

## *Axel Hoffmann*

### *WORK:*

*University of Illinois at Urbana-Champaign  
Materials Science and Engineering  
1021 Materials Research Lab  
104 S. Godwin, MC 230  
Urbana, IL 61801  
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### *HOME:*

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Champaign, IL 61821  
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email: axelhoffmann@mac.com*

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## R E S E A R C H E X P E R I E N C E

### **University of Illinois at Urbana-Champaign**

Founder Professor

*2019 – present*

- Spin Transport and Magnetization Dynamics

### **Argonne National Laboratory**

Senior Group Leader

*2014 – 2019*

- Magnetic Films Group

Materials Scientist

*2005 – 2014*

- Pure spin currents
- Nanomagnetism

Assistant Materials Scientist

*2001 – 2005*

- Magnetic nanostructures
- Exchange bias
- Biomagnetic sensors

### **Los Alamos National Laboratory**

Postdoctoral Fellow

*1999 – 2001*

- Neutron-scattering on magnetic heterostructures

### **University of California, San Diego**

Graduate research with Prof. Ivan K. Schuller

*1995 – 1999*

- Magnetic nanostructures
- Periodic pinning in superconducting films
- Persistent photoconductivity in high-T<sub>c</sub> superconductors
- Combinatorial search for new superconductors using phase-spread alloys

### **Rheinisch-Westfälische Technische Hochschule Aachen**

*1993 – 1994*

Diploma research thesis with Prof. Gernot Güntherodt

- Anisotropy of the superconducting ordering parameter in high-T<sub>c</sub> materials investigated with electronic Raman scattering.

### **University of California, San Diego**

*1992 – 1993*

Graduate research with Prof. Ivan K. Schuller

- Flux flow transformer in YBCO-STO-YBCO trilayers.

• E D U C A T I O N

**The University of Chicago, Booth School of Business** *2011 – 2012*  
Chicago, IL

- Strategic Laboratory Leadership Program

**University of California, San Diego** *1995 – 1999*  
La Jolla, CA

- Ph.D. in Physics, February 1999.  
Advisor: Ivan K. Schuller  
Thesis Title: “Periodic Pinning in Superconducting Nb Thin Films”

**Rheinisch-Westfälische Technische Hochschule Aachen** *1988 – 1994*  
Aachen, Germany

- Diplom Degree in Physics with Honors, December 1994.  
Advisor: Gernot Güntherodt  
Thesis Title: “Elektronische Raman-Streuung in  
Hochtemperatur-Supraleitern in Abhängigkeit von der Anisotropie”

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P R O F E S S I O N A L   A S S O C I A T I O N S

- American Association for the Advancement of Science
- American Physical Society, Fellow
- American Vacuum Society, Fellow
- Institute of Electronic and Electrical Engineers (IEEE), Fellow
- Materials Research Society
- Neutron Scattering Society of America

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- A W A R D S

<b>American Physical Society</b>	2022
<ul style="list-style-type: none"><li>• David Adler Lectureship Award in the Field of Materials Physics</li></ul>	
<b>Web of Science Group</b>	2019 – 2023
<ul style="list-style-type: none"><li>• Highly Cited Researcher for 2019, 2020, 2021, 2022, and 2023</li></ul>	
<b>University of Chicago</b>	2018
<ul style="list-style-type: none"><li>• Consortium for Advanced Science and Engineering Member, Senior Scientist At-Large</li></ul>	
<b>University of Chicago</b>	2017
<ul style="list-style-type: none"><li>• Distinguished Performance Award</li></ul>	
<b>American Vacuum Society</b>	2017
<ul style="list-style-type: none"><li>• Fellow</li></ul>	
<b>Chinese Academy of Sciences</b>	2016
<ul style="list-style-type: none"><li>• President's International Fellowship</li></ul>	
<b>American Vacuum Society</b>	2015
<ul style="list-style-type: none"><li>• Outstanding Researcher Award of the AVS Prairie Chapter</li></ul>	
<b>Texas A&amp;M University</b>	2015
<ul style="list-style-type: none"><li>• Adjunct Professor</li></ul>	
<b>IEEE</b>	2014
<ul style="list-style-type: none"><li>• Fellow</li></ul>	
<b>American Physical Society</b>	2014
<ul style="list-style-type: none"><li>• Outstanding Referee</li></ul>	
<b>American Physical Society</b>	2011
<ul style="list-style-type: none"><li>• Fellow</li></ul>	
<b>IEEE Magnetics Society</b>	2011
<ul style="list-style-type: none"><li>• Distinguished Lecturer</li></ul>	
<b>IEEE</b>	2009
<ul style="list-style-type: none"><li>• Senior Membership</li></ul>	
<b>Argonne National Laboratory, Argonne, Illinois</b>	2003
<ul style="list-style-type: none"><li>• Pacesetter Award, October 2003</li></ul>	
<b>Los Alamos National Laboratory, Los Alamos, New Mexico</b>	1999
<ul style="list-style-type: none"><li>• Director's Funded Postdoctoral Fellowship, September 1999</li></ul>	

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• A W A R D S ( C O N T . )

- Rheinisch-Westfälische Technische Hochschule Aachen, Aachen, Germany** *1995*  
 • Springorum Medal for Diploma thesis with honors, June 1995
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P R O F E S S I O N A L S E R V I C E S

- IEEE Magnetics Society** *Since 2023*  
 • Member Honors & Awards Committee
- Spin Electronic and Nanomagnetism Colloquium, Nancy, France** *2022 – 2023*  
 • Co-organizer
- Spin Caloritronics XI, Urbana, Illinois** *2019 – 2022*  
 • Organizer
- IEEE Magnetics Society** *Since 2017*  
 • Associate Chair for Mayor Conferences
- American Vacuum Society** *2015 – 2019*  
 • Member at Large of the Magnetic Interfaces and Nanostructures Division
- MMM Conference Advisory Committee** *2014*  
 • Chair
- MMM 2013, Denver, Colorado** *2013*  
 • General Chair
- IEEE Magnetics Society** *2010 – 2012*  
 • Member of the IEEE Magnetics Society Advisory Committee
- MMM 2010, Atlanta, Georgia** *2010*  
 • Program Chair
- American Institute of Physics** *Since 2009*  
 • Associate Editor, Journal of Applied Physics
- American Physical Society** *2007 – 2010*  
 • Vice-Chair, Chair-Elect, Chair, and Past-Chair of the Topical Group on Magnetism & its Applications
- IEEE Magnetics Society** *2007 – 2009*  
 • Chair of the IEEE Magnetics Society Technical Committee
- MMM/Intermag 2007, Baltimore, Maryland** *2007*  
 • Publication Chair (IEEE)

## P R O F E S S I O N A L   S E R V I C E   ( C O N T . )

- Los Alamos National Laboratory, Los Alamos, New Mexico** *2003 – 2014*
- Member of the LANSCE Materials Program Advisory Committee
- Reviews for Funding Agencies** *ongoing*
- Including Department of Energy, National Science Foundation, European Research Council, and German Science Foundation (DFG)
- Reviews for Journals** *ongoing*
- Including Science, Nature, Nat. Mater., Nat. Nanotechn., Nat. Phys., Phys. Rev. X, Phys. Rev. Lett., Adv. Funct. Mater., Appl. Phys. Lett., Phys. Rev. B, and Phys. Rev Appl.
- Scientific Advisory Committees**
- IFW Dresden, Germany *2023 – present*
  - EQUATE, University of Nebraska *2022 – present*
  - SHINES EFRC, University of California, Riverside *2014 – 2016*
- International Advisory Committee Member for Conferences**
- MML 2023, Seoul, Korea; PASPS10, Linz, Austria; ICM 2018, San Francisco, California; IcAUMS 2018, Jeju, Korea; Sol-SkyMag-2017, San Sebastian, Spain; Sol-SkyMag-2016, San Sebastian, Spain; ICMS 2016, Fethiye, Turkey; ICM 2015, Barcelona, Spain; ICMS 2014, Antalya, Turkey; ICM 2012, Busan, Korea
- Program Committee Member for Conferences**
- Joint MMM-Intermag 2025, New Orleans, LA; MMM 2023, Dallas, TX; Intermag 2023, Sendai, Japan; MMM 2022, Minneapolis, MN; Intermag 2021, Lyon, France; MORIS 2021, Matsue, Japan; MORIS 2019, Prague, Czech Republic; ICM 2018, San Francisco, California; MORIS 2018, New York, New York; MMM 2017, Pittsburgh, Pennsylvania; MML 2013, Kyoto, Japan; Joint MMM-Intermag 2010, Washington, D.C.; Intermag 2009, Sacramento, California; MMM 2008, Austin, Texas; MMM 2007, Tampa, Florida; Joint MMM-Intermag 2007, Baltimore, Maryland; and MMM 2005, San Jose, California

P A T E N T S

- US Patent # 11,474,283 2022  
"Super Resolution for Magneto-Optical Microscopy"  
S. G. E. te Velthuis, M. C. S. Vogel, and A. F. Hoffmann,
- US Patent # 7,639,359 2009  
"Magneto-optic biosensor using bio-functionalized magnetized nanoparticles"  
S.-H. Chung, A. F. Hoffmann, and S. D. Bader
- US Patent # 7,323,113 2008  
"Pattern transfer with self-similar sacrificial mask layer and vector magnetic field sensor"  
A. Hoffmann
- US Patent # 7,042,036 2006  
"Magnetic memory using single domain switching by direct current"  
S.-H. Chung and A. F. Hoffmann

PUBLICATIONS AND PRESENTATIONS

- Over 200 publications in Peer-Reviewed Journals (details see pp. 15–37)
- Over 70 publications in Conference Proceedings (details see pp. 38–45)
- 5 Book Chapters, 2 Books (details see p. 46)
- In total more than 10,000 citations, h-index: 59 according to Web of Science; more than 20,000 citations, h-index: 70 according to Google Scholar.

**267**

Publications in  
Web of Science

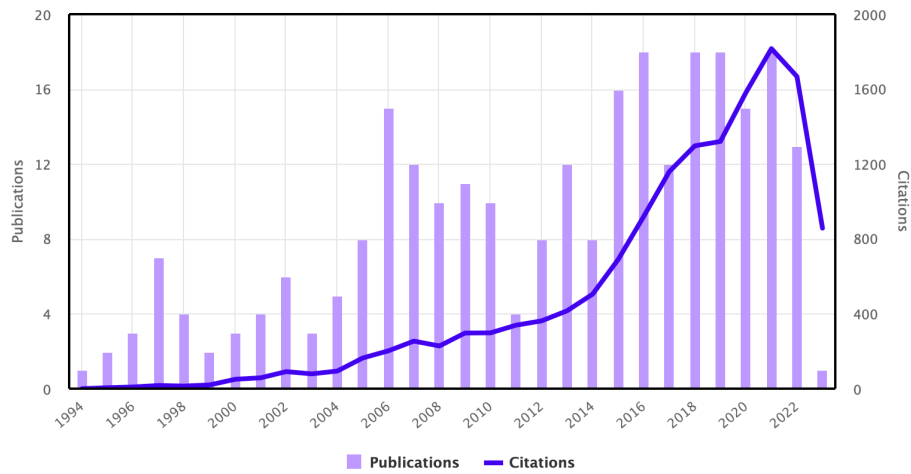
**14,809**

Sum of Times  
Cited

**59**

H-Index

Times Cited and Publications Over Time



- Over 200 Invited Talks at U.S. and Foreign Research Conferences (details see pp. 49–66)
- Over 100 Invited Seminars at U.S. and Foreign Research Institutions (details see pp. 67–82)

