

# MARTIN MOURIGAL

Associate Professor, School of Physics, Georgia Institute of Technology

## CONTACT INFORMATION

School of Physics, 837 State Street, Atlanta, GA 30332, USA  
Office: +1 (404) 385-5669; Mobile: +1 (404) 747-4969  
Email: [mourigal@gatech.edu](mailto:mourigal@gatech.edu)

## LABORATORY

Howey Physics Building  
Office: C202; Laboratory: S207  
Web: [mourigal.gatech.edu](http://mourigal.gatech.edu)

## RESEARCH THEMES

Quantum condensed matter physics, neutron scattering and instrumentation, frustrated magnets, spin-liquids, quantum materials, quantum information sciences, spin dynamics, materials synthesis and crystal growth, thermo-magnetic characterization of materials, superconductivity and correlated electrons.

## PERSONAL INFORMATION

Birth: 1984 in Limoges, France                      Citizenship: French, U.S. permanent resident  
Status: Married + 1 child                              Address: 325 Lindbergh Dr NE, Atlanta, GA 30305

## EMPLOYMENT

2020- Associate Professor, School of Physics, Georgia Institute of Technology (GT), Atlanta, USA.  
2015-2020 Assistant Professor, School of Physics, Georgia Institute of Technology (GT), Atlanta, USA.  
2011-2014 Postdoctoral Research Fellow, The Johns Hopkins University (JHU), Baltimore, USA,  
*Advisor: Collin L. Broholm.*  
2008-2011 Graduate Student, Institut Laue-Langevin (ILL), Grenoble, France,  
*Advisor: Mechthild Enderle.*  
2008-2011 Graduate Student, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland,  
*Advisor: Henrik M. Rønnow.*  
2007-2008 Master Student, Commissariat à l'Énergie Atomique (CEA), Grenoble, France,  
*Advisor: Mike E. Zhitomirsky.*

## EDUCATION

2006-2011 École Polytechnique Fédérale de Lausanne (EPFL), Switzerland,  
Ph.D., Physics, June 2011,  
M.Sc., Physics, February 2008.  
2004-2007 École des Mines de Nancy, France,  
B.Sc. (Equivalent), Materials Science, September 2007, "*Diplôme d'Ingénieur Civil des Mines*".  
2002-2004 Lycée Gay-Lussac, Limoges, France,  
Undergraduate coursework, Physics and Chemistry, "*Classes Préparatoires aux Grandes Écoles*".

## AWARDS AND FELLOWSHIPS

2019 [Kavli Fellow](#), U.S. National Academy of Sciences.  
2019 [Cullen-Peck Faculty Scholar Award](#) (GT, College of Sciences).  
2019 [Sigma Xi Young Faculty Award](#),  $\Sigma\Xi$  Scientific Research Honor Society (GT, University wide).  
2019 [BP Junior Faculty Teaching Excellence Award](#), Center for Teaching and Learning (GT, University wide).  
2018 [CAREER Award](#), National Science Foundation (NSF).  
2017 [Class of 1969 Teaching Fellow](#), Center for Teaching and Learning (GT, University wide).  
2016 [Ralph E. Powe Junior Faculty Enhancement Award](#), Oak Ridge Associated Universities (ORAU).  
2011 Johns Hopkins–Princeton Institute for Quantum Matter Postdoctoral Fellowship (2011-2014).  
2010 Institut Laue-Langevin Directors' Award for Best PhD Student Presentation.

## PUBLICATIONS

Group Website <http://mourigal.gatech.edu>  
Profiles [\[Google Scholar\]](#), [\[Web of Science\]](#), [\[Scopus\]](#), [\[Orcid\]](#).  
Citations Google Scholar: **1804** and  $h=22$ ; Web of Science: **1222** and  $h=17$ ; Scopus: **1240** and  $h=17$ ;  
Authorship \* indicates Georgia Tech research *i.e.* work done partly or wholly at Georgia Tech.  
**boldface** indicates postdocs<sup>PD</sup>, grad students<sup>G</sup>, or undergrads<sup>UG</sup> supervised by Mourigal.

## Submitted Journal Articles

- \* 46. J. Wang, Yuxuan Jiang, Tianhao Zhao, **Z. L. Dun**<sup>PD</sup>, A. L. Miettinen, X. Wu, M. Mourigal, H. D. Zhou, W. Pan, D. Smirnov, Z. Jiang, “Magneto-transport evidence for strong topological insulator phase in narrow-gap materials, *Submitted* (December 2020),
- \* 45. A. Legros, S.-S. Zhang, **X. Bai**<sup>G</sup>, H. Zhang, **Z. L. Dun**<sup>PD</sup>, W. A. Phelan, C. D. Batista, M. Mourigal, and N. P. Armitage, “Observation of 4- and 6-magnon bound-states in the spin-anisotropic frustrated antiferromagnet FeI<sub>2</sub>”, *Submitted* (November 2020), <https://arxiv.org/abs/2012.04205>.
- \* 44. J. A. M. Paddison, P. Mukherjee, **X. Bai**<sup>G</sup>, **Z. L. Dun**<sup>PD</sup>, C. R. Wiebe, H. Zhou, J. S. Gardner, **M. Mourigal**, S. E. Dutton, “Modeling Spin Dynamics in the Singlet Ground State Garnet Ho<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>”, *Submitted* (August 2019), <https://arxiv.org/abs/1908.03530>.

