

Curriculum Vitae

Maxim Tsoi

Address

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Education

Ph. D. (summa cum laude), Physics, Konstanz University, Germany, 1998
M. S., Physics, Moscow Institute of Physics and Technology, 1995
B. S., Physics, Moscow Institute of Physics and Technology, 1993

Appointments

Full Professor, Department of Physics, University of Texas (2016-present)
Associate Professor, Department of Physics, University of Texas (2009-2016)
Assistant Professor, Department of Physics, University of Texas (2003-2009)
Research Associate, IBM Research Division (2001-03)
Research Associate, Department of Physics, Michigan State University (2000-01)
Postdoctoral Fellow, Grenoble High Magnetic Field Laboratory, Max-Planck-Institut für
Festkörperforschung and Centre National de la Recherche Scientifique, Grenoble, France
(1998-00)
Research Assistant, Grenoble High Magnetic Field Laboratory, Max-Planck-Institut für
Festkörperforschung and Centre National de la Recherche Scientifique, Grenoble, France
(1995-98)
Research Assistant, Institute of Solid State Physics RAS, Chernogolovka, Russia (1993-95)

Honors and Awards

National Science Foundation CAREER Award (2006)
Rugnar Holm Plaque, Royal Institute of Technology (KTH), Stockholm, Sweden (2002)

Professional Presentations (see full list attached)

76 invited (including at APS March Meetings, MRS, E-MRS, MMM, Intermag, IEEE, SPIE, MML) and 81 contributing presentations at international conferences and meetings

Selected Publications (see full list attached)

70 archival journal publications (including in Nature, Nature Materials, Physical Review Letters, Applied Physics Letters), 2 manuscript in preparation, 2 book chapters, 1 patent

S. Shen, M. Williamson, G. Cao, J. Zhou, M. Tsoi, «Resistive switching in tunnel junctions with a single-crystal La_2NiO_4 electrode», J. Phys. D: Appl. Phys. **53**, 075302 (2020).

M. Williamson, S. Shen, G. Cao, J. Zhou, M. Tsoi, «*Evidence of resistive switching into a dynamical state in antiferromagnetic iridates*», AIP Advances **9**, 035147 (2019).

V. Baltz, A. Manchon, M. Tsoi, T. Moriyama, T. Ono, and Y. Tserkovnyak, «*Antiferromagnetic spintronics*», Rev. Mod. Phys. **90**, 015005 (2018).

H. Seinige, M. Williamson, S. Shen, C. Wang, G. Cao, J.-S. Zhou, J. B. Goodenough, and M. Tsoi, «*Electrically tunable transport and high-frequency dynamics in antiferromagnetic $Sr_3Ir_2O_7$* », Phys. Rev. B **94**, 214434 (2016).

C. Wang, H. Seinige, G. Cao, J.-S. Zhou, J. B. Goodenough, and M. Tsoi, «*Anisotropic magnetoresistance in antiferromagnetic Sr_2IrO_4* », Phys. Rev. X **4**, 041034 (2014).

A. H. MacDonald and M. Tsoi, «*Antiferromagnetic metal spintronics*», Phil. Trans. R. Soc. A **369**, 3098-3114 (2011).

Z. Wei, A. Sharma, A. S. Nunez, P. M. Haney, R. A. Duine, J. Bass, A. H. MacDonald, and M. Tsoi, «*Changing exchange bias in spin valves with an electric current*», Phys. Rev. Lett. **98**, 116603 (2007).

G. S. D. Beach, C. Nistor, C. Knutson, M. Tsoi, and J. L. Erskine, «*Dynamics of field-driven domain wall propagation in ferromagnetic nanowires*», Nature Mater. **4**, 741–744 (2005).

M. Tsoi, A. G. M. Jansen, J. Bass, W.-C. Chiang, V. Tsoi, and P. Wyder, «*Generation and detection of phase-coherent current-driven magnons in magnetic multilayers*», Nature **406**, 46 (2000).

M. Tsoi, A. G. M. Jansen, J. Bass, W.-C. Chiang, M. Seck, V. Tsoi, and P. Wyder, «*Excitation of a magnetic multilayer by an electric current*», Phys. Rev. Lett. **80**, 4281 (1998).

Synergistic Activities/Professional Societies/Service

Development of research tools, magnetic microcontact spectroscopy (MMS)
 Member, American Physical Society, DCMP, GMAG
 Speaker, Workshops for high school students '10, teachers '04, and for undergraduates '05
 Session Chair/Organizer, APS March Meeting, MMM, Intermag
 Program Committee Member, MMM, ICM
 Co-PI REU Program, Physics Department, UT Austin
 Reviewer, Science, Nature Phys., Nature Mat., Nature Nano., Nature Comm., Sci. Rep., PRL, PRB, PRA, EPL, APL, JAP, J. Phys. D, JMMM, Proc. R. Soc. A, J. Phys. Chem., IEEE Trans. Mag., IEEE Trans. Nano., Nanotech., Carbon, JNN, NSF, DOE, DoD, NSERC, NOW, DFG, SNSF
 Panel Member, NSF
 Editorial Board of Nanotechnology, Science and Applications
 Review Editor in Frontiers in Materials - Quantum Materials

Advisees

C. Knutson (Sapling Learning), B. O'Gorman (Princeton Consultants), Z. Wei (Seagate), H. Seinige (Intel), C. Wang (Seagate), S. Shen (Zoox), M. Williamson (ARL).

Advisors

Ph. D.: Prof. Peter Wyder (MPI-FKF & CNRS, Grenoble)
 Postdoc: Prof. Jack Bass (MSU); Dr. S. S. P. Parkin (IBM)