## P O S T D O C S   S U P E R V I S E D

**Post-Doctoral Researchers**

- Jinho Lim *2022 – present*
- Myoung-Woo Yoo *2021 – present*
- Jonathan Gibbons *2018 – 2022*  
(now research staff at Western Digital)
- Martin Lonsky *2019 – 2022*  
(now engineering staff at Nexperia)
- Saima Siddiqui *2019 – 2022*  
(now research staff at Intel)
- José Holanda *2018 – 2019*  
(now professor at Universidade Federal do Espírito Santo)
- Michael Vogel *2018 – 2019*  
(now postdoctoral researcher at Christian-Albrechts-Universität Kiel)
- Deshun Hong *2017 – 2019*  
(now faculty at Chongqing University)
- Trupti Khaire *2015 – 2018*  
(now research staff at Innovative Micro Technology)
- Benjamin Jungfleisch *2014 – 2017*  
(now assistant professor at University of Delaware)
- Wanjun Jiang *2014 – 2016*  
(now professor at Tsinghua University)
- Wei Zhang *2013 – 2016*  
(now associate professor at University of North Carolina at Chapel Hill)
- Vincent Vlamincx *2010 – 2013*  
(now research staff at IMT Atlantique, France)
- Helmut Schultheiß *2010 – 2013*  
(now research scientist at Helmholtz-Zentrum Dresden-Rossendorf, Germany)
- Oleksander Mosendz *2008 – 2010*  
(now research staff at Western Digital)
- Goran Mihajlović *2007 – 2010*  
(now research staff at Western Digital)
- Paolo Messina *2008 – 2009*  
(now at Innodemia)
- Yi Ji *2003 – 2006*  
(now associate professor at University of Delaware)



## P O S T D O C S   S U P E R V I S E D   ( C O N T . )

- Seok-Hwan Chung 2003 – 2007  
(now research scientist at Daegu Gyeongbuk Institute of Science and Technology, South Korea)

## S T U D E N T S   S U P E R V I S E D

**Graduate Students**

- Robert Kaman 2022 – present
- Zhixin Zhang 2021 – present
- Dreycen Foiles 2021 – 2023  
(now U.S. Army Construction Engineering Research Laboratory)
- Tzu-Hsiang Lo 2020 – present
- Shuchen Li 2020 – present
- Robin Klause 2019 – present
- Daniel Vaz 2019 – 2021  
(now Ph.D. student at University of Pittsburgh)
- Yi-Siou Huang 2019 – 2021  
(now Ph.D. student at University of Maryland)
- Takaaki Dohi 2019  
(now Ph.D. student at Tohoku University)
- Kathleen Oolman 2018  
(now Ph.D. student at University of Illinois at Urbana-Champaign)
- Adrian A. Camacho-Berrios 2016  
(now Ph.D. student at University of Puerto Rico, Rio Piedras)
- Hilal Saglam 2015 – 2019  
(now postdoctoral researcher at Princeton University)
- Pavel Lapa 2014 – 2017  
(now staff scientist at General Atomics)
- Joseph Sklenar 2014 – 2015  
(now assistant professor at Wayne State University)
- Guan-Yu Luo 2013
- Katrin Schultheiß 2010 – 2013  
(now postdoctoral researcher at Helmholtz-Zentrum Dresden-Rossendorf, Germany)
- Oscar Arnache 2006 – 2007  
(now professor at Universidad de Antioquia, Colombia)
- Klaus Brüggemann 2005 – 2006  
(now applications manager at Siltronic AG Singapore)

## STUDENTS SUPERVISED (CONT.)

- Volker Rose  
(now staff scientist at Argonne National Laboratory) 2005
- Gloria Campillo  
(now professor at Universidad de Antioquia, Colombia) 2004

**Undergraduate students**

- Youfu Qian 2023 – 2024
- Effie Gong 2023 – 2024
- Shivansh Agarwal 2023 – 2024
- Megan Batchelor (now undergraduate student at Mercer University) 2023
- Clerkson Ngolle (now undergraduate student at University of Maryland Eastern Shore) 2023
- Abhiraam Arun 2023
- Pantao Hu 2023
- Jack Hallet 2022 – 2023
- Danny Foster 2022  
(now Electronics Calibrations Technician at Standards & Calibrations)
- Zina Medina 2022  
(now undergraduate student at University of Puerto Rico-Mayagüez)
- Amber Simon 2022  
(now undergraduate student at Gustavus Adolphus College)
- Jiapei Yang 2021
- Zhaoxuan Ge 2021  
(now Ph.D. student at Carnegie Mellon University)
- Yung Man Yu 2021  
(now Ph.D. student at University of Illinois Urbana-Champaign)
- Jonathan Hartanto 2021  
(now Ph.D. student at Stanford University)
- Sophie Roberts 2020  
(now Ph.D. student at University of Illinois Urbana-Champaign)
- Daniel Vaz 2019  
(now Ph.D. student at University of Pittsburgh)
- Arthur Hendriks 2019  
(now Ph.D. student at Eindhoven University)

S T U D E N T S   S U P E R V I S E D   ( C O N T . )

- Nicolas Ferrer *2015 – 2016*
- Sebastian Höll *2009*
- Michael Patrick *2008 – 2009*  
(now optical engineer at L3Harris Technologies)

## FUNDING

**Department of Energy**

Energy Frontier Research Center “Quantum Materials for Energy Efficient Neuromorphic Computing”	<i>2022 – 2026</i>
<ul style="list-style-type: none"> <li>• Co-PI; \$3,150k/year</li> </ul>	
Materials and Chemical Sciences Research for Quantum Information Science “Hybrid-Magnon Quantum Devices”	<i>2021 – 2024</i>
<ul style="list-style-type: none"> <li>• Lead-PI; \$1,400k/year</li> </ul>	
NSRC Quantum Information Science and Research Infrastructure “Photon Qubit Entanglement and Transduction”	<i>2019 – 2021</i>
<ul style="list-style-type: none"> <li>• Co-PI; \$1,697k/year</li> </ul>	
Materials and Chemical Sciences Research for Quantum Information Science “Generation and Remote Distribution of Quantum Entanglements in Solids”	<i>2019 – 2021</i>
<ul style="list-style-type: none"> <li>• Co-PI; \$1,300k/year</li> </ul>	
Energy Frontier Research Center “Quantum Materials for Energy Efficient Neuromorphic Computing”	<i>2018 – 2022</i>
<ul style="list-style-type: none"> <li>• Co-PI; \$3,431k/year</li> </ul>	
Field Work Proposal “Magnetic Films”	<i>2005 – 2019</i>
<ul style="list-style-type: none"> <li>• Lead-PI (since 2014); \$2,129k in FY 2019</li> </ul>	
Field Work Proposal “Coherent Spin Phenomena”	<i>2008 – 2010</i>
<ul style="list-style-type: none"> <li>• Lead PI; \$435k/year</li> </ul>	
Field Work Proposal “Laterally Confined Nanomagnets”	<i>2001 – 2004</i>
<ul style="list-style-type: none"> <li>• Co-PI; \$1,200k/year</li> </ul>	

## FUNDING (CONT.)

**National Science Foundation**

Division of Materials Research; “Illinois Materials Research Center” *2023 – 2029*  
 • Co-PI; \$18,000k

Division of Electrical, Communications and Cyber Systems; *2020 – 2023*  
 “Collaborative Research: Correlating Device Performance and Interfacial Properties for Weyl Spintronics”  
 • Co-PI; \$298k

Division of Materials Research; “Illinois Materials Research Center” *2017 – 2023*  
 • Co-PI; \$300k

Division of Materials Research; Proposal for International Workshop *2010*  
 “Trends on Nanoscale Superconductivity and Magnetism”  
 • Co-PI; \$25k

Division of Electrical, Communications and Cyber Systems; Proposal for Workshop *2010*  
 “Opportunities for Magnetism in MEMS/NEMS”  
 • Co-PI; \$10k

**Air Force Office of Scientific Research**

Department of Defense Multidisciplinary Research Program of the University *2023 – 2028*  
 Research Initiative (MURI);  
 “Elucidating Interplays of Chirality and Spin in Chiral Assemblies”  
 • Co-PI; \$1,500k/year

**Defense Advanced Research Agency**

Proposal to BioMagnetICs Program *2003 – 2004*  
 • Co-PI; \$240k/year

## FUNDING (CONT.)

**Argonne National Laboratory**

- Laboratory Director Research & Development Proposal  
“Magnon-based Coherent Quantum Information Processing” 2019 – 2021
- Co-PI; \$180k/year
- Laboratory Director Research & Development Proposal  
“Oxides for Novel Computational Approaches” 2016 – 2018
- Lead PI; \$400k/year
- Laboratory Director Research & Development Proposal  
“Dynamics of Spin Ice” 2013 – 2016
- Lead PI; \$195k/year
- Laboratory Director Research & Development Proposal  
“Thin Film Skyrmion Spin Textures” 2013 – 2016
- Co-PI; \$204k/year
- Laboratory Director Research & Development Proposal  
“Spin-based Thermal Power Generation” 2012 – 2015
- Lead PI; \$193k/year
- Laboratory Director Research & Development Proposal  
“Magneto-Vibrational Energy Conversion at the Nanoscale” 2009 – 2012
- Lead PI; \$145k/year
- Laboratory Director Research & Development Proposal  
“Lateral and Molecular Spintronics Structures” 2004 – 2007
- Co-PI; \$200k/year
- Laboratory Director Research & Development Proposal  
“Nano-architecture from bio-systems: fabrication, assembly and function” 2002 – 2003
- Co-PI; \$300k/year
- Laboratory Director Research & Development Proposal  
“Hybrid and Patterned Nanomagnetic Systems” 2001 – 2004
- Lead PI; \$300k/year
- Laboratory Director Research & Development Proposal  
“Interacting Laterally Patterned Magnetic Structures” 2001 – 2004
- Co-PI; \$200k/year

## P E E R R E V I E W E D P U B L I C A T I O N S

**In Total More than 200 Peer-Reviewed Publications****Unraveling the origin of antiferromagnetic coupling at YIG/permalloy interface**

*J. Qian, Y. Li, Z.-H. Jiang, R. Busch, H.-C. Ni, T.-H. Lo, A. Hoffmann, A. Schleife, and J.-M. Zuo,*  
(unpublished)

**Strong Damping-Like Torques in Wafer-Scale MoTe<sub>2</sub> Grown MOCVD**

*S. T. Chyczewski, H. Lee, S. Li, M. Eladl, J.-F. Zheng, A. Hoffmann, and W. Zhu,*  
Nano Letters, submitted

**Ultrafast THz emission spectroscopy of spin currents in the metamagnet FeRh**

*Y. Lv, S. Shim, J. Gibbons, A. Hoffmann, N. Mason, and F. Mahmood,*  
APL Materials, submitted

**Magnon mediated spin pumping by coupled ferrimagnet garnets heterostructure**

*A. Swain, K. S. Rathore, P. Guta, A. Mishra, G. Lee, J. Lim, A. Hoffmann, R. Mahendiran, and S. Bedanta,*  
Applied Physics Letters, submitted

**Influence of temperature, doping, and amorphization on the electronic structure and magnetic damping of iron**

*Z. Jiang, A. Hoffman, and A. Schleife,*  
Physical Review B, submitted.

**Unconventional field-like spin-torques in CrPt<sub>3</sub>**

*R. Klause, A. Hoffmann, Y. Xiao, E. Fullerton, and J. Gibbons,*  
Physical Review Applied, submitted.

**Spin-Orbit Torques in Sputtered MoTe<sub>2</sub> Films**

*S. Li, J. Gibbons, S. Chyczewski, Z. Liu, H.-C. Ni, J. Qian, J.-M. Zuo, J.-F. Zheng, W. Zhu, and A. Hoffmann,*  
Physical Review B, submitted.

**Spin-orbit-torque-assisted thermal octupole reconfiguration**

*M.-W. Yoo, V. O. Lorenz, A. Hoffmann, and D. G. Cahill,*  
Science Advances, submitted.

**Colossal Anisotropic Absorption of Spin Currents Induced by Chirality**

*R. Sun, Z. Wang, M. Molitoris, A. H. Comstock, C. Yang, A. McConnell, B. Bloom, Z.-H. Cheng, Z. Yuan, W. Zhang, A. Hoffmann, J. Liu, D. Waldeck, and D. Sun,*  
Science Advances, submitted.