## Published and Accepted Journal Articles

- \* 43. **Z. L. Dun**<sup>PD</sup>, **X. Bai**<sup>G</sup>, M. B. Stone, H. D. Zhou, **M. Mourigal**, “Effective point-charge analysis of crystal electric fields – application to rare earth pyrochlores and tripod kagome magnets R<sub>3</sub>Mg<sub>2</sub>Sb<sub>3</sub>O<sub>14</sub>”, *Physical Review Research* **3**, 023012 (2021) [DOI].
- \* 42. **M. J. Daum**<sup>G</sup>, A. Ramanathan, A. I. Kolesnikov, S. Calder, **M. Mourigal**, H. S. La Pierre, “Collective excitations in the tetravalent lanthanide honeycomb antiferromagnet, Na<sub>2</sub>PrO<sub>3</sub>”, *Physical Review B* **103**, L121109 (2021); [DOI].
- \* 41. **Z. L. Dun**<sup>PD</sup>, **M. J. Daum**<sup>G</sup>, R. Baral, H. B. Cao, Y. Liu, J. A. Rodriguez-Rivera, H. E. Fischer, E. S. Choi, Q. Huang, H. D. Zhou, **M. Mourigal**, B. Frandsen, “Neutron scattering investigations of proposed Kosterlitz-Thouless transitions in transverse-field Ising model triangular lattice antiferromagnet TmMgGaO<sub>4</sub>”, *Physical Review B* **103**, 064424 (2021); [DOI].
- \* 40. **X. Bai**<sup>G</sup>, S.-S. Zhang, **Z. L. Dun**<sup>PD</sup>, H. Zhang, Q. Huang, H. D. Zhou, M. B. Stone, A. I. Kolesnikov, F. Ye, C. D. Batista, **M. Mourigal**, “Hybridized quadrupolar excitations in the frustrated and spin-anisotropic magnet FeI<sub>2</sub>”, *Nature Physics* (2021); [DOI].
- \* 39. **Z. L. Dun**<sup>PD</sup>, **X. Bai**<sup>G</sup>, **J. A. M. Paddison**<sup>PD</sup>, **E. Hollingworth**<sup>UG</sup>, N. P. Butch, C. D. Cruz, M. B. Stone, T. Hong, M. Mourigal, H. D. Zhou, “Quantum Spin Fragmentation in Kagome Ice Ho<sub>3</sub>Mg<sub>2</sub>Sb<sub>3</sub>O<sub>14</sub>”, *Physical Review X* **10**, 031069 (2020); [DOI].
- \* 38. Y. Jiang, J. Wang, T. Zhao, **Z. L. Dun**<sup>PD</sup>, Q. Huang, X. S. Wu, **M. Mourigal**, H. D. Zhou, W. Pan, M. Ozerov, D. Smirnov, Z. Jiang, “Unraveling the Topological Phase of ZrTe<sub>5</sub> via Magneto-infrared Spectroscopy”, *Physical Review Letters* **125**, 046403 (2020); [DOI].
- \* 37. X. Gui, T.-R. Chang, K. Wei, **M. J. Daum**<sup>G</sup>, D. E. Graf, R. E. Baumbach, **M. Mourigal**, and W. Xie, “A Novel Magnetic Material by Design: Observation of Yb<sup>3+</sup> with Spin-1/2 and Possible Superconducting Trace in Yb<sub>x</sub>Pt<sub>5</sub>P”, *ACS Central Science* **6**, 2023 (2020); [DOI].
- \* 36. Z. Wang, H. Ying, W. Chern, S. Yu, **M. Mourigal**, J. D. Cressler, and Asif I. Khan, “Cryogenic characterization of a ferroelectric field-effect-transistor”, *Applied Physics Letters* **116**, 042902 (2020); [DOI].
- 35. W. Wan, N. B. Christensen, A. W. Sandvik, P. Tregenna-Piggott, G. J. Nilsen, **M. Mourigal**, T. G. Perring, C. D. Frost, D.F. McMorrow, H.M. Rønnow, “Temperature dependence of the (π, 0) anomaly in the excitation spectrum of the 2D quantum Heisenberg antiferromagnet”, *Journal of Physics Condensed Matter* **32**, 374007 (2020); [DOI].
- \* 34. N. Jiang, **X. Bai**<sup>G</sup>, J. Bacsá, **M. Mourigal**, and H. S. La Pierre, “Synthesis and magneto-structural characterization of Yb<sub>3</sub>(OH)<sub>7</sub>SO<sub>4</sub>·1.5H<sub>2</sub>O: a frustrated quantum magnet with tunable stacking disorder”, *Inorganic Chemistry* **58**, 10417-10423 (2019); [DOI].
- \* 33. R. Rawl, **L. Ge**<sup>G</sup>, Z. Lu, Z. Evenson, C. R. Dela Cruz, Q. Huang, M. Lee, E. S. Choi, **M. Mourigal**, H. D. Zhou, and J. Ma, “Ba<sub>8</sub>MnNb<sub>6</sub>O<sub>24</sub>: a model two-dimensional spin-5/2 triangular lattice antiferromagnet”, *Physical Review Materials* **3**, 054412 (2019); [DOI].
- \* 32. **X. Bai**<sup>G</sup>, **J. A. M. Paddison**<sup>PD</sup>, E. Kapit, S. M. Koohpayeh, J.-J. Wen, S. E. Dutton, A. T. Savici, A. I. Kolesnikov, G. E. Granroth, C. L. Broholm, J. T. Chalker, and **M. Mourigal**, “Magnetic excitations of the classical spin liquid MgCr<sub>2</sub>O<sub>4</sub>”, *Physical Review Letters* **122**, 097201 (2019); [DOI].
- 31. J. Schlappa, U. Kumar, K. J. Zhou, S. Singh, **M. Mourigal**, V. N. Strocov, A. Revcolevschi, L. Patthey, H. M. Rønnow, S. Johnston, and T. Schmitt, “Direct observation of multi-spinon excitations outside of the two-spinon continuum in the antiferromagnetic spin chain cuprate Sr<sub>2</sub>CuO<sub>3</sub>”, *Nature Communications* **9**, 5394 (2018); [DOI].

Published and Accepted Journal Articles (Continued)

- \* 30. H. Ying, J. Dark, A. P. Omprakash, B. R. Wier, **L. Ge<sup>G</sup>**, U. Raghunathan, N. E. Lourenco, Z. E. Fleetwood, **M. Mourigal**, D. Davidović, and J. D. Cressler, “Collector Transport in SiGe HBTs Operating at Cryogenic Temperatures”, *IEEE Trans. on Electron Devices* **65**, 3697 (2018); [DOI].
- \* 29. Y. Kamiya, **L. Ge<sup>G</sup>**, Tao Hong, Y. Qiu, D. L. Quintero-Castro, Z. Lu, H. B. Cao, M. Matsuda, Z. Lu, E. Choi, C. D. Batista, **M. Mourigal**, H. D. Zhou, and J. Ma, “The nature of spin excitations in the one-third magnetization plateau phase of Ba<sub>3</sub>CoSb<sub>2</sub>O<sub>9</sub>”, *Nature Communications* **9**, 2666 (2018); [DOI].
- \* 28. X. Zhang, F. Mahmood, **M. Daum<sup>G</sup>**, Z. L. Dun, **J. A. M. Paddison<sup>PD</sup>**, N. J. Laurita, T. Hong, H. D. Zhou, N. P. Armitage, and **M. Mourigal**, “Hierarchy of exchange interactions in the triangular-lattice spin-liquid YbMgGaO<sub>4</sub>”, *Physical Review X* **8**, 031001 (2018); [DOI].
- \* 27. Nora Hassan, S. Cunningham, **M. Mourigal**, E. I. Zhilyaeva, S. Turunova, R. N. Lyubovskaya, J. Schlueter, and N. Drichko, “Evidence for a quantum dipole liquid state in an organic quasi-two-dimensional material”, *Science* **360**, 1101-1104 (2018); [DOI].

