "Theory of mechanical spin current generation via spin-orbit coupling," Solid State Communications **192**, 57-60 (2014).

41 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(1-4) (2013).

42 J. Ieda, S. Maekawa, and Y. Yamane, "Real time analysis of spinmotive force due to domain wall motion," Journal of Korean Physical Society **62**, 1802-1806 (2013).

43 M. Matsuo, J. Ieda, E. Saitoh, and S. Maekawa, "Effects of mechanical rotation and vibration on spin currents," Journal of Korean Physical Society **62**, 1404-1409 (2013).

44 M. Matsuo, J. Ieda, K. Harii, E. Saitoh, and S. Maekawa, "Mechanical generation of spin current by spin-rotation coupling," Physical Review B **87**, 180402(R)(1-4) (2013).

45 M. Matsuo, J. Ieda, and S. Maekawa, "Renormalization of spin-rotation coupling," Physical Review B **87**, 115301(1-7) (2013).

46 Jun'ichi Ieda and Sadamichi Maekawa, "Magnetic power inverter: AC voltage generation from DC magnetic fields," Applied Physical Letters **101**, 252413(1-4) (2012).

47 Y. Yamane, J. Ieda, and S. Maekawa, "Stability of Spinmotive Force in Perpendicularly Magnetized Nanowires under High Magnetic Fields," Applied Physical Letters **100**, 162401(1-3) (2012).

48 Masamitsu Hayashi, Jun'ichi Ieda, Yuta Yamane, Jun-ichiro Ohe, Yukiko K. Takahashi,

Seiji Mitani, and Sadamichi Maekawa, “Time-Domain Observation of the Spinmotive Force in Permalloy Nanowires,” Physical Review Letters **108**, 147202(1-5) (2012).

49 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(1-4) (2011).

50 Mamoru Matsuo, Jun’ichi Ieda, Eiji Saitoh, and Sadamichi Maekawa, “Spin-dependent inertial force and spin current in accelerating systems,” Physical Review B **84**, 104410(1-9) (2011).

51 Yuta Yamane, Jun’ichi Ieda, Jun-ichiro Ohe, Stewart E. Barnes, and Sadamichi Maekawa, “Spinmotive Force due to Intrinsic Energy of Ferromagnetic Nanowires,” Applied Physics Express **4**, 093003(1-3) (2011).

52 K. Ando, S. Takahashi, J. Ieda, H. Kurebayashi, T. Trypiniotis, C. H. W. Barnes, S. Maekawa, and E. Saitoh, “Electrically tunable spin injector free from the impedance mismatch problem,” Nature Materials **10**, 655-659 (2011).

53 Mamoru Matsuo, Jun’ichi Ieda, Eiji Saitoh, and Sadamichi Maekawa, “Spin current generation due to mechanical rotation in the presence of impurity scattering,” Applied Physical Letters **98**, 242501(1-3) (2011).

54 K. Ando, S. Takahashi, J. Ieda, Y. Kajiwara, H. Nakayama, T. Yoshino, K. Harii, Y. Fujikawa, M. Matsuo, S. Maekawa, and E. Saitoh, “Inverse spin-Hall effect induced by spin pumping in metallic system,” Journal of Applied Physics **109**, 103913(1-11) (2011).

55 Yuta Yamane, Jun’ichi Ieda, Jun-ichiro Ohe, Stewart E. Barnes, and Sadamichi Maekawa, “Equation-of-motion approach of spin-motive force,” Journal of Applied Physics **109**, 07C735(1-3) (2011).

56 Mamoru Matsuo, Jun’ichi Ieda, Eiji Saitoh, and Sadamichi Maekawa, “Effects of mechanical rotation on spin currents,” Physical Review Letters **106**, 076601(1-4) (2011).

57 K. Uchida, J. Xiao, H. Adachi, J. Ohe, S. Takahashi, J. Ieda, T. Ota, Y. Kajiwara, H. Umezawa, H. Kawai, G. E. W. Bauer, S. Maekawa, and E. Saitoh, “Spin Seebeck insulator,” Nature Materials **11**, 894-897 (2010).

58 J. Ieda, H. Sugishita, and S. Maekawa, “Current-induced domain wall motion in magnetic nanowires with spatial variation,” Journal of Magnetism and Magnetic Materials **322**, 1363-1367 (2010).