## PEER REVIEWED PUBLICATIONS (CONT.)

**Programmable Real-Time Magnon Interference in Two Remotely Coupled Magnonic Resonators**

*M. Song, T. Polakovic, J. Lim, T. W. Cecil, J. Pearson, R. Divan, W.-K. Kwok, U. Welp, A. Hoffmann, K.-J. Kim, V. Novosad, and Y. Li,*  
Physical Review Letters, submitted.

**Stable Antivortex Nucleation and Spin-Torque-Driven Dynamics in Truncated Asteroid Shaped Nanomagnets**

*A. K. Aykin, H. Piskin, B. Kocaman, V. Karakas, S. Arpacı, A. Ozbay, M. Carpentieri, G. Finocchio, F. Celegato, P. Tiberto, S. Lendinez, V. Novosad, A. Hoffmann, and O. Özatay*  
Physical Review Applied, submitted.

**Inverse Chirality-Induced Spin Selectivity Effect in Chiral  $\pi$ -Conjugated Polymers**

*R. Sun, K. S. Park, A. Comstock, A. McConnell, D. Beratan, W. You, A. Hoffmann, Z.-G. Yu, Y. Diao, and D. Sun,*  
Nature Materials, to be published.

**Developing computational skills through simulation based problem-solving in science**

*M. Lonsky, M. Lang, S. Holt, S. A. Pathak, R. Klause, T.-H. Lo, M. Beg, A. Hoffmann, and H. Fangohr,*  
American Journal of Physics, to be published.

**Epitaxial growth and magnetic properties of kagome metal FeSn/elemental ferromagnet heterostructures**

*P. M. Laxmeesha, T. D. Tucker, R. K. Rai, S. Li, M.-W. Yoo, E. A. Stach, A. Hoffmann, and S. May,*  
Journal of Applied Physics **135**, 085302 (2024).

**Probing intrinsic magnon bandgap in a layered hybrid perovskite antiferromagnet by a superconducting resonator**

*Y. Li, T. Draher, A. H. Comstock, Y. Xiong, Md. A. Haque, E. Easy, J. Qian, T. Polakovic, J. E. Pearson, R. Divan, J.-M. Zuo, X. Zhang, U. Welp, W.-K. Kwok, A. Hoffmann, J. M. Luther, M. C. Beard, D. Sun, W. Zhang, and V. Novosad,*  
Physical Review Research **5**, 043031 (2023).

**Integrating magnons for quantum information**

*Z. Jiang, J. Lim, Y. Li, W. Pfaff, T.-H. Lo, J. Qian, A. Schleife, J.-M. Zuo, V. Novosad, and A. Hoffmann,*  
Applied Physics Letters **123**, 130501 (2023).

**Challenges in electrical detection of Spin-orbit torque in Ir<sub>20</sub>Mn<sub>20</sub>/Pt hetero-structures**

*I. Göksal, H. Pişkin, B. Kocaman, K. Akin, D. Çay, E. Selvi, V. Karakaş, S. Lenidinez, H. Sağlam, Y. Li, J. E. Pearson, R. Divan, W. Zhang, V. Novosad, A. Hoffmann, and Ö. Özatay,*  
International Journal of Electromagnetics and Mechanics **73**, 3 (2023).



## PEER REVIEWED PUBLICATIONS (CONT.)

**Evidence of pseudogravitational distortions of the Fermi surface geometry in the antiferromagnetic metal FeRh**

*J. Sklenar, S. Shim, H. Saglam, J. Oh, M. G. Vergniory, A. Hoffmann, B. Bradlyn, N. Mason, and M. J. Gilbert,*  
Communications Physics **6**, 241 (2023).

**Unidirectional microwave transduction with chirality selected short-wavelength magnon excitations**

*Y. Li, T.-H. Lo, J. Lim, J. E. Pearson, R. Divan, W. Zhang, U. Welp, W.-K. Kwok, A. Hoffmann, and V. Novosad,*  
Applied Physics Letters **123**, 022406 (2023).

**The effects of field history on magnetic skyrmion formation in [Pt/Co/Ir]<sub>3</sub> multilayers**

*A. T. Clark, X. Wang, A. R. Stuart, Q. Wang, W. Jiang, J. E. Pearson, S. G. E. te Velthuis, A. Hoffmann, X. M. Cheng, and K. S. Buchanan,*  
Journal of Magnetism and Magnetic Materials **563**, 169951 (2022).

**Spin Transport Modified by Magnetic Order**

*A. Hoffmann,*  
Journal of Magnetism and Magnetic Materials **563**, 169896 (2022).

**Topological spin memory of antiferromagnetically coupled skyrmion pairs in Co/Gd/Pt multilayers**

*X. Wang, A. R. Stuart, M. S. Swyt, C. M. Quispe Flores, A. T. Clark, A. Fiagbenu, R. V. Chopdekar, P. N. Lapa, Z. Xiao, D. Keavney, R. Rosenberg, M. Vogel, J. E. Pearson, S. G. E. te Velthuis, A. Hoffmann, K. S. Buchanan, and X. M. Cheng,*  
Physical Review Materials **6**, 084412 (2022).

**Large Exotic Spin Torques in Antiferromagnetic Iron Rhodium**

*J. Gibbons, T. Dohi, V. P. Amin, F. Xue, H. Ren, J.-W. Xu, H. Arava, S. Shim, H. Saglam, Y. Liu, J. E. Pearson, N. Mason, A. K. Petford-Long, P. M. Haney, M. D. Stiles, E. E. Fullerton, A. D. Kent, S. Fukami, and A. Hoffmann,*  
Physical Review Applied **18**, 024075 (2022).

**Dynamic fingerprints of synthetic antiferromagnet nanostructures with interfacial Dzyaloshinskii-Moriya interaction**

*M. Lonsky and A. Hoffmann,*  
Journal of Applied Physics **132**, 043903 (2022).

**Quantum materials for energy-efficient neuromorphic computing: Opportunities and challenges**

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**Unidirectional Magnetoresistance in Antiferromagnet/Heavy-Metal Bilayers**

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**Unidirectional spin-torque driven magnetization dynamics**

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**Recent Advances in Magnetic Insulators – From Spintronics to Microwave Applications**

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**Pure Spin Currents**

*A. Hoffmann,*  
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**Domain States determined by Neutron Refraction and Scattering**

*A. Hoffmann and G. P. Felcher,*  
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**Brownian Motion in Biological Sensing**

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**Persistent photoconductivity in high- $T_c$  superconductors**

*A. Hoffmann, I. K. Schuller, Z. F. Ren, J. Y. Lao, J. H. Wang, D. Girata, W. Lopera, and P. Prieto,*  
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## O T H E R P U B L I C A T I O N S

**Emerging Materials for Antiferromagnetic Spintronics**

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**Neuromorphic computing: Challenges from quantum materials to emergent connectivity**

*I. K. Schuller, A. Frano, R. C. Dynes, A. Hoffmann, B. Noheda, C. Schuman, A. Sebastian, and J. Shen,*  
Applied Physics Letters **120**, 140401 (2022).

**Spin pumping gathers speed**

*A. Hoffmann,*  
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**A new twist on phonons**

*M. B. Jungfleisch and A. Hoffmann,*  
Nature Physics **14**, 433 (2018).

**Correction to Tunable Transport Gap in Phosphorene**

*S. Das, W. Zhang, M. Demarteau, A. Hoffmann, M. Dubey, and A. Roelofs,*  
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*V. Vlaminck, H. Schultheiss, J. E. Pearson, F. Y. Fradin, S. D. Bader, and A. Hoffmann,*  
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**Make your Spins Spin**

*A. Hoffmann,*  
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*C. Visani, V. Peña, J. Garcia-Barriocanal, D. Arias, Z. Sefrioui, C. Leon, J. Santamaria, N. M. Nemes, M. Garcia-Hernandez, J. L. Martinez, S. G. E. te Velthuis, and A. Hoffmann,*  
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*A. Hoffmann*  
Physical Review Letters **95**, 159901 (2005).

O T H E R P U B L I C A T I O N S ( C O N T . )

**Magnetic Viruses for Biomedical Applications**

*A. Hoffmann,*

Magnetics Business & Technology, **Spring**, 24 (2005).



## I N V I T E D T A L K S A T C O N F E R E N C E S

**In Total More than 200 Invited Talks at U.S. and Foreign Research Conferences**  
(6 keynote; 10 plenary; 2 semi-plenary; 8 tutorial)

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| <p><b>International Union of Materials Research Societies –<br/>18<sup>th</sup> International Conference on Electronic Materials</b><br/>Hong Kong, Hong Kong, May 17–20, 2024</p> <ul style="list-style-type: none"> <li>• “Spin Currents with Antiferromagnets”</li> </ul> | 2024 |
| <p><b>Intermag 2024</b><br/>Rio de Janeiro, Brazil, May 5–10, 2024</p> <ul style="list-style-type: none"> <li>• “Magnetic skyrmions in synthetic ferri- and antiferromagnets”</li> </ul>   | 2024 |
| <p><b>International Conference on Magnetic Materials and Applications</b><br/>Hyderabad, India, December 4–6, 2023</p> <ul style="list-style-type: none"> <li>• “Hybrid Magnon Modes”</li> </ul>   | 2023 |
| <p><b>Annual Conference on Quantum Condensed Matter</b><br/>Bhubaneswar, India, November 27–30, 2023</p> <ul style="list-style-type: none"> <li>• “Hybrid Magnon Modes”</li> </ul>   | 2023 |
| <p><b>Spin Asia 2023</b><br/>Chiang Mai, Thailand, September 24–29, 2023</p> <ul style="list-style-type: none"> <li>• “Spin Currents with Antiferromagnets”</li> </ul>   | 2023 |
| <p><b>Spin Electronics and Nanomagnetism Colloquium</b><br/>Nancy, France, August 30–September 2, 2023</p> <ul style="list-style-type: none"> <li>• “How to Turn Charge into Spin”</li> </ul>  | 2023 |
| <p><b>31<sup>st</sup> International Materials Research Congress</b><br/>Cancun, Mexico, August 13–18, 2023</p> <ul style="list-style-type: none"> <li>• “Spin Currents with Antiferromagnets”</li> </ul>   | 2023 |
| <p><b>11<sup>th</sup> International Symposium on Metallic Multilayers</b><br/>Seoul, Korea, July 24–28, 2023</p> <ul style="list-style-type: none"> <li>• “Spin Currents with Antiferromagnets”</li> </ul>   | 2023 |
| <p><b>Platinum group metals: critical to the future of sustainable technologies?</b><br/>Reading, United Kingdom, July 18–20, 2023</p> <ul style="list-style-type: none"> <li>• “Rh, Pd, Ir, Pt: What makes them special for spintronics?”</li> </ul>                        | 2023 |
| <p><b>Spin Caloritronics XII</b><br/>Tsukuba, Japan, May 22–25, 2023</p> <ul style="list-style-type: none"> <li>• “Spin Currents with Antiferromagnets”</li> </ul>   | 2023 |
| <p><b>Magnetic Frontiers: Quantum Technologies</b><br/>Orlando, Florida, April 19–22, 2023</p> <ul style="list-style-type: none"> <li>• “Hybrid Magnon Modes for Coherent Information Processing” (<i>keynote</i>)</li> </ul>  | 2023 |

I N V I T E D T A L K S A T C O N F E R E N C E S  
( C O N T . )