Perspective by B. J. Powell, “The expanding materials multiverse”, *Science* **360**, 1073-1074 (2018).

- 26. J. Leiner, Joosung Oh, A. I. Kolesnikov, M. B. Stone, Manh Duc Le, E. P. Kenny, B. J. Powell, **M. Mourigal**, E. E. Gordon, M.-H. Whangbo, J.-W. Kim, S.-W. Cheong, and Je-Geun Park, “Magnetic excitations of the Cu<sup>2+</sup> quantum spin chain in Sr<sub>3</sub>CuPtO<sub>6</sub>”, *Physical Review B* **97**, 104426 (2018); [DOI].
- \* 25. J. R. Chamorro, **L. Ge<sup>G</sup>**, J. Flynn, M. A. Subramanian, **M. Mourigal**, and T. M. McQueen, “Frustrated spin one on a diamond lattice” (Editors’ Sugg.), *Physical Review Materials* **2**, 034404 (2018); [DOI].
- \* 24. **M. Mourigal**, “The two faces of a magnetic honeycomb” (News & Views, Non Peer-Reviewed Editorial), *Nature* **554**, 307-308 (2018); .
- \* 23. N. Blanc, J. Trinh, L. Dong, **X. Bai<sup>G</sup>**, A. A. Aczel, **M. Mourigal**, L. Balents, T. Siegrist, and A. P. Ramirez, “Quantum criticality among entangled spin chains”, *Nature Physics* **14**, 273-276 (2018); [DOI].
- \* 22. D. Davidović, H. Ying, J. Dark, B. R. Wier, **L. Ge<sup>G</sup>**, N. E. Lourenco, A. P. Omprakash, **M. Mourigal** and J. D. Cressler, “Tunneling, current gain, and transconductance in silicon-germanium heterojunction bipolar transistors operating at milliKelvin temperatures”, *Physical Review Applied* **8**, 024015 (2017); [DOI].
- \* 21. **L. Ge<sup>G</sup>**, J. Flynn, **J. A. M. Paddison<sup>PD</sup>**, M. B. Stone, S. Calder, M. A. Subramanian, A. P. Ramirez, **M. Mourigal**, “Spin order and dynamics in the diamond-lattice Heisenberg antiferromagnets CuRh<sub>2</sub>O<sub>4</sub> and CoRh<sub>2</sub>O<sub>4</sub>” (Editors’ Suggestion), *Physical Review B* **96**, 064413 (2017); [DOI].
- \* 20. R. Rawl, **L. Ge<sup>G</sup>**, H. Agrawal, Y. Kamiya, C. R. Dela Cruz, N. P. Butch, X. F. Sun, M. Lee, E. S. Choi, J. Oitmaa, C. Batista, **M. Mourigal**, H. D. Zhou, and J. Ma, “Ba<sub>8</sub>CoNb<sub>6</sub>O<sub>24</sub>: a spin-1/2 triangular-lattice Heisenberg antiferromagnet in the 2D limit”, *Physical Review B* **95**, 060412 (2017); [DOI].
- \* 19. **J. A. M. Paddison<sup>PD</sup>**, **M. Daum<sup>G</sup>**, Z. L. Dun, G. Ehlers, Y. Liu, M. B. Stone, H. D. Zhou, and **M. Mourigal**, “Continuous excitations of the triangular-lattice quantum spin liquid YbMgGaO<sub>4</sub>”, *Nature Physics* **13**, 117-122 (2017); [DOI].

Web of Science’s Highly Cited Paper (Top 1% in its academic field). News & Views on concurrent work by L. Balents, “Condensed-matter physics: Quantum mechanics in a spin”, *Nature* **540**, 534-535 (2016). Listed as ORNL Neutron Scattering Top 10 most impactful papers of 2017.

- \* 18. H. Ying, B. R. Wier, J. Dark, N. E. Lourenco, **L. Ge<sup>G</sup>**, A. P. Omprakash, **M. Mourigal**, D. Davidović, and J. D. Cressler, “Operation of SiGe HBTs down to 70 mK”, *IEEE Electron Device Letters* **38**, 12-15 (2017); [DOI].
- \* 17. **J. A. M. Paddison<sup>PD</sup>**, H. S. Ong, J. O. Hamp, P. Mukherjee, **X. Bai<sup>G</sup>**, M. G. Tucker, N. P. Butch, C. Castelnovo, **M. Mourigal**, and S. E. Dutton, “Emergent order in the kagome Ising magnet Dy<sub>3</sub>Mg<sub>2</sub>Sb<sub>3</sub>O<sub>14</sub>”, *Nature Communications* **7**, 13842 (2016); [DOI].

————— Below: work performed before arriving at Georgia Tech —————

- 16. A. M. Fry-Petit, A. F. Rebola, **M. Mourigal**, M. Valentine, N. Drichko, J. P. Sheckelton, C. J. Fennie, and T. M. McQueen, “Direct assignment of molecular vibrations through normal mode analysis of the neutron dynamic pair distribution function technique”. *Journal of Chemical Physics* **143**, 124201 (2015); [DOI].