59 K. Ando, J. Ieda, K. Sasage, S. Takahashi, S. Maekawa, and E. Saitoh, “Electric detection of spin wave resonance using inverse spin-Hall effect,” Applied Physics Letters **94**, 262505(1-3) (2009).

60 K. Uchida, S. Takahashi, J. Ieda, K. Harii, K. Ikeda, W. Koshibae, S. Maekawa, and E. Saitoh, “Phenomenological analysis for spin-Seebeck effect in metallic magnets,” Journal of Applied Physics **105**, 07C908(1-3) (2009).

61 K. Uchida, S. Takahashi, K. Harii, J. Ieda, W. Koshibae, K. Ando, S. Maekawa, and E. Saitoh, “Observation of the spin Seebeck effect,” Nature **455**, 778-781 (2008).

62 K. Ando, S. Takahashi, K. Harii, K. Sasage, J. Ieda, S. Maekawa, and E. Saitoh, “Electric manipulation of spin relaxation using the spin Hall effect,” Physical Review Letters **101**, 036601(1-4) (2008).

63 M. Yamanouchi, J. Ieda, F. Matsukura, S. E. Barnes, S. Maekawa, and H. Ohno,

"Universality Classes for Domain Wall Motion in the Ferromagnetic Semiconductor (Ga,Mn)As," Science **317**, 1726-1729 (2007).

64 M. Uchiyama, J. Ieda, and M. Wadati, "Multicomponent Bright Solitons in F =2 Spinor Bose-Einstein Condensates," Journal of the Physical Society of Japan **76**, 074005(1-6) (2007).

65 J. Ieda and M. Wadati, "Nonlinear Dynamics of Spin Structure in Confined Bose–Einstein Condensates," Journal of Low Temperature Physics **148**, 405-410 (2007).

66 M. Uchiyama, J. Ieda, and M. Wadati, "Soliton Dynamics of F = 1 Spinor Bose–Einstein Condensate with Nonvanishing Boundaries," Journal of Low Temperature Physics **148**, 399-404 (2007).

67 J. Ieda, S. Takahashi, M. Ichimura, H. Imamura, and S. Maekawa, "Spin accumulation and resistance due to a domain wall," Journal of Magnetism and Magnetic Materials **310**, 2058-2060 (2007).

68 M. Ichimura, J. Ieda, H. Imamura, S. Takahashi, and S. Maekawa, "Numerical analysis of spin accumulation due to a domain wall," Journal of Magnetism and Magnetic Materials **310**, 2055-2057 (2007).

69 J. Ieda, M. Uchiyama, and M. Wadati, "Inverse Scattering Method for the Multicomponent Nonlinear Schrödinger Equation under Nonvanishing Boundary Conditions," Journal of Mathematical Physics **48**, 013507(1-19) (2007).

70 S. E. Barnes, J. Ieda, and S. Maekawa, "Magnetic memory and current amplification devices using moving domain walls," Applied Physics Letters **89**, 122507(1-3) (2006).

71 M. Uchiyama, J. Ieda, and M. Wadati, "Dark Solitons in F =1 Spinor Bose-Einstein Condensate," Journal of the Physical Society of Japan **75**, 064002(1-9) (2006).

72 J. Ieda, T. Miyakawa, and M. Wadati, "Exact soliton solutions of spinor Bose-Einstein condensates," Laser Physics **16**, 678-682 (2006).

73 J. Ieda, T. Miyakawa, and M. Wadati, "Exact Analysis of Soliton Dynamics in Spinor Bose-Einstein Condensates," Physical Review Letters **93**, 194102(1-4) (2004).

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75 J. Ieda, T. Tsurumi, M. Wadati, "Bose-Einstein Condensation of Ideal Bose Gases," Journal of the Physical Society of Japan **70**, 1256-1259 (2001).

Conference papers

1. J. Ieda, S. Okayasu, K. Harii, M. Kobata, K. Yoshii, T. Fukuda, M. Ishida, and E. Saitoh, "The damage analysis for irradiation tolerant spin-driven thermoelectric device based on single-crystalline $Y_3Fe_5O_{12}$/Pt heterostructures," IEEE Transactions on Magnetics **58**, 1301106(6) (2022).