- Materials Research Society Spring Meeting & Exhibit** 2023  
San Francisco, California, April 10–14, 2023
- “Hybrid Magnon Modes for Coherent Information Processing”
- 68<sup>th</sup> Annual IEEE International Electron Devices Meeting** 2022  
San Francisco, California, December 3–7, 2022
- “Hybrid-Magnon Quantum Devices: Strategies and Approaches”
- Spin Argentina 2022** 2022  
Bariloche, Argentina, November 6–11, 2022
- “Hybrid Magnon Modes”
- 2022 IEEE Magnetic Society Mini-Workshop on Spintronics and Quantum Materials** 2022  
Nanjing, China, October 14–18, 2022
- “Hybrid Magnon Modes”
- Spin Dynamics at the Nanoscale and its Applications: A Symposium in Honor of Andrew Kent** 2022  
New York, New York, September 23,24, 2022
- “Hybrid Magnon Modes”
- Trends in Magnetism** 2022  
Venice, Italy, September 4–9, 2022
- “Spin Currents with Antiferromagnets” (*keynote*)
- Magnonics 2022** 2022  
Oxnard, California, July 31–August 4, 2022
- “Hybrid Magnon Modes”
- Sol-SkyMag 2022** 2022  
San Sebastian, Spain, June 27–July 1, 2022
- “Spin Currents with Antiferromagnets”
- 2022 March Meeting of the American Physical Society** 2022  
Chicago, Illinois, March 14–18, 2022
- “Adler Lectureship Award (2022): The Joy of Magnetism”
- International Conference on Integration of Social Science, Science, Engineering and Technology – Trans and Interdisciplinary approaches in Higher Education and Research** 2022  
Chennai, India, March 10–11, 2022
- “Hybrid Magnon Modes for Coherent Information Processing” (*keynote*)
- Advanced Research Strategy Meeting** 2022  
Los Angeles, California, February 8–10, 2022
- “Spin Currents with Antiferromagnets”

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
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- 2022 Joint MMM-Intermag** 2022  
 New Orleans, Louisiana, January 10–14, 2022
- “Spintronics Entering a New Orbit” (*plenary*)
- 3<sup>rd</sup> Indian Materials Conclave and  
 32<sup>nd</sup> Annual General Meeting of the Materials Research Society of India** 2021  
 Chennai, India, December 20–23, 2021
- “Hybrid Magnon Modes”
- IEEE Nanotechnology Materials and Devices Conference** 2021  
 Vancouver, Canada, December 12–15, 2021
- “Hybrid Magnon Modes”
- 3<sup>rd</sup> Joint Annual Meeting,  
 IEEE Magnetics Society and Nanotechnology Council Chicago Chapter** 2021  
 Evanston, Illinois, December 3, 2021
- “Hybrid Magnon Modes”
- 7<sup>th</sup> Front Range Advanced Magnetics Symposium** 2021  
 Ft. Collins, Colorado, September 18–19, 2021
- “Hybrid Magnon Modes” (*plenary*)
- International conference on theoretical physics  
 “From quasi-classics to Bose condensation and everthing in between”** 2021  
 Chernogolovka, Russia, August 17–20, 2021
- “Magnetic Skyrmions”
- Emerging Opportunities at the Interception of Quantum and Thermal Sciences** 2021  
 Austin, Texas, June 28–30, 2021
- “Hybrid Magnon Modes”
- Sol-SkyMag 2021** 2021  
 San Sebastian, Spain, June 21–24, 2021
- “Hybridized Magnons in Thin Film Systems”
- ALBA II Colloquium in Spintronics** 2021  
 Barcelona, Spain, May 17, 2021
- “Spin Currents in Antiferromagnets”
- Materials Research Society Spring Meeting & Exhibit** 2021  
 Seattle, Washington, April 17–23, 2021
- “Topological Quasiparticles: Magnetic Skyrmions”
- Petaspin Seminar** 2021  
 Messina, Italy, February 4, 2021
- “Hybrid Magnon Modes”

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- Workshop on Magnetism and Magnetic Materials: From Basic Physics to Magnonics** 2020  
Recife, Brasil, October 16, 2020
- “Hybrid Magnon Modes”
- Workshop Emergent Quantum Materials and Technologies** 2020  
Lincoln, Nebraska, March 26–27, 2020
- “Topological Quasiparticles: Magnetic Skyrmions”
- French-US Symposium on Nanoelectronics** 2019  
Paris, France, September 25–27, 2019
- “Spin Currents with Antiferromagnets”
- Magnonics 2019** 2019  
Carovigno, Italy, July 28–August 1, 2019
- “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- 10<sup>th</sup> International Symposium on Metallic Multilayers** 2019  
Madrid, Spain, June 17–21, 2019
- “Spin currents in metallic antiferromagnets”
- York-Tohoku-Kaiserslautern Symposium** 2019  
York, United Kingdom, June 12–14, 2019
- “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- Spin Caloritronics X** 2019  
Groningen, The Netherlands, May 20–24, 2019
- “Thermal Spin Currents in Antiferromagnets” (*review & outlook talk*)
- Spin Mechanics 6** 2019  
Zao, Japan, February 26–28, 2019
- “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- Cu Spin** 2019  
Copper Mountain, Colorado, February 18–21, 2019
- “Spins in Copper”
- Advanced Materials and Nanotechnology 9** 2019  
Wellington, New Zealand, February 10–14, 2019
- “Topological Quasiparticles: Magnetic Skyrmions”
- International Conference on Magnetic Materials and Applications** 2018  
Bhubaneswar, India, December 9–13, 2018
- “Spin Current Generation, Detection, and Transport with Antiferromagnets” (*semi-plenary*)

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- Spintronics meets Neuromorphics** 2018  
Mainz, Germany, October 8–12, 2018
- “Manipulating Magnetic Skyrmions” (*tutorial*)
- Magnetic Single Nano-Object Workshop & School** 2018  
Nancy, France, September 25–27, 2018
- “High Frequency Dynamics of Artificial Spin Ice”
- 2018 E-MRS Fall Meeting and Exhibit** 2018  
Warsaw, Poland, September 17–20, 2018
- “Magnetic Skyrmions in Magnetic Multilayers”
- International Union of Materials Research Societies –  
International Conference on Electronic Materials** 2018  
Daejeon, Korea, August 19–24, 2018
- “Magnetic Skyrmions in Magnetic Multilayers” (*keynote*)
- 10<sup>th</sup> International School and Conference on  
Physics and Applications of Spin Phenomena in Solids** 2018  
Linz, Austria, August 5–9, 2018
- “Manipulating Magnetic Skyrmions” (*tutorial*)
- Spin Caloritronics IX** 2018  
Columbus, Ohio, June 25–29, 2018
- “Spin-to-Charge Current Conversion from Interfacial Rashba Spin-Orbit Coupling”
- Sol-SkyMag 2018** 2018  
San Sebastian, Spain, June 18–22, 2018
- “High Frequency Dynamics of Artificial Spin Ice”
- 5<sup>th</sup> International Conference of Asian Union of Magnetism Societies** 2018  
Jeju, Korea, June 3–7, 2018
- “High Frequency Dynamics of Artificial Spin Ice”
- International Conference on Emergent Phenomena in Quantum Materials** 2018  
Shanghai, China, May 30–June 1, 2018
- “Topological Quasiparticles: Magnetic Skyrmions”
- Intermag 2018** 2018  
Singapore, Singapore, April 23–27, 2018
- “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- Simpósio Latinoamericano de Física del Estado Sólido XXIII** 2018  
Bariloche, Argentina, April 10–13, 2018
- “Topological Quasiparticles: Magnetic Skyrmions” (*plenary*)

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- Materials Research Society Spring Meeting & Exhibit** 2018  
Phoenix, Arizona, April 2–6, 2018
- “Manipulating Magnetic Skyrmions” (*tutorial*)
- Indo-US Symposium on Recent Advances in Magnetism and Spintronics** 2018  
Mumbai, India, February 5–6, 2018
- “Topological Quasiparticles: Magnetic Skyrmions”
- 4<sup>th</sup> International Symposium on Advanced Magnetic Materials and Applications** 2017  
Phu Quoc, Vietnam, December 10–13, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- Workshop on Innovative Nanoscale Devices and Systems** 2017  
Kohala Coast, Hawaii, November 26–December 1, 2017
- “Topological Quasiparticles: Magnetic Skyrmions”
- Workshop on Antiferromagnetic Spintronics** 2017  
Grenoble, France, October 25–27, 2017
- “Spin Current Generation, Detection, and Transport in Antiferromagnets”
- Innovations in Materials Science** 2017  
Newark, Delaware, October 19–20, 2017
- “Topological Quasiparticles: Magnetic Skyrmions”
- Experimental Condensed Matter Physics PI Meeting** 2017  
Gaithersburg, Maryland, September 11–13, 2017
- “Magnetic thin films”
- Japan Society of Applied Physics Autumn Meeting** 2017  
Fukuoka, Japan, September 5–8, 2017
- “Topological Quasiparticles: Magnetic Skyrmions”
- 15<sup>th</sup> International Union of Materials Research Societies –  
International Conference on Advanced Materials** 2017  
Kyoto, Japan, August 27–September 1, 2017
- “Topological Quasiparticles: Magnetic Skyrmions” (*plenary*)
- Skyrmionics: Materials, Phenomena and Applications** 2017  
Santa Fe, New Mexico, August 7–10, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- Gordon Research Conference Spin Dynamics in Nanostructures** 2017  
Les Diablerets, Switzerland, July 16–21, 2017
- “Generating and Manipulating Room-Temperature Skyrmions”
- Frontiers in Emergent Quantum Phenomena** 2017  
New York, New York, June 28–30, 2017
- “Topological Quasiparticles: Magnetic Skyrmions” (*plenary*)

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- Sol-SkyMag 2017** 2017  
San Sebastian, Spain, June 19–23, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- Spincaloritronics 8** 2017  
Regensburg, Germany, June 12–15, 2017
- “Unidirectional spin-torque driven Magnetization Dynamics”
- 2017 Ohio State University Materials Week** 2017  
Columbus, Ohio, May 9–12, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- Workshop Collective Spin Transport in Electrical Insulators** 2017  
Natal, Brazil, April 24–May 26, 2017
- “Spin Current Generation and Detection with Antiferromagnets”
- Trends in Nanoscience 2017** 2017  
Irsee, Germany, March 27–30, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- DPG Frühjahrstagung 2017** 2017  
Dresden, Germany, March 19–24, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- Symposium Bio-Convergence Spin System** 2017  
Daegu, South Korea, February 9–11, 2017
- “Manipulating Room Temperature Magnetic Skyrmions”
- 2016 Fall Materials Research Society Meeting** 2016  
Boston, Massachusetts, November 27–December 2, 2016
- “Manipulating Room Temperature Magnetic Skyrmions”
- Antiferromagnetic Spintronics Workshop** 2016  
Mainz, Germany, September 26–30, 2016
- “Spin Current Generation and Detection with Antiferromagnets”
- Science & Applications of Thin Films, Conference & Exhibition** 2016  
Cesme, Turkey, September 19–23, 2016
- “Manipulating Room Temperature Magnetic Skyrmions”
- Nano-Materials 2016 – IWST – 2016 International Workshop on Spin Transfer** 2016  
Nancy, France, September 19–23, 2016
- “Driving Magnetization Dynamics in Insulators via Spin Hall Effects”
- SPIE Optics & Photonics** 2016  
San Diego, California, August 28–September 1, 2016
- “Driving Magnetization Dynamics with Interfacial Spin-Orbit Torques”