## Published and Accepted Journal Articles (Continued)

15. D. E. MacLaughlin, O. O. Bernal, L. Shu, J. Ishikawa, Y. Matsumoto, J.-J. Wen, **M. Mourigal**, C. Stock, C. L. Broholm, G. Ehlers, K. Kimura, Y. Machida, S. Nakatsuji, Y. Shimura, and T. Sakakibara, “Unstable spin-ice order in the stuffed metallic pyrochlore  $\text{Pr}_{2+x}\text{Ir}_{2-x}\text{O}_{7-\delta}$ ” ([Editors’ Suggestion](#)), *Physical Review B* **92**, 054432 (2015); [\[DOI\]](#).
14. **M. Mourigal**, S. Wu, M. B. Stone, J. R. Neilson, J. M. Caron, T. M. McQueen, and C. L. Broholm, “Block magnetic excitations in the orbitally selective Mott insulator  $\text{BaFe}_2\text{Se}_3$ ”, *Physical Review Letters* **115**, 047401 (2015); [\[DOI\]](#).
13. M. Valentine, S. M. Koochpayeh, **M. Mourigal**, T. M. McQueen, C. L. Broholm, N. Drichko, S. Dutton, R.J. Cava, T. Birol, H. Das, and C. J. Fennie, “Raman study of magnetic excitations and magneto-elastic coupling in  $\text{SrCr}_2\text{O}_4$ ”, *Physical Review B* **91**, 144411 (2015); [\[DOI\]](#).
12. B. Dalla Piazza, **M. Mourigal**, N. B. Christensen, G. J. Nilsen, P. Tregenna-Piggott, T. G. Perring, M. Enderle, D. F. McMorrow, D. A. Ivanov, and H. M. Rønnow, “Fractional excitations in the square-lattice quantum antiferromagnet”, *Nature Physics* **11**, 62-68 (2015); [\[DOI\]](#).
- [News & Views](#) by F. Becca and S. Sorella, “Quantum Magnets: Break it up”, *Nature Physics* **11**, 8-9 (2015).
11. **M. Mourigal**, W. T. Fuhrman, J. P. Sheckelton, A. Wartelle, J. A. Rodriguez-Rivera, D. L. Abernathy, T. M. McQueen, and C. L. Broholm, “Molecular quantum magnetism in  $\text{LiZn}_2\text{Mo}_3\text{O}_8$ ”, *Physical Review Letters*, **112**, 027202 (2014); [\[DOI\]](#).
10. S. M. Koochpayeh, J.-J. Wen, **M. Mourigal**, S. E. Dutton, R. J. Cava, C. L. Broholm, and T. M. McQueen, “Optical floating zone crystal growth and magnetic properties of  $\text{MgCr}_2\text{O}_4$ ”, *Journal of Crystal Growth* **384**, 39-43 (2013); [\[DOI\]](#).
9. **M. Mourigal**, W. T. Fuhrman, A. L. Chernyshev, and M. E. Zhitomirsky, “Dynamical structure factor of triangular lattice antiferromagnet”, *Physical Review B* **88**, 094407 (2013); [\[DOI\]](#).
8. **M. Mourigal**, M. Enderle, A. Klöpperpieper, J.-S. Caux, A. Stunault, and H. M. Rønnow, “Fractional spinon excitations in the quantum Heisenberg antiferromagnetic chain”, *Nature Physics* **9**, 435-441 (2013); [\[DOI\]](#).
7. **M. Mourigal**, M. Enderle, B. Fåk, R. K. Kremer, J. M. Law, A. Schneidewind, A. Hiess, and A. Prokofiev, “Evidence of a bond-nematic phase in  $\text{LiCuVO}_4$ ”, *Physical Review Letters* **109**, 027203 (2012); [\[DOI\]](#).
6. W. T. Fuhrman, **M. Mourigal**, M. E. Zhitomirsky, and A. L. Chernyshev, “Dynamical structure factor of quasi-2D antiferromagnet in high fields”, *Physical Review B* **85**, 184405 (2012); [\[DOI\]](#).
5. S. E. Dutton, M. Kumar, **M. Mourigal**, Z. G. Soos, J.-J. Wen, C. L. Broholm, N. H. Andersen, Q. Huang, M. Zbiri, R. Toft-Petersen, and R. J. Cava, “Quantum spin liquid in frustrated one-dimensional  $\text{LiCuSbO}_4$ ”, *Physical Review Letters* **108**, 187206 (2012); [\[DOI\]](#).
4. J. Schlappa, K. Wohlfeld, K. Zhou, **M. Mourigal**, M. Haverkort, V. N. Strocov, L. Hozoi, C. Monney, S. Nishimoto, S. Singh, A. Revcolevschi, J.-S. Caux, L. Patthey, H. M. Rønnow, J. v.d.Brink, and T. Schmitt, “Spin-orbital separation in the quasi-1D Mott insulator  $\text{Sr}_2\text{CuO}_3$ ”, *Nature* **485**, 82-85 (2012); [\[DOI\]](#).
- [Web of Science’s Highly Cited Paper](#) (Top 1% in its academic field). [News & Views](#) by R. Claessen, Solid-state physics: Electrons do the split”, *Nature* **485**, 46-47 (2012).
3. B. Dalla Piazza, **M. Mourigal**, M. Guarise, H. Berger, T. Schmitt, M. Grioni, and H. M. Rønnow, “Unified quantitative model for magnetic and electronic spectra of the undoped cuprates”, *Physical Review B* **85**, 100508(R) (2011); [\[DOI\]](#).
2. **M. Mourigal**, M. Enderle, R. K. Kremer, J. M. Law, and B. Fåk, “Ferroelectricity from spin supercurrents in  $\text{LiCuVO}_4$ ”, *Physical Review B* **83**, 100409(R) (2011); [\[DOI\]](#).
1. **M. Mourigal**, M. E. Zhitomirsky, and A. L. Chernyshev, “Field-induced decay dynamics in square-lattice antiferromagnets”, [Editors’ Suggestion](#), *Physical Review B*, **82**(14), 144402 (2010); [\[DOI\]](#).

## Conference Presentations with Proceedings

- \*1. Z. Wang, H. Ying, N. Tasneem, A. Gaskell, D. Cressler, **M. Mourigal**, A. I. Khan, “Cryogenic Characterization of Antiferroelectric Zirconia down to 50 mK”, *2019 Device Research Conference (DRC)*, Ann Arbor, MI, USA, pp. 85-86 (2019), [\[DOI\]](#).

## Dissertations

- \* 4. L. Ge<sup>G</sup> (Advisor: **M. Mourigal**), “Versatile Spin-wave Approaches To The Spin Dynamics Of Transition-metal Insulators”. Ph.D. Dissertation, Georgia Institute of Technology (May 2020).
- \* 3. X. Bai<sup>G</sup> (Advisor: **M. Mourigal**), “Neutron Scattering And Quantitative Modeling Of Magnetic Excitations In Frustrated Magnets”. Ph.D. Dissertation, Georgia Institute of Technology (December 2019).
2. **M. Mourigal** (Advisors: H. M. Rønnow and M. Enderle), “Order and Dynamics of Model Quantum Antiferromagnets”. Ph.D. Dissertation, Ecole Polytechnique Fédérale de Lausanne (June 2011); [\[DOI\]](#). Defense committee included P. Bourges (Saclay), F. Mila (Lausanne) and D. A. Tennant (Berlin).
1. **M. Mourigal** (Advisor: M. E. Zhitomirsky), “Effect of Magnetic Field on Dynamics of Antiferromagnets”; Master’s Thesis, Ecole Polytechnique Fédérale de Lausanne (February 2008). [\[DOI\]](#).

