

Curriculum Vitae

Nirmal J. Ghimire

Assistant Professor, George Mason University

Email: nghimire@gmu.edu

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Employment and Education:

- Assistant Professor, 08/2018 – present. George Mason University, Fairfax, VA
- Argonne Scholar-Director's Fellow, 10/2015 – 08/2018. Argonne National Lab, Lemont, IL
- Postdoctoral Research Associate, 08/2013 – 10/2015. Los Alamos National Lab, Los Alamos, NM
- Graduate Research Assistant, 05/2010 – 08/2013. Oak Ridge National Lab/University of Tennessee
- Graduate Teaching Assistant 08/2008 – 04/2010. University of Tennessee, Knoxville, TN
- PhD (Condensed Matter Physics), 2008 – 2013, University of Tennessee, Knoxville, TN. (Advisor Prof. David Mandrus)
- Lecturer (Physics) 2006 – 2008, Kantipur Engineering College, Lalitpur, Nepal
- MSc (Physics), 2003 – 2005, Tribhuvan University, Kathmandu, Nepal

Awards and Fellowships

- NSF Early Career Award 2021
- DOE - ANL subcontract 2021
- COS Seed Grant 2021 (Co-PI)
- Dean's Award for Early Career Excellence, College of Science, George Mason University, 2020
- DOE-ANL subcontract - 2020
- COS Grant for Postdoctoral Fellowship - 2020
- COS Seed Grants - 2019 (2, PI and Co-PI)
- DOE-ANL subcontract -2019
- Director's Postdoctoral Fellowship, Argonne National Laboratory - 2015
- Seaborg Fellowship, Seaborg Institute, Los Alamos National Laboratory - 2015
- Chancellor's Citation for Extraordinary Professional Promise, The University of Tennessee - 2013
- Outstanding Graduate Teaching Assistant, Department of Physics and Astronomy, The University of Tennessee - 2009

Other affiliation(s)

NIST Center for Neutron Research, Gaithersburg MD - Guest Researcher (2020 - present)

Patent

[Hf-Co-B Alloys as Permanent Magnet Materials](#). Michael Alan McGuire, Orlando Rios, Nirmal Jeevi Ghimire, US, 9552911, Jan. 24, 2017.

Publications

URL: <https://scholar.google.co.uk/citations?user=OCzObToAAAAJ> (Google Scholar)

- [56] Peter Siegfried, Hari Bhandari, D Jones, Madhav Ghimire, Rebecca Dally, L Poudel, M Bleuel, Jeffrey Lynn, Igor Mazin, [Nirmal Ghimire](#). [Topological phase transition and charge-spin coupling in the kagome metal \$\text{YMn}_6\text{Sn}_6\$](#) . Preprint: Research Square.
- [55] [Iridate \$\text{Li}_8\text{IrO}_6\$: An Antiferromagnetic Insulator](#). Callista M. Skaggs, Peter E. Siegfried, Chang-Jong Kang, Craig M. Brown, Fu Chen, Lu Ma, Steven N. Ehrlich, Yan Xin, Mark Croft, Wenqian Xu, Saul H. Lapidus, Nirmal J. Ghimire, and Xiaoyan Tan. **Inorg. Chem.** 60, 17201–17211 (2021).
- [54] Kamal Choudhary, Kevin F. Garrity, [Nirmal J. Ghimire](#), Naweena Anand, Francesca Tavazza. [High-throughput search for magnetic topological materials using spin-orbit spillage, machine-learning and experiments](#). **Physical Review B** 103, 155131 (2021).
- [53] Rebecca L. Dally, Daniel Phelan, Nicholas Bishop, [Nirmal J. Ghimire](#), Jeffrey W. Lynn. [Isotropic Nature of the Metallic Kagome Ferromagnet \$\text{Fe}_3\text{Sn}_2\$ at High Temperatures](#). **Crystals**, 11, 307 (2021).
- [52] Rebecca L. Dally, Dina Michel, Peter Siegfried, Igor I. Mazin, Nirmal J. Ghimire, Jeffrey W. Lynn. [Chiral properties of the zero-field spiral state and field-induced magnetic phases of the itinerant kagome metal \$\text{YMn}_6\text{Sn}_6\$](#) . **Physical Review B**, 103, 094413 (2021).
- [51] [Nirmal J. Ghimire](#), Rebecca L. Dally, L. Poudel, D. C. Jones, D. Michel, N. Thapa Magar, M. Bleuel, Michael A. McGuire, J. S. Jiang, J. F. Mitchell, Jeffrey W. Lynn, I. I. Mazin. [Competing magnetic phases and fluctuation-driven scalar spin chirality in the kagome metal \$\text{YMn}_6\text{Sn}_6\$](#) . **Science Advances** 6, eabe2680 (2020).
- [50] Mojammel A. Khan, Po-Hao Chang, [Nirmal Ghimire](#), Terence M. Bretz-Sullivan, Anand Bhattacharya, J. S. Jiang, John Singleton, and J. F. Mitchell. Fermi surface topology and nontrivial Berry phase in the flat-band semimetal Pd_3Pb . **Physical Review B** 101, 245113 (2020).
- [49] Giulia Tenasini, Edoardo Martino, Nicolas Ubrig, [Nirmal J. Ghimire](#), Helmuth Berger, Oksana Zaharko, Fengcheng Wu, J. F. Mitchell, Ivar Martin, László Forró, and Alberto F. Morpurgo. Giant anomalous Hall effect in quasi-two-dimensional layered antiferromagnet $\text{Co}_1/3\text{NbS}_2$. **Physical Review Research** 2, 023051 (2020).
- [48] [Nirmal J. Ghimire](#) & Igor I. Mazin. Topology and correlations on the kagome lattice. **Nature Materials** 19, 130 (2020).
- [47] Jason F. Khoury, Alexander J. E. Rettie, Mojammel A. Khan, [Nirmal J. Ghimire](#), Iñigo Robredo, Jonathan E. Pfluger, Koushik Pal, Chris Wolverton, Aitor Bergara, J. S. Jiang,