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| <p><b>IcAUMS Satelite Conference</b><br/>         Taipei, Taiwan, August 4–5, 2016</p> <ul style="list-style-type: none"> <li>• “Spin Currents in Antiferromagnets”</li> </ul>   | 2016 |
| <p><b>International Conference of the Asian Union of Magnetism Societies 2016</b><br/>         Tainan, Taiwan, August 1–5, 2016</p> <ul style="list-style-type: none"> <li>• “Spin Currents in Antiferromagnets”</li> </ul>  | 2016 |
| <p><b>Spin Caloritronics 7</b><br/>         Utrecht, The Netherlands, July 11–15, 2016</p> <ul style="list-style-type: none"> <li>• “Spin Current Generation and Detection with Antiferromagnets”</li> </ul>   | 2016 |
| <p><b>Spin Orbit Coupling and Topology in Low Dimensions</b><br/>         Spetses, Greece, June 26–July 3, 2016</p> <ul style="list-style-type: none"> <li>• “Spin Orbit Torques from Interfacial Rashba-Edelstein Effects”</li> </ul>                               | 2016 |
| <p><b>9<sup>th</sup> International Symposium on Metallic Multilayers</b><br/>         Uppsala, Sweden, June 20–24, 2016</p> <ul style="list-style-type: none"> <li>• “Manipulating Room Temperature Magnetic Skyrmions”</li> </ul>                                   | 2016 |
| <p><b>IEEE International Conference on Microwave Magnetism 2016</b><br/>         Tuscaloosa, Alabama, June 5–8, 2016</p> <ul style="list-style-type: none"> <li>• “Driving Magnetization Dynamics in Insulators Using Spin Hall Effects” (<i>plenary</i>)</li> </ul> | 2016 |
| <p><b>X Brazilian School of Magnetism</b><br/>         Belém, Brazil, May 30–June 3, 2016</p> <ul style="list-style-type: none"> <li>• “Magnetic Skyrmions”</li> </ul>   | 2016 |
| <p><b>Summit of Materials Science</b><br/>         Sendai, Japan, May 18–21, 2016</p> <ul style="list-style-type: none"> <li>• “Spin Hall Effects in Metals”</li> </ul>  | 2016 |
| <p><b>International Conference on Superconductivity and Magnetism</b><br/>         Fethiye, Turkey, April 24–30, 2016</p> <ul style="list-style-type: none"> <li>• “Generating and manipulating magnetic skyrmions at room temperature”</li> </ul>                   | 2016 |
| <p><b>Annual Symposium of the Institute for Molecules and Materials</b><br/>         Nijmegen, The Netherlands, April 4–5, 2016</p> <ul style="list-style-type: none"> <li>• “Manipulating Room Temperature Magnetic Skyrmions”</li> </ul>                           | 2016 |
| <p><b>2016 MRS Spring Meeting &amp; Exhibit</b><br/>         Phoenix, Arizona, March 28–April 1, 2016</p> <ul style="list-style-type: none"> <li>• “Manipulating Room Temperature Magnetic Skyrmions”</li> </ul>   | 2016 |
| <p><b>Workshop Magnetodynamics</b><br/>         Vail, Colorado, March 20–23, 2016</p> <ul style="list-style-type: none"> <li>• “Driving Magnetization Dynamics with Spin Hall Effects”</li> </ul>  | 2016 |



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- 3<sup>rd</sup> International Conference on Nanoscience, Nanotechnology and Nanobiotechnology** 2015  
 Brasilia, Brazil, December 14 – December 18, 2015
- “Manipulating Room Temperature Magnetic Skyrmions”
- Magnetics and Optics Research International Symposium** 2015  
 Penang, Malaysia, November 29 – December 2, 2015
- “Magneto-Optic Imaging of Room-Temperature Magnetic Skyrmion Bubbles”
- International Workshop on Spintronics with Antiferromagnets** 2015  
 Sendai, Japan, November 16–17, 2015
- “Spin Currents in Antiferromagnets”
- 14<sup>th</sup> International Union of Materials Research Societies – International Conference on Advanced Materials** 2015  
 Jeju, South Korea, October 25–29, 2015
- “Electrically Driven Magnetization Dynamics in Ferrimagnetic Oxide Insulators”
- 2015 American Vacuum Society Prairie Chapter Symposium** 2015  
 South Bend, Indiana, September 10, 2015
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- SpinIcur Summer School 2015** 2015  
 Braga, Portugal, September 7–11, 2015
- “Spin Hall Effects in Metals” (*tutorial*)
- 22<sup>nd</sup> International Colloquium on Magnetic Films and Surfaces** 2015  
 Cracow, Poland, July 12–17, 2015
- “Magnetization Dynamics Driven by Spin Hall Effects”
- 20<sup>th</sup> International Conference on Magnetism** 2015  
 Barcelona, Spain, July 5–10, 2015
- “Electric Manipulations of Spin Textures” (*semi-plenary*)
- Recent Trends in Nanomagnetism, Spintronics, and their Application** 2015  
 San Sebastian, Spain, June 30–July 3, 2015
- “Spin Hall Effects in Magnetically Ordered Materials”
- Hefei Mini-Workshop on Skyrmions** 2015  
 Hefei, China, May 18–19, 2015
- “Electric Manipulation of Skyrmions in Metals and Insulators”
- Intermag 2015** 2015  
 Beijing, China, May 11–15, 2015
- “Electric Manipulation of Skyrmions in Metals and Insulators”

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| <p><b>Recent Advances in Spintronics</b><br/>Safed, Israel, May 10–14, 2015</p> <ul style="list-style-type: none"> <li>• “Blowing Magnetic Skyrmion Bubbles”</li> </ul>   | 2015 |
| <p><b>2015 Conference on Magnetism and Its Applications</b><br/>Shanghai, China, January 31–February 2, 2015</p> <ul style="list-style-type: none"> <li>• “Electric Manipulations of Spin Textures”</li> </ul>  | 2015 |
| <p><b>III Brazilian Workshop on Magnetization Dynamics</b><br/>Santa Maria, Brazil, November 19–21, 2014</p> <ul style="list-style-type: none"> <li>• “Connecting Spin Waves to Charge Currents”</li> </ul>   | 2014 |
| <p><b>59<sup>th</sup> Annual Magnetism &amp; Magnetic Materials Conference</b><br/>Honolulu, Hawaii, November 3–7, 2014</p> <ul style="list-style-type: none"> <li>• “Insights about spin Hall effects from spin pumping”</li> </ul>  | 2014 |
| <p><b>Workshop on Oxide Materials: Novel Multifunctional Properties</b><br/>Cali, Colombia, September 15–19, 2014</p> <ul style="list-style-type: none"> <li>• “Magnetization dynamics in nanometer-thick yttrium iron garnet films”</li> <li>• “Magnetic skyrmions in metals and insulators”</li> </ul>                    | 2014 |
| <p><b>SPIE NanoScience+Engineering</b><br/>San Diego, California, August 17–24, 2014</p> <ul style="list-style-type: none"> <li>• “Insight about spin Hall effects from spin pumping”</li> </ul>  | 2014 |
| <p><b>International Workshop on Nanoscale Spectroscopy and Nanotechnology</b><br/>Chicago, Illinois, July 28–31, 2014</p> <ul style="list-style-type: none"> <li>• “Connecting Spin Waves to Charge Currents”</li> </ul>  | 2014 |
| <p><b>Spincaloritronics VI</b><br/>Irsee, Germany, July 14–18, 2014</p> <ul style="list-style-type: none"> <li>• “Reduction of Spin Hall Effects due to Magnetic Proximity”</li> </ul>  | 2014 |
| <p><b>Concepts in Spintronics</b><br/>Santa Barbara, California, September 30–October 4, 2013</p> <ul style="list-style-type: none"> <li>• “Electric control and detection of spinwaves”</li> </ul>   | 2013 |
| <p><b>Experimental Condensed Matter Physics PI Meeting</b><br/>Gaithersburg, Maryland, September 23–25, 2013</p> <ul style="list-style-type: none"> <li>• “Magnetic thin films”</li> </ul>  | 2013 |
| <p><b>2013 JSAP-MRS Joint Symposia</b><br/>Kyoto, Japan, September 16–20, 2013</p> <ul style="list-style-type: none"> <li>• “Magnetic damping in nanometer-thick yttrium iron garnet films”</li> <li>• “Connecting Spinwaves to Charge Currents in Ferromagnetic/Non-magnetic Heterostructures” (<i>plenary</i>)</li> </ul> | 2013 |

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
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- Donostia International Conference on Nanoscaled Magnetism and Applications** 2013  
San Sebastian, Spain, September 9–13, 2013
- “Charge Voltages from Magnetization Dynamics”
- SPIE NanoScience+Engineering** 2013  
San Diego, California, August 25–29, 2013
- “Magnetic damping in nanometer-thick yttrium iron garnet films”
- Magnonics 2013** 2013  
Varberg, Sweden, August 4–8, 2013
- “Electric control and detection of spin waves”
- International French-USA Workshop “Toward low power spintronics devices”** 2013  
La Jolla, California, July 8–12, 2013
- “Electric control and detection of spin waves”
- Spin Caloritronics V** 2013  
Columbus, Ohio, May 12–15, 2013
- “Charge Voltages from Magnetization Dynamics”
- MXLS13 “New Opportunities for Magnetic Dynamics and Materials at NSLS-II and MAX-IV”** 2013  
Vail, Colorado, March 24–28, 2013
- “Imaging Spin Currents”
- 2013 March Meeting of the American Physical Society** 2013  
Baltimore, Maryland, March 18–22, 2013
- “Charge Voltages from Magnetization Dynamics”
- W.-E. Hereaus Seminar “Spin-orbit driven transverse transport phenomena”** 2012  
Bad Honnef, Germany, December 3–6, 2012
- “Quantifying Spin Hall Effects in Non-Magnetic Metals”
- XXX Conference Egyptian Materials Society** 2012  
Marsa Alam, Egypt, November 24–27, 2012
- “Quantifying Spin Hall Effects in Metals” (*keynote*)
  - “Connecting Spinwaves to Electronics: Towards Charge-Free Spintronics”
- Japan Society of Applied Physics 73<sup>rd</sup> Fall Meeting** 2012  
Matsuyama, Japan, September 11–14, 2012
- “Quantifying Spin Hall Effects in Metals”
  - “Connecting Spinwaves to Electronics: Towards Charge-Free Spintronics”
- Spin Caloritronics IV** 2012  
Sendai, Japan, June 2–5, 2012
- “Quantifying Spin Hall Effects in Non-Magnetic Metals”

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
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- Materials Research Society Spring Meeting 2012** 2012  
San Francisco, California, April 9–13, 2012
- “Quantifying Spin Hall Effects in Non-Magnetic Metals”
- Magnetic Single Nano-Object Workshop & School** 2012  
Les Houches, France, February 5–10, 2012
- “Quantifying Spin Hall Effects in Non-Magnetic Metals”
- Bilateral NTU/ANL Workshop** 2012  
Taipei, Taiwan, January 12–14, 2012
- “Spin Hall Effects: A Pathway towards Charge-Free Spintronics”
- Center for Materials for Information Technology Research Workshop** 2011  
Tuscaloosa, Alabama, October 28, 2011
- “Discharging Spintronics: Pure Spin Currents”
- Symposium “Physics at the Nanoscale”** 2011  
Madrid, Spain, October 18–21, 2011
- “Discharging Spintronics: Pure Spin Currents”
- 8<sup>th</sup> IEEE Romanian Magnetic Society Chapter Conference** 2011  
Iași, Romania, October 17, 2011
- “Discharging Spintronics: Pure Spin Currents”
- Magnetics Symposium 2011** 2011  
Singapore, Singapore, October 3–5, 2011
- “Discharging Spintronics: Pure Spin Currents”
- 1<sup>st</sup> Centennial of Superconductivity International Workshop** 2011  
Cali, Colombia, June 29–July 1, 2011
- “Superconducting vortex pinning with magnetic dots:  
Does the size and magnetization matter?”
- II International Conference for Young Scientists – Low Temperature Physics** 2011  
Kharkov, Ukraine, June 6–10, 2011
- “Pure Spin Currents: Discharging Spintronics”
- IEEE Magnetics Society Summer School** 2011  
New Orleans, Louisiana, May 22–28, 2011
- “Spintronics” (*tutorial*)
- Intermag 2011** 2011  
Taipei, Taiwan, April 25–29, 2011
- “Quantifying Spin-Hall Effects in Metals”

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
( C O N T . )