## TEACHING AND MENTORING

### Courses Taught

Grade is “Instructor Overall Effectiveness” score given by students (Response Rate, Number of respondents)

Fall 2021	PHYS 3143	Quantum Mechanics I			
Spring 2021	PHYS 6610	Condensed Matter Physics II	15 students		
Fall 2020	PHYS 3122	Electro & Magnetostatics	57 students	4.9/5	(52%, 30 responses)
Spring 2020	PHYS 4262	Solid State Physics	24 students		(No Survey due to COVID-19)
Spring 2019	PHYS 4262	Solid State Physics	30 students	4.9/5	(53%, 17 responses)
Fall 2018	PHYS 3122	Electro & Magnetostatics	55 students	5.0/5	(56%, 31 responses)
Spring 2018	PHYS 4262	Solid State Physics	16 students	5.0/5	(81%, 13 responses)
Fall 2017	PHYS 3122	Electro & Magnetostatics	61 students	5.0/5	(44%, 27 responses)
Spring 2017	PHYS 2212	Introductory Physics II	45 students	4.9/5	(67%, 30 responses)
Spring 2016	PHYS 2212	Introductory Physics II	79 students	4.9/5	(61%, 48 responses)
Spring 2015	PHYS 2212	Introductory Physics II	92 students	4.8/5	(59%, 54 responses)

### Graduate Students Supervised

6. Olivia Vilella GT Physics Graduate Student 01/2021-Current
5. David Brooks GT Physics Graduate Student 01/2021-Current
4. Jensen Kaplan GT Physics Graduate Student 01/2020-Current
3. Marcus Daum GT Physics Graduate Student 01/2016-Current  
Candidacy exam passed November 12, 2018. [Recipient of a DOE SCGSR award](#)  
Project: “Quantum Magnetism in Rare-Earth Magnets: Neutron Scattering and Instrumentation”  
*Subsequently:* Future Technical Leader Program, Northrop Grumman (Starting Summer 2021)
2. Luwei Ge GT Physics Graduate Student 01/2015-05/2020  
Obtained PhD degree in May 2020 (Date of defense: March 11, 2020).  
*Subsequently:* Software Engineer, Google
1. Xiaojian Bai GT Physics Graduate Student 01/2015-12/2019  
Obtained PhD degree in December 2020 (Date of defense: October 23, 2019).  
*Subsequently:* Postdoctoral Fellow, High Flux Isotope Reactor, Oak Ridge National Laboratory (TN)

### Master Students Supervised

1. Benjamin Lichy GT Physics Master Student 01/2020-08/2020  
Project: “Simulations of the Two-Dimensional Ising System on a Square Lattice”

### Postdocs Mentored

2. Zhiling Dun Postdoctoral Research Associate 09/2017–07/2021  
*Subsequently:* Tenure-Track Researcher, Institute of Physics, Chinese Academy of Sciences, Beijing (China)
1. Joseph Paddison Postdoctoral Research Associate 06/2015–09/2016  
*Subsequently:* Junior Research Fellow, Churchill College & Cavendish Lab, Cambridge University (UK)  
*Currently:* Wigner Distinguished Staff Fellow, Oak Ridge National Laboratory (TN)

## Undergraduate Students Supervised

17. Aulden Jones GT Physics Undergraduate Student 01/2021–
16. Adit Desai GT Physics Undergraduate Student 01/2021–
15. Milkias Balkew GT Physics and ECE Undergraduate Student 01/2021–
14. Robin Glefke GT Physics Undergraduate Student 01/2020–05/2021  
President’s Undergraduate Research Award(PURA), Summer 2020 (\$1,500)  
2021 NSF Graduate Research Fellow  
*Subsequently:* Graduate Student in Physics at the University of California Santa Barbara (US)
13. Charles Cardot GT Physics Undergraduate Student 01/2020–12/2020  
*Subsequently:* Graduate Student in Physics at the University of Washington (US)
12. Patrick Pinney GT Physics Undergraduate Student 05/2019–12/2019  
*Subsequently:* Intern at Los Alamos National Laboratory
11. Liam Ritchie GT Physics Undergraduate Student 05/2018–12/2019  
*Subsequently:* HERE Intern, Oak Ridge National Laboratory
10. Emilly Hollingworth GT Physics Undergraduate Student 06/2018–07/2019  
Hitohiro Fukuyo Outstanding Physics Undergraduate Award  
2021 NSF Graduate Research Fellow  
*Subsequently:* Graduate Student in Physics at the University of California, Berkeley (US)
9. Hannah Price GT Physics Undergraduate Student 09/2017–07/2019  
President’s Undergraduate Research Award (PURA), Spring 2018 (\$1,500)  
*Subsequently:* Master Student in Theoretical Physics at ETH Zürich (CH)
8. Zack Kennedy GT Physics Undergraduate Student 09/2017–07/2019  
REU Student at Johns Hopkins Crystal Growth Facility (PARADIM), Summer 2018  
*Subsequently:* Graduate Student in Physics at Cornell University (US)
7. Emmanuel Aneke Summer Student (NSF REU Program) 06/2018–07/2018  
*Subsequently:* Al Ashley Fellow, SLAC National Accelerator Laboratory
6. Darian Hartsell GT Physics Undergraduate Student 09/2016–06/2018  
President’s Undergraduate Research Award (PURA), Spring 2018 (\$1,500)  
*Subsequently:* Graduate Student in Physics at the University of Southern California (US)
5. Cheetan Velivela Cornell Physics Undergraduate Student (Visiting) 01/2017–07/2017  
*Subsequently:* Continued as Physics Undergraduate Student at Cornell University (US)
4. Sai Paladugu GT Physics and Computer Science Undergraduate Student 06/2016–05/2017  
President’s Undergraduate Research Award (PURA), Spring 2017 (\$1,500)  
*Subsequently:* Graduate Student in Physics at the University of Illinois, Urbana-Champaign (US)
3. Patrick Nave ORNL Intern (Challenge Program) 06/2016–08/2016  
Co-advised with Dr. Jiao Lin at Oak Ridge National Laboratory’s NDAV Division  
*Subsequently:* Graduate Student in Mathematics at Duke University, Durham (US)
2. Michael Wadell ORNL Intern (Challenge Program) 06/2016–08/2016  
Co-advised with Dr. Matthew Stone at Oak Ridge National Laboratory’s QCMD Division  
*Subsequently:* Graduate Student in Data Analytics at Columbia University, New York (US)
1. Michael Waterbury GT Physics Undergraduate Student 04/2015–08/2016  
*Subsequently:* Graduate Student in Physics at the University of California, Irvine (US)

