

Prof. Dr. Jairo Sinova - Curriculum Vitae

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Nationality: Spain and USA
Marital status: Married

Last update: 19th of February 2024

Professional Life and Work Experience

Johannes-Gutenberg-Universität Mainz Alexander von Humboldt Professor (W3)	2014 to Present
Johannes Gutenberg Universität Mainz Director of the Spin Phenomena Interdisciplinary Center (SPICE)	2014 to Present
Inst. of Physics of the Academy of Sciences of the Czech Republic Independent Researcher	2007 to Present
Texas A&M University Associate Head for Undergraduate Programs	2012 to 2014
Texas A&M University Professor of Physics	2010 to 2014
Texas A&M University Associate Professor of Physics	2007 to 2010
Texas A&M University Assistant Professor of Physics	2003 to 2007
University of Texas at Austin Postdoctoral Research Fellow	2001 to 2003
University of Tennessee Postdoctoral Research Fellow	1999 to 2001
Indiana University Graduate Research Assistant	1995 to 1999
Indiana University Teaching assistant and Summer Researcher	1994 to 1995
Indiana University Cyclotron Facility Summer Researcher	1993

Education

Indiana University	Ph.D. Physics	August 1999
Indiana University	M.S. Physics	August 1995
Ohio University	B.S. Physics (Magna Cum Laude)	June 1994

Major Honors and Awards

2021:	Alexander von Humboldt Scout
2014:	Alexander von Humboldt Professorship
2014:	Johannes Gutenberg Research Fellowship
2014:	ERC Synergy award
2011:	Fellow of the American Physical Society
2011:	Student Lead Award for Teaching Excellence
2011:	Distinguished Achievement University Wide Award in Research
2008:	Distinguished Achievement College Level Award in Teaching (Award donated to the Texas A&M University Physics Department)

2007: Big XII Research Fellowship
2006: NSF CAREER Award
2006: Cottrell Scholar Award from the Research Corporation
2006: Montague-Center for Teaching Excellence Scholar

Professional Activities and Services to the Community

Scientific Focus:

- Antiferromagnetic and Altermagnetic spintronics.
- Semiconductor and metallic spintronics; spin-orbitronics.
- Emergent phenomena in strongly correlated systems revealed in transport.
- Thermoelectric effects in topological insulator and ferromagnetic materials.
- Current driven magnetization-dynamics in ferromagnetic and strongly spin-orbit coupled systems.

Professional Activities, Research and Mentoring Highlights:

- **Publications and Impact Summary:** >216 reviewed publications (over 20,674 citations and h-factor 61 in Web of Science; 31320 citations and h-factor 76 in Google Scholar)
 - Predicted the intrinsic spin Hall effect (Phys. Rev. Lett. 2004) and formed part of one of the teams that discovered the Spin Hall effect (Phys. Rev. Lett. 2005).
 - Predicted the Néel Spin-Orbit Torque effect (Phys. Rev. Lett. 2014), which was observed in 2016 (Science 2016) starting the Antiferromagnetic Spintronics field.
 - Predicted a novel magnetically order phase (Altermagnetism) (Phys. Rev. X 2022), now having been indirectly observed by experiments.
- **Conferences:** >211 invited presentations at universities and conferences.
- **Mentoring:** Supervision of >46 Postdocs, PhD and Master students and interns. 14 former group members have become faculty members at leading institutions. Within the SPICE center he promotes the concept of Young Research Leaders Workshops – an invitation only top junior researchers conference.
- **Funding:** >8.1 Mio. € third party funding (in Germany since 2014); 2.6 Mio. \$ (USA).
- **Services to the Community:**
 - founder of the **Spin Phenomena Interdisciplinary Center (SPICE) in 2015**, with over 41 international conferences organized (<https://www.spice.uni-mainz.de/>).
 - Vice-chair of the Gordon Conference on Nanomagnetism, July 2019.
 - Chair of Gordon Conference on Nanomagnetism, July 2021 (postponed to 2023)
 - **Organizer of the Joint European Magnetic Symposia (JEMS), September 2018**
 - Organizer of the Spintronics Tutorial session at the APS March Meeting, March 2013 and at the DFG Spring Meeting 2016 (with Karin Everschor-Sitte).
 - Member of the ERC Advance Panel Review, 2016 – Present.
 - Co-organizer of the first German-USA Fulbright-Cottrell workshop in Germany on innovative teaching and junior researcher's leadership.
 - **Physical Review Letters Associate Divisional Editor, 2020-Present.**
 - Reviewer for various journals (Nature Physics, Nature Materials, PRL).
 - Reviewer for project and laboratories (NSF, ANR, AERES, etc.)