- Korean Physical Society Meeting 2011** 2011  
Daejon, Korea, April 13–15, 2011
- “Quantifying Spin-Hall Effects in Metals”
- APS March Meeting 2011** 2011  
Dallas, Texas, March 21–25, 2011
- “Quantifying Spin-Hall Effects in Nonmagnetic Metals”
- 75. Jahrestagung der DPG und DPG Frühjahrstagung** 2011  
Dresden, Germany, March 13–18, 2011
- “Quantifying Spin-Hall Effects in Nonmagnetic Metals”
- International Conference on Quantum Effects in Solids of Today** 2010  
New Dehli, India, December 20–23, 2010
- “Quantifying Spin-Hall Effects in Metals”
- International Conference on Magnetic Materials** 2010  
Kolkata, India, October 25–29, 2010
- “Quantifying Spin-Hall Effects in Metals”
- Advanced Light Source Users’ Meeting** 2010  
Berkeley, California, October 13–15, 2010
- “New Insights into Spin Relaxation from Pure Spin Currents”
- 95<sup>a</sup> Reunión Nacional de la Asociación Física Argentina** 2010  
Malargüe, Argentina, September 28–October 1, 2010
- “Teaching Electrons New Tricks: Pure Spin Currents” (*plenary*)
- 2010 IEEE 7<sup>th</sup> International Symposium on Metallic Multilayers** 2010  
Berkeley, California, September 19–24, 2010
- “Pure Spin Currents in Silver Nanowires”
- COMA-RUGA 2010,** 2010  
**6<sup>th</sup> International Workshop on Nanomagnetism and Superconductivity**  
Coma-Ruga, Spain, June 30–July 4, 2010
- “Quantifying Spin Hall Effects in Non-Magnetic Metals”
- NordicSpin’10 – 2<sup>nd</sup> Nordic Workshop on Spintronics and Nanomagnetism** 2010  
Gimo, Sweden, May 7–9, 2010
- “Quantifying Spin Hall Effects in Metals” (*keynote*)
- 2<sup>nd</sup> International Conference on Advanced Materials and their Applications and its workshop on “New Trends in Nanoscience and Laser Physics”** 2010  
Cairo, Egypt, April 6–8, 2010
- “Teaching Electrons New Tricks: Pure Spin Currents” (*plenary*)

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
( C O N T . )

- |  |      |
|--|------|
| <p><b>International Workshop on Spin Current and Spin Caloritronics</b><br/>Sendai, Japan, February 8–10, 2010</p> <ul style="list-style-type: none"> <li>• “Spin Hall Effects in Gold, Platinum, and Molybdenum”</li> </ul>   | 2010 |
| <p><b>Taiwan-Argonne Workshop on Nano-structured Materials</b><br/>Tainan, Taiwan, February 1–2, 2010</p> <ul style="list-style-type: none"> <li>• “New Insights into Spin Relaxation and Scattering from Pure Spin Currents”</li> </ul>   | 2010 |
| <p><b>2009 Advanced Light Source Users’ Meeting</b><br/>Berkeley, California, October 15–17, 2009</p> <ul style="list-style-type: none"> <li>• “Pure Spin Currents via Non-local Injection and Spin Pumping”</li> </ul>  | 2009 |
| <p><b>XXXII Encontro Nacional de Física da Matéria Condensada</b><br/>Águas de Lindóia, Brazil, May 11 – 15, 2009</p> <ul style="list-style-type: none"> <li>• “Teaching Electrons New Tricks: Pure Spin Currents”</li> </ul>  | 2009 |
| <p><b>Asian Magnetic Conference</b><br/>Busan, Korea, December 10 – 13, 2008</p> <ul style="list-style-type: none"> <li>• “Exchange Biased Magnetic Vortices”</li> </ul>   | 2008 |
| <p><b>2<sup>nd</sup> Internal Workshop “Vortex dynamics and its future”</b><br/>Seoul, Korea, December 8 – 9, 2008</p> <ul style="list-style-type: none"> <li>• “Exchange Biased Magnetic Vortices”</li> </ul>   | 2008 |
| <p><b>X Congreso Iberoamericano de Metalurgia y Materiales Iberomet</b><br/>Cartagena de Indias, Colombia, October 13 – 17, 2008</p> <ul style="list-style-type: none"> <li>• “Pure Spin Currents in Lateral Spin-Valves” (<i>plenary</i>)</li> </ul>  | 2008 |
| <p><b>5<sup>th</sup> Nanoscale Spectroscopy and Nanotechnology –<br/>2<sup>nd</sup> Spin Polarized Scanning Tunneling Microscopy International Workshop</b><br/>Athens, Ohio, July 15 – 19, 2008</p> <ul style="list-style-type: none"> <li>• “Pure Spin Currents in Lateral Spin-Valves”</li> </ul> | 2008 |
| <p><b>Strongly Correlated Electron Workshop on Oxide Heterostructures</b><br/>Oak Ridge, Tennessee, June 17 – 18, 2008</p> <ul style="list-style-type: none"> <li>• “Interfacial Magnetism in Complex Oxide Heterostructures”</li> </ul>   | 2008 |
| <p><b>First Nordic Workshop on Spintronics and Nanomagnetism</b><br/>Bålsta, Sweden, April 22 – 24, 2008</p> <ul style="list-style-type: none"> <li>• “Pure Spin Currents in Lateral Spin-Valves”</li> </ul>   | 2008 |
| <p><b>52<sup>nd</sup> Magnetism and Magnetic Materials Conference</b><br/>Tampa, Florida, November 5 – 9, 2007</p> <ul style="list-style-type: none"> <li>• “Pure Spin Currents in Lateral Spin-Valves”</li> </ul>   | 2007 |
| <p><b>XXII Congreso Nacional de Física</b><br/>Ibague, Colombia, October 22 – 26, 2007</p> <ul style="list-style-type: none"> <li>• “Shaken Not Stirred: Using Brownian Motion for Biomagnetic Sensing”</li> </ul>   | 2007 |

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( C O N T . )

- IEEE Sixth Metallic Multilayer Symposium** 2007  
Perth, Australia, October 14 – 19, 2007
- “Exchange Biased Vortices”
- Materials Science & Technology 2007 Conference and Exhibition** 2007  
Detroit, Michigan, September 16 – 20, 2007
- “Spin Injection, Diffusion, and Detection in Lateral Spin-Valves”
- International Storage Technology Symposium 2007** 2007  
Kalamata, Greece, June 17 – 22, 2007
- “Biomagnetic Sensing via Brownian Motion”
- Strategic Partnership for Research in Nanotechnology IV** 2007  
Houston, Texas, February 6 – 7, 2007
- “Shaken Not Stirred: Magnetic Viruses for Biomagnetic Sensing”
- Trends on Novel Materials** 2006  
Santa Marta, Colombia, October 16 – 20, 2006
- “Lateral Spin Transport in Metallic Devices”
- Kinken-Wakate, 3<sup>rd</sup> Materials Science School for Young Scientists** 2006  
**“Physics and Applications of Advanced Magnetic Materials”**  
Sendai, Japan, August 26 – 28, 2006
- “Shaken Not Stirred: Magnetic Viruses for Biomagnetic Sensing” (*tutorial*)
- International Conference on Magnetism 2006** 2006  
Kyoto, Japan, August 20 – 25, 2006
- “Shaken Not Stirred: A New Way of Biomagnetic Sensing”
- Ultrasmooth Summer School** 2006  
Durham, United Kingdom, July 9 – 14, 2006
- “Lateral Spintransport: Teaching Electrons New Tricks” (*tutorial*)
- Intermag 2006** 2006  
San Diego, California, May 8 – 12, 2006
- “Shaken Not Stirred: Magnetic Viruses for Biomagnetic Sensing”
- Midwest Workshop on Quantum Transport and Magnetics** 2006  
Evanston, Illinois, March 27 – 28, 2006
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- APS March Meeting 2006** 2006  
Baltimore, Maryland, March 13 – 17, 2006
- “Magnetic Viruses: Utilizing Self-Assembly for Biomedical Applications”

I N V I T E D   T A L K S   A T   C O N F E R E N C E S  
( C O N T . )

- Pacifichem 2005** 2005  
Honolulu, Hawaii, December 15 – 20, 2005
- “Shaken Not Stirred, Using the Brownian Motion of Magnetite Nanoparticles for Biomagnetic Sensing”
- Pacific Polymer Federation IX Conference** 2005  
Maui, Hawaii, December 11 – December 14, 2005
- “Using Brownian Motion of Magnetic Nanoparticles for Biomagnetic Sensing”
- AVS 52<sup>nd</sup> International Symposium** 2005  
Boston, Massachusetts, October 30 – November 4, 2005
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- US –Spain Workshop on Nanoscale Materials** 2005  
Segovia, Spain, September 20 – 23, 2005
- “Teaching Spins new Tricks: Magnetotransport in Lateral Geometries”
- 12<sup>th</sup> International Conference on Composites/Nano Engineering** 2005  
Santa Cruz de Tenerife, Spain, August 1 – 6, 2005
- “Incommensurate Magnetization Profiles in Complex Oxide Heterostructures”
- 2004 CSUI Conference on Graduate Student Research and Research in Nano-Science and Technology** 2004  
Argonne, Illinois, November 5–6, 2004
- “Separating Spin and Charge in Lateral Magnetotransport Structures”
- Workshop on Nanomagnetism Using X-ray Techniques** 2004  
Lake Geneva, Wisconsin, August 29 – September 1, 2004
- “Magnetic Structure at Buried Interfaces”
- Nanoscience Workshop** 2004  
Chicago, Illinois, August 25, 2004
- “Nanomagnetism at Argonne National Laboratory”
- 11<sup>th</sup> International Conference on Composites/Nano Engineering** 2004  
Hilton Head, South Carolina, August 8–14, 2004
- “Inhomogeneous Magnetization in  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ ”
- Magnetics 2004:** 2004  
**Advancements in Magnetic Applications, Technology & Materials**  
Denver, Colorado, June 9–10, 2004
- “Shaken Not Stirred; A New Approach to Biomagnetic Sensing”
- Satellite Seminar on Variety of Oxide Materials and Properties** 2003  
Tsukuba, Japan, October 14, 2003
- “Persistent Photoconductivity in High  $T_c$  Oxides”



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( C O N T . )

- 8<sup>th</sup> IUMRS International Conference on Advanced Materials** 2003  
Yokohama, Japan, October 8 – 13, 2003
- “Persistent Photoconductivity in High  $T_c$  Oxides”
- Grand Challenges in Modelling the Assembly and Properties of Nanomaterials** 2003  
Argonne, Illinois, August 20 – 22, 2003
- “Magnetic Anisotropies in coupled antiferromagnetic/ferromagnetic systems”
- Nanoscience Research Summer School** 2003  
Argonne, Illinois, August 3 – 10, 2003
- “Spintronics” (*tutorial*)
- 2002 MRS Fall Meeting** 2002  
Boston, Massachusetts, December 2 – 6, 2002
- “Magnetic Proximity Effects studied with Neutron Scattering”
- International Workshop on Polarized Neutrons in Condensed Matter Investigations** 2002  
Jülich, Germany, September 15 – 19, 2002
- “Magnetization Reversal in Exchange Bias Systems: New Insights with Polarized Neutron Reflectometry”
  - “Overview of Polarized Neutrons at LANSCE”
- Magnetic and Semiconductor Nanostructures Symposium at the International Materials Research Congress 2002** 2002  
Cancun, Quintana Roo, Mexico, August 25 – 29, 2002
- “Magnetic Proximity Effects”
- 2<sup>nd</sup> CNMS Workshop on “Magnetism in Nanostructured Materials”** 2002  
Knoxville, Tennessee, June 23 – 25, 2002
- “APS beamlines for magnetism”
- International Workshop on “Nanocomposites: Materials, Neutrons, and Data Interpretation”** 2002  
Argonne, Illinois, March 28 – 30, 2002
- “Nanoscience and Nanotechnology Initiative at ANL”
- 1<sup>st</sup> CNMS Workshop on “Magnetism in Nanostructured Materials”** 2001  
Oak Ridge, Tennessee, December 6 and 7, 2001
- “Neutrons as a tool for nano-magnetism”
- International Conference on Neutron Scattering (ICNS 2001)** 2001  
München, Germany, September 9 – 12, 2001
- “Exchange Bias in the Fe/Difluoride System”

I N V I T E D T A L K S A T C O N F E R E N C E S  
( C O N T . )