## GRANTS AND CONTRACTS

### Currently Funded (Total: \$2,078,000)

4. “Quantum multipolar fluctuations in spin-orbit magnets” (DE-SC-0018660)  
Department of Energy, Office of Science, Basic Energy Sciences, Neutron Scattering Program.  
Total: \$570,894  
Role: PI (100% Share)  
Period: 06/2021–05/2024 (3 Years)

3. “Controlling quantum coherence in frustrated spin-orbit magnets” (DE-SC-0018660)  
 Department of Energy, Office of Science, Basic Energy Sciences, Neutron Scattering Program.  
 Total: \$555,000  
 Role: PI (100% Share)  
 Period: 06/2018–05/2021 (3 Years)
2. “CAREER: Anomalous spin dynamics in triangular quantum magnets: from materials discovery to quantitative neutron spectroscopy” (NSF-DMR-1750186)  
 National Science Foundation, Division of Materials Research, Condensed Matter Physics.  
 Total: \$621,772  
 Role: PI (100% Share)  
 Period: 06/2018–05/2023 (5 Years)
1. Acquisition of an Energy-tunable X-ray Analytical Characterization Tool (EXACT) for Measuring Local Structure and Chemistry in Materials (NSF-DMR-1925797)  
 National Science Foundation, Division of Materials Research, MRI.  
 Total: \$332,500.  
 Role: Co-PI with five GT colleagues including Faisal Alamgir (PI).  
 Period: 09/2019–08/2022 (3 Years)

## PROFESSIONAL ACTIVITIES AND SERVICE

\* indicates major service work in terms in time commitment and/or responsibilities.

### **Advisory and Technical Roles with Oak Ridge National Laboratory (ORNL)**

- \* 2020-Current Team Spokesperson, CHESS Instrument Concept, Second Target Station Project.
- 2020-Current Team Member, VERDI Instrument Concept, Second Target Station Project.
- \* 2020 Chair, SNS-HFIR User Group Executive Committee (SHUG-EC).
- 2020 Member, Data Reduction Analysis and Handling Review Committee, Neutron Scattering Div.
- \* 2019-2021 Elected Member, SNS-HFIR User Group Executive Committee (SHUG-EC).
- 2018-Current Chair, MANTA Instrument Advisory Committee, Neutron Scattering Division.
- 2016-2017 Co-chair, Young Investigators Advisory Board, Quantum Condensed Matter Division.

### **Peer Review**

- 2019 Reviewer, ORAU’s Ralph E. Powe Junior Faculty Enhancement Award Applications.
- 2018-Current Reviewer, Early Career, Neutron Scattering and SBIR Programs, Office of Science, DOE.
- 2018-Current Referee, *Nature Reviews*, *Journal of the Physical Society of Japan*, *Communications Physics*.
- 2017-Current Referee, *Nature*, *Science Advances*, *npj Quantum Materials*, *Physical Review Materials*.
- 2017 Nature Research Outstanding Peer Reviewer.
- \* 2016-Current Member, Beam Time Allocation Committee, NIST Center for Neutron Research, NIST.
- \* 2016-Current Member, Reviewer and On-Site Science Review Committee, Neutron Scattering Division, ORNL.
- 2016-Current Referee, *Nature Communications*.
- 2016 Reviewer, Condensed Matter Physics, Division of Materials Research, NSF.
- 2015-Current Referee, *Nature Physics*, *Physical Review Letters*, *Physical Review B*.

### **Service for Georgia Tech**

- 2020-Current Member, Graduate Program Committee, School of Physics.
- 2020-Current Member, Task Force on Strategic Initiatives, School of Physics.
- 2020 Finalist, Institute of Materials Executive Directorship.
- \* 2020 Member, School of Physics Chair Search Committee.
- \* 2019-2020 Member, Condensed Matter Faculty Search Committee, School of Physics (1 successful hire).
- \* 2019-Current Co-Director, Georgia Tech Quantum Alliance (University-wide effort in quantum sci. & engineering).
- 2019 Lead technical organizer, Workshop on Quantum Sciences and Technologies.
- \* 2018-2020 Elected Member and Secretary, Faculty Advisory Committee, School of Physics.
- 2018-2019 Member, Blue Ribbon Panel, Institute for Materials.
- \* 2017-2018 Chair, Condensed Matter Faculty Search Committee, School of Physics (1 successful hire).
- 2017-2018 Member, Excellence through Diversity in Faculty Hiring Committee, College of Science.
- 2017 Member, Review Committee, Institute for Materials.
- 2016-2019 Co-Author (with Colin Parker), White paper on *Adding  $\hbar$  to Georgia Tech*, Strategic Plan.
- 2016 Strategic Planning Committee, Institute for Materials.
- 2015-2016 Member, Introductory Physics Program Committee, School of Physics.

## Meeting Organization

- \* 2019 Science at the Second Target Station Workshop, ORNL, December 9–10, 2019
- \* 2019 Focus Topic Organizer (GMAG) for the 2020 APS March Meeting, Denver (CO).
- 2018 Session Chair, APS March Meeting 2018, Los Angeles (CA).
- 2017 Organizer, Workshop on Early Quantum Materials Science at ORNL's Second Target Station, Georgia Tech, 20 international participants, January 05–06, 2017.
- 2017 Session Chair, APS March Meeting 2017, New Orleans (LA).

## Membership in Professional Societies

American Physical Society  
Materials Research Society  
Neutron Scattering Society of America  
Sigma Xi, The Scientific Research Honor Society  
American Association of University Professors

## ORAL PRESENTATIONS

### Invited Presentations at International Conferences & Workshops

#### 2021

- \* 32. “Magnon pairing, interactions and decay in the spin-orbital magnet  $\text{FeI}_2$ ” (online), Workshop on Quantum Materials: New Insights from Neutron Scattering, University of Minnesota, June 2021.
- \* 31. “Hybridization and interaction between quantum multipolar fluctuations in a conventional magnet” (online), International workshop on Emergence and Dynamics in Quantum Matter, Korea Institute for Advanced Study, February 3, 2021.

#### 2020

- \* 30. (Postponed to 2021), Third International Workshop From Electronic Correlations to Functionality, Kloster Seeon (Germany). September 14-17, 2020.
- \* 29. (Postponed to 2021), Swiss Workshop on Materials with Novel Electronic Properties (SWM-2020), Les Diablerets (Switzerland). August 31-September 2, 2020.
- \* 28. (Postponed to 2021), 29<sup>th</sup> Rare Earth Research Conference (RERC29), Philadelphia (PA). June 21-25, 2020.
- \* 27. (Postponed to 2021), Quantum Materials Canada 2020, Jouvence (Québec). May 26-29, 2020.