2. M. Kobata, K. Yoshii, T. Fukuda, I. Kawasaki, T. Okane, H. Yamagami, T. Yaita, K. Harii, J. Ieda, S. Okayasu, T. Hioki, T. Kikkawa, and E. Saitoh, "Hard X-ray Photoelectron

Spectroscopy Study of $Pt/Y_3Fe_5O_{12}$," Proceedings of the International Conference on Strongly Correlated Electron Systems (SCES2019), JPS Conf. Proc. **30**, 011192 (2020).

3. J. Ieda, S. E. Barnes, and S. Maekawa, "Current-Induced Domain Wall Creep in Magnetic Wires," Proceedings of the ISQM-Tokyo `08, ed. by S. Ishioka and K. Fujikawa, (World Scientific, Singapore, 2009), 134-137.

4. J. Ieda, "Spinor Solitons in Bose-Einstein Condensates — Atomic Spin Transport," Proceedings of the ISQM-Tokyo `05, ed. by S. Ishioka and K. Fujikawa, (World Scientific Singapore, 2006), 298-301.

5. Jun'ichi Ieda, "Dark Solitons in Multicomponent Bose-Einstein Condensates," Proceedings of the Quantum Field Theories: Fundamental Problems and Application, (Kyoto, December 16-18, 2004) 素粒子論研究, **111**, C78 (2005).

6. Jun'ichi Ieda, "Matter-Wave Solitons in a Multi-Component Bose-Einstein Condensate," Proceedings of the Quantum Field Theories: Fundamental Problems and Application, (Kyoto, December 24-26, 2003) 素粒子論研究, **109**, F52 (2004).

7. Jun'ichi Ieda, "Multi-Component NLS for Spinor Condensates," Nonlinear Wave Phenomena and Application, (Kyoto, October 22-24, 2003) 数理解析研究所講究録, 1368, 96 (2004).

Review articles

1 "Spin and Spin Current - From Fundamentals to Recent Progress,"S. Maekawa, T. Kikkawa, H. Chudo, J. Ieda, and E. Saitoh, Journal of Applied Physics **133**, 020902 (2023).

2 J. Ieda, "The future of energy, a challenge of Spintronics," FBNews (放射線安全管理総合情報誌 in Japanese) **528**, 1-5 (2020).

3 J. Ieda, "A Quantum Mechanical Theory of Pumping `Magnetic Swings'," JPSJ News Comments **16**, 12 (2019).

4 J. Ieda, "Radiation and Spintronics," Radiation & Industries (放射線と産業 in Japanese) **146**, 48-52 (2019).

5 Y. Yamane and J. Ieda, "Spin Torques and Electric Voltage Generation in Antiferromagnetic Nanostructures," Magnetics Japan (まぐね in Japanese) **13,** 235-241 (2018).

6 J. Ieda and S. Maekawa, "Spinmotive Force as a New Energy Conversion Mechanism," Journal of the Magnetic Society of Japan **38**, 75-77 (2014).

7 J. Ieda, Y. Yamane, and S. Maekawa, "Spinmotive Force in Ferromagnetic Nanostructures," SPIN **3**, 1330004(1-15) (2013).

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9 J. Ieda and S. Maekawa, “Spinmotive Force -Basic Concepts and Developments-,” Solid State Physics (固体物理 in Japanese) **47**, 339-353 (2012).

10 S. Maekawa and J. Ieda, “From GMR to TMR,” Butsuri (日本物理学会誌 in Japanese) **65,** 324-330 (2010).

11 J. Ieda and S. Maekawa, “Theory of Domain-wall Dynamics in Ferromagnetic Nanostructures,” Magnetics Japan (まぐね in Japanese) **4,** 384-389 (2009).

Book Chapter

1 J. Ieda and S. Maekawa, “Spinmotive force,” Chapter 7 in *Spin Current 2nd ed.*, (Oxford University Press, Oxford, 2017).

2 J. Ieda and M. Wadati, “Exact Nonlinear Dynamics in Spinor Bose-Einstein Condensates,” Chapter 2 in *Nonlinear Dynamics*, (IN-TECH, Vienna, 2010).

Invited talks

1 J. Ieda, “Emergent electromagnetic response of spiral systems,” Japanese Physical Society Meeting 2023 Spring, Virtual Conference (March 2023).