- Warren Symposium** *2001*  
Tegernsee, Germany, January 21 – 24, 2001
- “Future Trends in Polarized Neutron Reflectometry”
- Workshop “Superlattice and Microstructure”** *1999*  
Cancun, Mexico, August 27 – 29, 1999
- “Artificially Induced Reconfiguration of the Vortex Lattice in Nb”
- 1999 Centennial Meeting of The American Physical Society** *1999*  
Atlanta, Georgia March 20 – 26, 1999
- “Periodic Pinning with Magnetic Dots:  
Does the Size and Geometry Matter?”
- International Symposium on Optical Science, Engineering, and Instrumentation  
at SPIE’s 43<sup>rd</sup> Annual Meeting** *1998*  
San Diego, California July 19 – 24, 1998
- “Photodoping of YBaCuO Grain Boundary Josephson Junctions”
- Symposium on “Applications of spectroscopy to superconducting material”  
at the 215<sup>th</sup> National American Chemical Society Meeting** *1998*  
Dallas, Texas March 29 – April 2, 1998
- “Persistent Photoconductivity in High  $T_c$  Cuprates”

## I N V I T E D   S E M I N A R S

**In Total More than 100 Invited Seminars at U.S. and Foreign Research Institutions**

- University of Illinois Urbana-Champaign** 2023  
Urbana, Illinois, April 14, 2023
- “Magnetic Matchmaking: Hybrid Magnon Modes”
- Northwestern University** 2022  
Evanston, Illinois, March 30, 2023
- “Spin Currents in Antiferromagnets”
- Western Digital** 2022  
San Jose, California, December 2, 2022
- “Spin Currents in Antiferromagnets”
- Centro Atómico de Bariloche** 2022  
Bariloche, Argentina, May 11, 2022
- “Topological Quasiparticles: Magnetic Skyrmions”
- Drexel University** 2022  
Philadelphia, Pennsylvania, January 27, 2022
- “Magnetic Matchmaking: Hybrid Magnon Modes”
- Brazilian Physical Society, Condensed Matter Webinar** 2021  
Rio de Janeiro, Brazil, March 8, 2021
- “Topological Quasiparticles: Magnetic Skyrmions”
- Ecole Polytechnique Fédérale de Lausanne** 2020  
Lausanne, Switzerland, November 23, 2020
- “Topological Quasiparticles: Magnetic Skyrmions”
- Case-Western University** 2020  
Cleveland, Ohio, September 17, 2020
- “Topological Quasiparticles: Magnetic Skyrmions”
- Online SPICE-SPIN+X Seminar** 2020  
Mainz, Germany, August 29, 2020
- “Magnetic Matchmaking: Hybrid Magnon Modes”
- W2S Seminar** 2020  
Bhubaneswar, India, August 13, 2020
- “Hybrid Magnon Modes”
- North Carolina State University** 2018  
Raleigh, North Carolina, November 12, 2018
- “Topological Quasiparticles: Magnetic Skyrmions”

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- Purdue University** 2018  
 West Lafayette, Indiana, November 1, 2018  
 • “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- University of Tennessee** 2018  
 Knoxville, Tennessee, October 29, 2018  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- National Institute of Science and Technology** 2018  
 Gaithersburg, Maryland, October 22, 2018  
 • “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- University of Illinois at Urbana-Champaign** 2018  
 Urbana, Illinois, February 14, 2018  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- University of Madras** 2018  
 Chennai, India, February 8, 2018  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- Bhaba Atomic Research Centre** 2018  
 Mumbai, India, February 7, 2018  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- King Abdullah University of Science and Technology** 2017  
 Thuwal, Saudi Arabia, November 16, 2017  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- University of Illinois at Urbana-Champaign** 2017  
 Urbana, Illinois, October 16, 2017  
 • “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- Universidad de los Andes** 2017  
 Bogotá, Colombia, October 9–10, 2017  
 • “Topological Quasiparticles: Magnetic Skyrmions”  
 • “Spin Current Generation, Detection, and Transport with Antiferromagnets”
- University of New Hampshire** 2017  
 Durham, New Hampshire, September 27, 2017  
 • “Topological Quasiparticles: Magnetic Skyrmions”
- Universidade Federal do Rio Grande do Norte** 2017  
 Natal, Brazil, May 3, 2017  
 • “Room Temperature Generation and Manipulation of Magnetic Skyrmions”
- Michigan State University** 2017  
 East Lansing, Michigan, April 17, 2017  
 • “Room Temperature Generation and Manipulation of Magnetic Skyrmions”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Illinois Institute of Technology** 2017  
Chicago, Illinois, April 5, 2017
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- Texas A&M University** 2017  
College Station, Texas, January 26, 2017
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- University of Florida** 2016  
Gainesville, Florida, November 17, 2016
- “Room Temperature Generation and Manipulation of Magnetic Skyrmions”
- Carnegie Mellon University** 2016  
Pittsburgh, Pennsylvania, November 14, 2016
- “Room Temperature Generation and Manipulation of Magnetic Skyrmions”
- Fudan University** 2016  
Shanghai, China, October 18, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- Nanjing University** 2016  
Nanjing, China, October 17, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- Technische Universität München** 2016  
Garching, Germany, October 10, 2016
- “Opportunities at the Frontiers of Spintronics”
- Izmir Institute of Technology** 2016  
Izmir, Turkey, September 26, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- Central South University** 2016  
Changsha, China, August 9, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- National Taiwan University** 2016  
Taipei, Taiwan, July 29, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- IBM Watson Research Laboratory** 2016  
Yorktown Heights, New York, June 10, 2016
- “New Opportunities for Spintronics:  
Spin Transport with Magnetic Skyrmions and Antiferromagnets”
- Sichuan University** 2016  
Chengdu, China, May 24, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Beijing University** 2016  
Beijing, China, May 12, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- Chinese Academy of Sciences** 2016  
Beijing, China, May 11, 2016
- “Spin Currents in Antiferromagnets”
  - “New Opportunities for Spintronics: Magnetic Skyrmions”
- University of California, Santa Cruz** 2016  
Santa Cruz, California, May 5, 2016
- “New Opportunities for Spintronics: Magnetic Skyrmions”
- University of California, Riverside** 2016  
Riverside, California, April 13, 2016
- “Opportunities at the Frontiers of Spintronics”
- Illinois Institute of Technology** 2016  
Chicago, Illinois, January 21, 2016
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- Tohoku University** 2015  
Sendai, Japan, November 26, 2015
- “Manipulating Room Temperature Magnetic Skyrmions”
- Daegu Gyeonbuk Institute of Science and Technology** 2015  
Daegu, South Korea, October 27, 2015
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- California State University Long Beach** 2015  
Long Beach, California, September 16, 2015
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- Los Alamos National Laboratory** 2015  
Los Alamos, New Mexico, July 22, 2015
- “Magnetism at the Mesoscale: Blowing Magnetic Skyrmions”
- University of California, Riverside** 2015  
Riverside, California, June 5, 2015
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- University of California – San Diego** 2015  
La Jolla, California, June 4, 2015
- “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- New York University** 2015  
New York, New York, June 2, 2015
- “Spin Hall Effects: From Spin Current Detection to Manipulation of Skyrmions”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Nanjing University** *2015*  
 Nanjing, China, May 20, 2015  
 • “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- Bar-Ilan University** *2015*  
 Ramat-Gan, Israel, May 7, 2015  
 • “Spin Hall Effects: From Spin Current Detection to Manipulation of Skyrmions”
- University of California, Davis** *2015*  
 Davis, California, February 12, 2015  
 • “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- Fudan University** *2015*  
 Shanghai, China, January 30, 2015  
 • “Magnetism at the Mesoscale: Harnessing Competing Interactions”
- SLAC National Accelerator Laboratory** *2014*  
 Menlo Park, California, December 5, 2014  
 • “Spin Hall Effects: From Spin Current Detection to Manipulation of Skyrmions”
- Centro Brasileiro de Pesquisas Fisicas** *2014*  
 Rio de Janeiro, Brazil, November 20, 2014  
 • “Electric Manipulation of Spin Textures”
- University of Illinois at Chicago** *2014*  
 Chicago, Illinois, October 30, 2014  
 • “Electric Manipulation of Spin Textures”
- Northwestern University** *2014*  
 Evanston, Illinois, October 16, 2014  
 • “Electric Manipulation of Spin Textures”
- Ohio State University** *2013*  
 Columbus, Ohio, November 21, 2013  
 • “Connecting Spin Waves to Electronics: Towards Charge-Free Spintronics”
- HGST** *2013*  
 San Jose, California, September 5, 2013  
 • “Spin Hall Effects in Metals”
- Samsung** *2013*  
 Milpitas, California, August 30, 2013  
 • “Spin Hall Effects in Metals”
- Texas A&M University** *2013*  
 College Station, Texas, February 22, 2013  
 • “Connecting Spin Waves to Electronics: Towards Charge-Free Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Kyoto University** *2012*  
Kyoto, Japan, September 11, 2012  
• “Pure Spin Currents: Discharging Spintronics”
- Mie University** *2012*  
Tsu, Japan, September 10, 2012  
• “Pure Spin Currents: Discharging Spintronics”
- ETH Zürich** *2012*  
Zürich, Switzerland, February 10, 2012  
• “Spin Hall Effects: A Pathway towards Charge-Free Spintronics”
- Argonne National Laboratory, Materials Science Colloquium** *2012*  
Argonne, Illinois, January 19, 2012  
• “Spin Hall Effects: A Pathway towards Charge-Free Spintronics”
- Simon-Fraser University** *2011*  
Vancouver, Canada, November 29, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- University of Washington** *2011*  
Seattle, Washington, November 28, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- University of California – San Diego** *2011*  
San Diego, California, November 22, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- California State University Long Beach** *2011*  
Long Beach, California, November 21, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- University of California Los Angeles** *2011*  
Los Angeles, California, November 17, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- University of California, Irvine** *2011*  
Irvine, California, November 16, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- IEEE Magnetics Society Santa Clara Valley Chapter** *2011*  
San Jose, California, November 15, 2011  
• “Pure Spin Currents: Discharging Spintronics”
- Carnegie Mellon University** *2011*  
Pittsburgh, Pennsylvania, October 24, 2011  
• “Pure Spin Currents: Discharging Spintronics”