#### 2019

- \* 26. “Nature of magnetic excitations in 2D and 3D spin liquids”, Materials Research Society (MRS) Fall Meeting 2019, Boston (MA). December 2, 2019.
- \* 25. “Continuous magnetic spectra in absence of quasiparticle fractionalization”, Workshop on Topological Quantum Matter: Concepts and Realizations, KITP, UC Santa Barbara (CA). October 15, 2019.
- \* 24. “Magnetic Materials: a gateway to quantum matter and information” (Poster), Second Japanese-American-German Frontiers of Science Symposium, Kyoto (Japan). September 27, 2019.
- \* 23. “Magnetic excitations in classical spin liquids: the case of  $\text{MgCr}_2\text{O}_4$  and beyond”, International Conference on Strongly Correlated Electron Systems (SCES) 2019, Okayama (Japan). September 25, 2019.
- \* 22. “Anomalous spin dynamics in triangular quantum magnets”, Workshop on Quantum Matter: Dynamics of Quantum Magnetism, Tsung-Dao Lee Institute, Shanghai (China). August 29, 2019.
- \* 21. “Magnetic excitations in classical spin liquids: the case of  $\text{MgCr}_2\text{O}_4$  and beyond”. Workshop on Competing Interactions and Colossal Responses in Transition Metal Oxides, Telluride Science Research Center (CO). June 26, 2019.
- \* 20. “Magnetic excitations of a classical spin liquid: the case of  $\text{MgCr}_2\text{O}_4$ ”, Workshop on Constrained Many-Body Dynamics, Max Planck Institute for the Physics of Complex Systems, Dresden (Germany). March 29, 2019.
- \* 19. “Nature of magnetic excitations in spin liquids”, Quantum Materials Workshop, Oak Ridge National Laboratory (TN). February 19, 2019.
- \* 18. “Nature of magnetic excitations in spin liquids”, Quantum Materials Symposium 2019, YongPyong (South Korea). February 12, 2019.

#### 2018

- \* 17. “Exotic magnetic matter and the search for spin liquids”, The 85th Annual Meeting of the APS Southeastern Section, Knoxville (TN). November 8, 2018.
- \* 16. “Anomalous spin dynamics in triangular quantum magnets”, International Conference on Highly Frustrated Magnetism 2018, Davis (CA). July 14, 2018.



- \* 15. “Impact and future of cold neutrons for quantum materials research”, Neutron Users New Instrument Workshop, American Conference on Neutron Scattering, College Park (MD). June 24, 2018.

#### 2017

- \* 14. “Spin fragmentation in kagome Ising magnets”. Seventy fifth Pittsburgh Diffraction Conference, Indiana (PA). October 19, 2017.
- \* 13. “Kagome Ising physics realized in bulk magnets: the  $RE_3Mg_2Sb_3O_{14}$  family”. International Conference on Strongly Correlated Electron Systems (SCES) 2017, Prague (Czech Republic). July 17, 2017.
- \* 12. “Spin-liquid candidates in novel triangular and kagome rare-earth oxides”. Workshop on Competing Interactions and Colossal Responses in Transition Metal Oxides, Telluride Science Research Center (US). June 28, 2017.
- \* 11. “Non-harmonic magnons in quantum antiferromagnets”. Workshop on Larmor precession techniques for ultrahigh-resolution spectroscopy, Oak Ridge National Laboratory (US). May 25, 2017.
- \* 10. “Current investigations in quantum magnetism using (mostly) cold neutrons”. Workshop on the MANTA spectrometer, Oak Ridge National Laboratory (US). May 4, 2017.
- \* 9. “Continuous magnetic excitations in the triangular-lattice quantum spin-liquid  $YbMgGaO_4$ ”. APS March Meeting, New Orleans (US). March 13, 2017.

#### 2015

- 8. “Block magnetic excitations in the orbitally selective Mott insulator  $BaFe_2Se_3$ ”. User Meeting 2015, Oak Ridge National Laboratory (US). October 27, 2015.
- \* 7. “Opportunities for Cold Neutrons on Quantum Materials: Bright, Focused, Extreme and Polarized”. MANTA: A Next Generation Cold Triple Axis Spectrometer for the High Flux Isotope Reactor, Oak Ridge National Laboratory (US). May 19, 2015.

#### Before 2015

- 6. “Frustrated magnetism with magnetic molecules”. American Conference on Neutron Scattering, Knoxville (US). June 2, 2014.
- 5. “Molecular quantum magnetism in  $LiZn_2Mo_3O_8$ ”. APS March Meeting, Denver (US). March 3, 2014.
- 4. “Molecular quantum magnetism in  $LiZn_2Mo_3O_8$ ”. Mott Physics Beyond Heisenberg, Monte Verità (Switzerland). October 28, 2013.
- 3. “Origin of ferroelectricity and exotic magnetism in frustrated  $LiCuVO_4$ ”. APS March Meeting, Baltimore (US). March 20, 2013.
- 2. “Origin of ferroelectricity and exotic magnetism in frustrated  $LiCuVO_4$ ”. FLIPPER, International Workshop on Single-Crystal Diffraction with Polarised Neutrons, Institut Laue-Langevin, Grenoble (France). January 25, 2013.
- 1. “Neutron scattering from quantum and frustrated spin chains”. SYNEMAG – International Workshop on Synchrotron and Neutron Applications of High Magnetic Fields, European Synchrotron Radiation Facility, Grenoble (France). October 19, 2012.

#### Invited Presentations at Universities & Institutes

##### 2021

- \* 34. “Magnon pairing, interactions and decay in the spin-orbital magnet  $FeI_2$ ” Theory of Quantum Matter Seminar, Okinawa Institute of Science and Technology (Japan). March 31, 2021.

##### 2020

- \* 33. “Anomalous excitation spectra of conventional magnets”, Condensed Matter Seminar, University of Tennessee, Knoxville (TN). November 18, 2020.
- \* 32. “Anomalous excitation spectra of conventional magnets”, Condensed Matter Seminar, Florida State University and High Magnetic Field Laboratory, Tallahassee (FL). October 16, 2020.
- \* 31. “Anomalous excitation spectra of conventional magnets”, Quantum Matter Seminars, Northeastern University, Boston (MA). September 16, 2020.