2 J. Ieda, “Controlling magnetic anisotropy by Rashba and other spin-orbit couplings,” 65th Annual Conference on Magnetism and Magnetic Materials, Virtual Conference (November 2020).

3 J. Ieda, “Theory of spin transfer torques in antiferromagnetic textures,” 8th JSPS Core-to-Core workshop on “New-Concept Spintronics Devices” Sendai, Japan (January 2019).

4 J. Ieda, “Spintronic Micro-power Generation,” International Conference on Condensed Matter Physics, Kolkata, India (November 2017).

5 J. Ieda, “Manipulation of antiferromagnetic magnetization by electron spins,” Workshop on a new trend of antiferromagnetic spintronics (Japan Society of Applied Physics), Ochanomizu, Japan (November 2017).

6 J. Ieda, “Perpendicular magnetic anisotropy induced by Rashba spin-orbit interaction,” The annual ISSP workshop/symposium on New Perspectives in Spintronics and Mesoscopic Physics, Kashiwa, Japan (June 2015).

7 J. Ieda, “Rashba effects in ferromagnetic ultra-thin films – Electric field control of magnetic anisotropy and spinmotive force-,” Workshop on the frontier of spintronics (Japan Society of Applied Physics), Akihabara, Japan (November 2014).

8 J. Ieda, “Theory of interfacial magnetic anisotropy due to the Rashba effect,” Japanese Physical Society Meeting 2014 Autumn, Chubu University, Japan (September 2014).

9 J. Ieda, “Renormalization of spin-rotation coupling and Barnett fields,” Spin Mechanics

II, Sendai, Japan (June 2014).

10 J. Ieda, “Mechanical generation of spin current in nonmagnetic thin films,” Spin Caloritronics IV, Sendai, Japan (June 2012).

11 J. Ieda, “Spin Current from Mechanical Motion,” Spin Caloritronics III, Lorentz Center, Leiden, Netherlands (May 2011).

12 J. Ieda, “Theories of Spin Seebeck Effect and Spin Motive Force,” Japanese Physical Society Meeting 2009 Autumn, Kumamoto University, Japan (September 2009).

13 J. Ieda, “Spin Hall, Spin Faraday, and Spin Seebeck Effects,” WPI-AIMR Annual Workshop, Sendai, Japan (March 2009).

14 J. Ieda, “Thermal Spin Currents,” Spin Caloritronics, Leiden, Netherlands (February 2009).

15 J. Ieda, “Spin Seebeck Effect,” Series Workshop of Condensed Matter Science Working Group for Next Generation Supercomputing Project, Sendai, Japan (December 2008).

16 J. Ieda, “Current-induced domain wall motion in inhomogeneous nanowires,” The 23rd Nishinomiya-Yukawa Memorial International Workshop, Spin Transport in Condensed Matter, Kyoto, Japan (November 2008).

17 J. Ieda, H. Sugishita, and S. Maekawa, “Domain wall motion in variable-shaped magnetic wires,” The Joint European Magnetics Symposia, Dublin, Ireland (September 2008).

18 J. Ieda, “Theory of Current-Induced Domain Wall Creep in (Ga,Mn)As,” The American Physical Society March Meeting, New Orleans, USA (March, 2008).

19 J. Ieda, “Universality classes of domain wall creep motion,” 2nd International Workshop on Spin Currents, Sendai, Japan (February 2008).

Patents

1 Patent number : 5649198 (domestic), “Spin Current Control Device,” M. Ichimura, J. Ieda, and S. Maekawa.

2 Patent number : 5626741 (domestic), “Magnetic Memory,” M. Ichimura, R. Sugano, J. Ieda, and S. Maekawa.

3 Patent number : 5071908 (domestic), PCT/JP2006/315189, “Electric and Magnetic Energy Transferring Nano-Device,” S. E. Barnes, S. Maekawa, and J. Ieda.

4 Patent number : 4962889 (domestic), PCT/JP2006/315188, “Magnetic Memory,” S. E. Barnes, S. Maekawa, and J. Ieda.

5 Patent number : 4817148 (domestic), PCT/JP2006/315189, “Electric and Magnetic Energy Transferring Nano-Device,” S. E. Barnes, S. Maekawa, and J. Ieda.