## I N V I T E D   S E M I N A R S   ( C O N T . )

- Boğaziçi University** *2011*  
Istanbul, Turkey, October 12, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Hong Kong University** *2011*  
Hong Kong, Hong Kong, October 11, 2011
- “Pure Spin Currents: Discharging Spintronics”
- City University of Hong Kong** *2011*  
Kowloon, Hong Kong, October 10, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Paul-Scherrer Institut** *2011*  
Villingen, Switzerland, September 30, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Ecole Polytechnique Fédérale de Lausanne** *2011*  
Lausanne, Switzerland, September 29, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Trinity College** *2011*  
Dublin, Ireland, September 27, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Cardiff University** *2011*  
Cardiff, United Kingdom, September 26, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of York** *2011*  
York, United Kingdom, September 22, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of Leeds** *2011*  
Leeds, United Kingdom, September 21, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Reykjavik University** *2011*  
Reykjavik, Iceland, September 19, 2011
- “Pure Spin Currents: Discharging Spintronics”
- New York University** *2011*  
New York, New York, September 15, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Massachusetts Institute of Technology** *2011*  
Cambridge, Massachusetts, September 14, 2011
- “Pure Spin Currents: Discharging Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Northeastern University** *2011*  
Boston, Massachusetts, September 13, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of Southern Florida** *2011*  
Tampa, Florida, September 9, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of Central Florida** *2011*  
Orlando, Florida, September 8, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Victoria University of Wellington** *2011*  
Wellington, New Zealand, August 8, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Monash University** *2011*  
Melbourne, Australia, August 5, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of Wollongong** *2011*  
Wollongong, Australia, August 3, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Australian Nuclear Science and Technology Organisation** *2011*  
Lucas Heights, Australia, August 2, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidad de Antioquia** *2011*  
Medellin, Colombia, July 25, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidad Nacional de Colombia** *2011*  
Bogota, Colombia, July 22, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidade Federal do Pernambuco** *2011*  
Recife, Brazil, July 20, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidade Federal do Rio Grande de Norte** *2011*  
Natal, Brazil, July 18, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Centro de Desenvolvimento da Tecnologia Nuclear** *2011*  
Belo Horizonte, Brazil, July 15, 2011
- “Pure Spin Currents: Discharging Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Universidad de Buenos Aires** 2011  
Buenos Aires, Argentina, July 13, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Centro Atómico Constituyentes** 2011  
Buenos Aires, Argentina, July 12, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Pontificia Universidad Catolica** 2011  
Santiago, Chile, July 7, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidad San Francisco de Quito** 2011  
Quito, Ecuador, July 4 and 5, 2011
- “Pure Spin Currents: Electrical Injection”
  - “Pure Spin Currents: Spin Hall Effects and Spin Pumping”
- Universidad del Valle** 2011  
Cali, Colombia, June 28, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Université de Paris-Sud** 2011  
Orsay, France, June 16, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Université de Lyon** 2011  
Lyon, France, June 15, 2011
- “Pure Spin Currents: Discharging Spintronics”
- SPINTEC** 2011  
Grenoble, France, June 14, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Technische Universität Kaiserslautern** 2011  
Kaiserslautern, Germany, June 8, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Nancy Université** 2011  
Nancy, France, June 6, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universitat de Barcelona** 2011  
Barcelona, Spain, June 3, 2011
- “Pure Spin Currents: Discharging Spintronics”
- nanoGune** 2011  
San Sebastian, Spain, June 2, 2011
- “Pure Spin Currents: Discharging Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Instituto de Ciencia de Materiales,** *2011*  
**Consejo Superior de Investigaciones Científicas**  
Cantoblanco, Spain, May 31, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidad Complutense de Madrid** *2011*  
Madrid, Spain, May 30, 2011
- “Pure Spin Currents: Discharging Spintronics”
- IEEE Magnetics Society Twin Cities Chapter** *2011*  
Minneapolis, Minnesota, May 23, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Seagate** *2011*  
Bloomington, Minnesota, May 23, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Argonne National Laboratory, Physics Colloquium** *2011*  
Argonne, Illinois, May 20, 2011
- “Pure Spin Currents: Discharging Spintronics”
- CINVESTAV-Unidad Queretaro** *2011*  
Queretaro, Mexico, May 4, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Universidad Nacional Autónoma de México** *2011*  
Mexico City, Mexico, May 2, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Fudan University** *2011*  
Shanghai, China, April 22, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Nanjing University** *2011*  
Nanjing, China, April 20, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Chinese Academy of Sciences** *2011*  
Beijing, China, April 18, 2011
- “Pure Spin Currents: Discharging Spintronics”
- National Taiwan University** *2011*  
Taipei, Taiwan, April 12, 2011
- “Pure Spin Currents: Discharging Spintronics”
- National Tsing Hua University** *2011*  
Hsin-Chu, Taiwan, April 11, 2011
- “Pure Spin Currents: Discharging Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- IFW Dresden** 2011  
Dresden, Germany, March 10, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Forschungszentrum Dresden-Rossendorf e.V.** 2011  
Dresden, Germany, March 8, 2011
- “Pure Spin Currents: Discharging Spintronics”
- The Academy of Sciences of the Czech Republic** 2011  
Halle, Germany, March 7, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Max-Planck-Institut für Mikrostrukturphysik** 2011  
Halle, Germany, March 4, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Los Alamos National Laboratory** 2011  
Los Alamos, New Mexico, February 22, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Stanford Univeristy** 2011  
Stanford, California, February 18, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of California, Davis** 2011  
Davis, California, February 17, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Advanced Light Source** 2011  
Berkeley, California, February 16, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Hitachi Global Storage** 2011  
San Jose, California, February 15, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Grandis** 2011  
San Jose, California, February 14, 2011
- “Pure Spin Currents: Discharging Spintronics”
- Oregon State University** 2011  
Corvalis, Oregon, February 11, 2011
- “Pure Spin Currents: Discharging Spintronics”
- University of Denver** 2011  
Denver, Colorado, February 9, 2011
- “Pure Spin Currents: Discharging Spintronics”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- University of Wyoming** *2011*  
 Laramie, Wyoming, February 8, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Colorado State University** *2011*  
 Fort Collins, Colorado, February 7, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- University of Colorado, Colorado Springs** *2011*  
 Colorado Springs, Colorado, February 4, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- IEEE Magnetics Society Rocky Mountain Chapter, University of Colorado,  
 College of Engineering and Applied Science** *2011*  
 Boulder, Colorado, February 3, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Ruhr Universität Bochum, SFB Seminar** *2011*  
 Bochum, Germany, January 27, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Delft University of Technology** *2011*  
 Delft, The Netherlands, January 26, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- RWTH Aachen, Physik Kolloquium** *2011*  
 Aachen, Germany, January 24, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Katholieke Universiteit Leuven** *2011*  
 Leuven, Belgium, January 18, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Forschungszentrum Jülich, Peter-Grünberg-Institut** *2011*  
 Jülich, Germany, January 17, 2011  
 • “Pure Spin Currents: Discharging Spintronics”
- Centro Atómico Bariloche** *2010*  
 Bariloche, Argentina, October 5, 2010  
 • “Teaching Electrons New Tricks: Pure Spin Currents”
- Universitat Autònoma de Barcelona** *2010*  
 Bellaterra, Spain, June 23, 2010  
 • “Teaching Electrons New Tricks: Pure Spin Currents”
- RWTH Aachen** *2010*  
 Aachen, Germany, May 5, 2010  
 • “Teaching Electrons New Tricks: Pure Spin Currents”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Miami University** 2010  
Oxford, Ohio, February 24, 2010
- “Teaching Electrons New Tricks: Pure Spin Currents”
- University of California, Berkeley** 2010  
Berkeley, California, February 22, 2010
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Nanjing University** 2010  
Nanjing, China, February 4, 2010
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Academia Sinica** 2009  
Taipei, Taiwan, October 22, 2009
- “Shaken not Stirred: Using Brownian Motion for Biomagnetic Sensing”
- National Tsing Hua University** 2009  
Hsinchu, Taiwan, October 21, 2009
- “Teaching Electrons New Tricks: Pure Spin Currents”
- National Taiwan University** 2009  
Taipei, Taiwan, October 20, 2009
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Centro de Desenvolvimento da Tecnologia Nuclear** 2009  
Belo Horizonte, Brazil, May 18, 2009
- “Nanomagnetism at Argonne National Laboratory”
- Advanced Light Source, Lawrence Berkeley National Laboratory** 2009  
Berkeley, California, February 18, 2009
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Hitachi Global Storage** 2009  
San Jose, California, January 28, 2009
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Condensed Matter Seminar, University of California, Davis** 2009  
Davis, California, January 22, 2009
- “Teaching Electrons New Tricks: Pure Spin Currents”
- California State University Long Beach** 2008  
Long Beach, California, September 22, 2008
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Simon Fraser University** 2008  
Burnaby, Canada, August 1, 2008
- “Non-Local Detection of Pure Spin Currents”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Universidad de Antioquia** 2007  
Medellín, Colombia, November 1, 2007
- “Shaken Not Stirred: Using Brownian Motion for Biomagnetic Sensing”
- Universidad del Valle** 2007  
Cali, Colombia, October 29 – 31, 2007
- “Surprises with Exchange Bias”
  - “Teaching Electrons New Tricks: Pure Spin Currents”
- Australian Nuclear Science And Technology Organization** 2007  
Sydney, Australia, October 12, 2007
- “Shaken Not Stirred: Using Brownian Motion for Biomagnetic Sensing”
- University of Delaware** 2007  
Newark, Delaware, October 2, 2007
- “Shaken Not Stirred: Using Brownian Motion for Biomagnetic Sensing”
- Donostia International Physics Center** 2007  
San Sebastian, Spain, September 12, 2007
- “Teaching Electrons New Tricks: Pure Spin Currents”
- National Institute of Standards and Technology** 2007  
Boulder, Colorado, August 3, 2007
- “Pure Spin Currents”
- Colorado State University** 2007  
Fort Collins, Colorado, August 1, 2007
- “Exchange Biased Vortices”
- Materials Science Colloquium** 2007  
Argonne, Illinois, March 15, 2007
- “Pure Spin Currents”
- University of Texas at Arlington** 2007  
Arlington, Texas, February 23, 2007
- “Teaching Electrons New Tricks: Pure Spin Currents”
- Northern Illinois University** 2007  
De Kalb, Illinois, February 2, 2007
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Northwestern University** 2007  
Evanston, Illinois, January 25, 2007
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
  - “Teaching Electrons New Tricks: Pure Spin Currents”



## I N V I T E D   S E M I N A R S   ( C O N T . )

- Georgia Institute of Technology, Center for Nonlinear Science** 2006  
Atlanta, Georgia, September 20, 2006
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Mie University, Graduate School of Engineering** 2006  
Tsu, Japan, August 31, 2006
- “Shaken Not Stirred: Magnetic Nanoparticles for Biomedical Applications”
- Martech Seminar, Florida State University** 2006  
Tallahassee, Florida, January 23, 2006
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Universitat Autònoma de Barcelona** 2005  
Bellaterra, Spain, September 30, 2005
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Universidad Complutense de Madrid** 2005  
Madrid, Spain, September 28, 2005
- “Interplay between Exchange Bias and Magnetic Anisotropies”
- Forschungszentrum Jülich** 2005  
Jülich, Germany, May 11, 2005
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Katholieke Universiteit Leuven** 2005  
Leuven, Belgium, May 9, 2005
- “Interplay between Exchange Bias and Magnetic Anisotropies”
- Kavli Institute of Nanoscience, Delft University of Technology** 2005  
Delft, The Netherlands, May 4, 2005
- “Shaken Not Stirred: A New Approach to Biomagnetic Sensing”
- Nano-Club, RWTH Aachen** 2005  
Aachen, Germany, May 2, 2005
- “Interplay between Exchange Bias and Magnetic Anisotropies”
- Kungliga Tekniska Högskolan (Royal Institute of Technology)** 2005  
Stockholm, Sweden, April 26 and 27, 2005
- “Shaken not Stirred: Brownian Motion in Biological Sensing”
  - “Lateral Spintransport: Teaching Electrons new Tricks”
- West Virginia University** 2004  
Morgantown, West Virginia, January 29, 2004
- “Shaken Not Stirred; A New Approach to Biomagnetic Sensing”
- Osaka University** 2003  
Osaka, Japan, October 16, 2003
- “The Role of Anisotropy in Exchange Bias”

## I N V I T E D   S E M I N A R S   ( C O N T . )

- Materials Science Colloquium** *2003*  
Argonne, Illinois, August 28, 2003
- “The Role of Anisotropy for Exchange Bias in Antiferromagnet/Ferromagnet Exchange Coupled Systems”
- West Virginia University** *2001*  
Morgantown, West Virginia, October 4, 2001
- “Magnetization Reversal in Exchange Bias Systems: New Insights with Polarized Neutron Reflectometry”
- Paul Scherrer Institut** *2001*  
Villingen, Switzerland, September 7, 2001
- “Exchange Bias in the Fe/Difluoride System”
- IBM Zürich Research Laboratory** *2001*  
Zürich, Switzerland, September 27, 2000
- “Magnetization Reversal in Exchange Bias Systems”
- Gerhard-Mercator-Universität-Duisburg** *2000*  
Duisburg, Germany, September 21, 2000
- “Magnetization Reversal in Exchange Bias Systems”
- Rheinisch-Westfälische Technische Hochschule Aachen** *2000*  
Aachen, Germany, September 19, 2000
- “Exchange Bias in Fe/FeF<sub>2</sub> and Fe/MnF<sub>2</sub>: Neue Einsichten mit Neutronenreflektometrie”
- Friedrich-Schiller Universität Jena, Institutsseminar** *2000*  
Jena, Germany, March 10, 2000
- “Flusslinienverankerung mit magnetischen Punkten”