##### 2019

- \* 30. “Spin Liquids: A dive into exotic magnetic matter”, Physics Colloquium, Louisiana State University, Baton Rouge (LA). November 21, 2019.
- \* 29. “Nature of magnetic excitations in spin-liquids”, Condensed Matter Seminar, University of Colorado, Boulder (CO). November 7, 2019.
- \* 28. “Continuous magnetic spectra in absence of quasiparticle fractionalization”, Condensed Matter Seminar, University of Tennessee, Knoxville (TN). October 21, 2019.
- \* 27. “Spin Liquids: A dive into exotic magnetic matter”, Physics Colloquium, Georgia Tech, Atlanta (GA). September

09, 2019.

- \* 26. “Nature of magnetic excitations in selected 2D and 3D spin liquids”, Solid State Physics Seminar, ETH Zürich (CH). June 03, 2019.
- \* 25. “Spin liquids: the New Wave of Magnetism”, Physics Colloquium, Emory University, Atlanta (GA). March 26, 2019.
- \* 24. “Exotic magnetic matter and the search for spin-liquids”, Institute of Quantum Matter Seminar, Johns Hopkins University, Baltimore (MD). March 18, 2019.
- \* 23. “Anomalous spin dynamics in triangular quantum antiferromagnets”, Condensed Matter Seminar, Texas A&M, College Station (TX). January 18, 2019.

#### 2018

- \* 22. “Anomalous spin dynamics in triangular quantum magnets”, Condensed Matter Seminar, University of Kentucky (KY). November 13, 2018.
- \* 21. “Exotic magnetic matter and the search for spin-liquids”, Physics Colloquium, North Carolina State University, Raleigh (NC). September 17, 2018.
- \* 20. “Neutron scattering from quantum materials”, Quantum Café, Flatiron Institute, Simons Foundation, New York City (US); April 11, 2018.

#### 2017

- \* 19. “Spin-liquids in novel triangular and kagome rare-earth magnets”, Condensed Matter Seminar, Brookhaven National Laboratory, Upton (US); April 28, 2017.
- \* 18. “Triangular and kagome rare-earth magnets: a new route to spin-liquids?”, Quantum Matters Seminar, University of Waterloo, Waterloo (CA); April 21, 2017.
- \* 17. “Triangular and kagome rare-earth magnets: a new route to spin-liquids?”, Brockhouse Institute for Materials Research Seminar, McMaster University, Hamilton (CA); April 20, 2017.
- \* 16. “Spin-liquids in novel triangular and kagome rare-earth magnets”, Condensed Matter Seminar, Department of Physics and Astronomy, University of Utah, Salt Lake City (US); February 28, 2017.
- \* 15. “Magnetic excitations in spin-liquids: from classical to quantum”, Condensed Matter Seminar, Department of Physics and Astronomy, University of California, Irvine (US); January 11, 2017.

#### 2016

- \* 14. “Novel spin-liquids in triangular and kagome rare-earth magnets”, “Chez Pierre” Seminar, Department of Physics, Massachusetts Institute of Technology, Cambridge (US); December 5, 2016.
- \* 13. “Probing the exotic collective behavior of frustrated magnetic matter”, Department of Chemistry and Physics, Augusta University, Augusta (US); September 2, 2016.
- \* 12. “Using neutron scattering to probe exotic magnetic excitations in quantum materials”. Department of Physics, Clark Atlanta University, Atlanta (US). April 14, 2016.

#### Before 2015

11. “Interacting quasiparticles in quantum and frustrated magnets”. School of Physics, Georgia Institute of Technology, Atlanta (US). March 13, 2014.
10. “Interacting quasiparticles in quantum and frustrated magnets”, “Chez Pierre” Seminar, Department of Physics, Massachusetts Institute of Technology, Cambridge (US). February 12, 2014.
9. “Interacting quasiparticles in quantum and frustrated magnets”, Department of Physics and Astronomy, SUNY Stony Brook (US). January 24, 2014.
8. “Counting fractional excitations in quantum and frustrated spin chains”, Clarendon Laboratory, Oxford University (UK). January 28, 2013.
7. “Counting fractional magnetic excitations with neutrons”, Department of Physics, Rice University, Houston (US). January 16, 2013.
6. “Excitations fractionnaires et effet de la frustration dans les chaines de spins quantiques”, Laboratoire Léon Brillouin, Saclay (FR). October 22, 2012.
5. “Neutron Scattering Experiments for Quantum and Frustrated Spin Chain”, Kavli Institute for Theoretical Physics, Santa Barbara (US). October 2, 2012.
4. “Neutron scattering from frustrated quantum spin chains”, Spallation Neutron Source, Oak Ridge National Laboratory (US). November 10, 2011.
3. “Polarized neutron scattering from model spin-1/2 antiferromagnets”, NIST Center for Neutron Research, Gaithersburg (US). February 8, 2011.
2. “Polarized neutron scattering from model spin-1/2 antiferromagnets”, The Johns Hopkins University, Baltimore (US). February 7, 2011.
1. “Non-linear spin dynamics on the square-lattice: neutron scattering and theory”, Niels Bohr Institute, University of

Copenhagen (DK). May 5, 2010.

## OUTREACH ACTIVITIES

9. Hosted a high-school teacher from Rockdale High School part of Georgia Tech's GIFT program. June 1–July 17, 2020.
8. Hosted two students from Dunwoody High School performing superconductivity measurements in my laboratory at Georgia Tech. October 7–9, 2019.
7. Organized the visit of 12 Georgia Tech School of Physics' REU students to Oak Ridge National Laboratory (US). June 25–26, 2019.
6. Organized and participated in the visit of 13 Georgia Tech School of Physics' REU students to Oak Ridge National Laboratory (US). June 18–19, 2018.
5. Organized and participated in the visit of 10 Georgia Tech School of Physics' REU students to Oak Ridge National Laboratory (US). June 19–20, 2017.
4. Served as “Quantum Matter Expert”, *Graduate Student Lunch with the Experts*, APS March Meeting, New Orleans. March 14, 2017. [\[Web\]](#)
3. Co-organized and acted as faculty supervisor for the *ORNL Challenge Program*, hosting two undergraduate summer students at Oak Ridge National Laboratory (US). June 6–August 12, 2016. [\[Web\]](#)
2. Organized and participated in the visit of 11 Georgia Tech School of Physics' REU students to Oak Ridge National Laboratory (US). June 17–18, 2016. [\[Web\]](#)
1. Participated in the art show *Of the attraction of the sun* by artist Rodolphe Delaunay. The Institute of Contemporary Art Baltimore and the Current Gallery, Baltimore (US). June 16, 2013. [\[Web\]](#)