- Leslie M. Schoop, Maia G. Vergniory, J. F. Mitchell, Duck Young Chung, Mercurio G. Kanatzidis. A New Three-Dimensional Subsulfide Ir₂In₈S with Dirac Semimetal Behavior. *Journal of American Chemical Society* 2019, 141, 48, 19130-19137 (2019).
- [46] H Takeda, H Yasuoka, M Yoshida, M Takigawa, NJ Ghimire, D Mandrus, BC Sales. 51V-NMR study on the S= 1/2 square lattice antiferromagnet K₂V₃O₈. *Physical Review B* 100, 054406 (2019).
- [45] K. A. Modic, Maja D. Bachmann, B. J. Ramshaw, F. Arnold, K. R. Shirer, Amelia Estry, J. B. Betts, Nirmal J. Ghimire, E. D. Bauer, Marcus Schmidt, Michael Baenitz, E. Svanidze, Ross D. McDonald, Arkady Shekhter, Philip J. W. Moll. *Resonant torsion magnetometry in anisotropic quantum materials*, [arXiv:1802.08211](https://arxiv.org/abs/1802.08211) (2018).
- [44] Nirmal. J. Ghimire, A. S. Botana, J. S. Jiang, Junjie Zhang, Y.-S. Chen & J. F. Mitchell, *Large anomalous Hall effect in the chiral-lattice antiferromagnet CoNb₃S₆*. *Nature Communications* 9, 3975 (2018).
- [43] N. J. Ghimire, Mojammel A. Khan, A. S. Botana, J. S. Jiang, and J. F. Mitchell. Anisotropic angular magnetoresistance and Fermi surface topology of the candidate novel topological metal Pd₃Pb, *Physical Review Materials* 2, 081201 (2018). (Rapid Communication, Highlighted by the editor)
- [42] David M Fobes, S Zhang, S-Z Lin, Pinaki Das, NJ Ghimire, ED Bauer, JD Thompson, LW Harriger, G Ehlers, A Podlesnyak, RI Bewley, A Sazonov, V Hutanu, F Ronning, CD Batista, M Janoschek. Tunable emergent heterostructures in a prototypical correlated metal. *Nature Physics* 14, 465 (2018).
- [41] A. A. Aczel, L. M. DeBeer-Schmitt, T. J. Williams, M. A. McGuire, N. J. Ghimire, L. Li, and D. Mandrus. *Extended exchange interactions stabilize long-period magnetic structures in Cr_{1/3}NbS₂*, *Appl. Phys. Lett.* 113, 032404 (2018).
- [40] B. J. Ramshaw, K. A. Modic, Arkady Shekhter, Yi Zhang, Eun-Ah Kim, Philip J. W. Moll, Maja D. Bachmann, M. K. Chan, J. B. Betts, F Balakirev, A. Migliori, N. J. Ghimire, E. D. Bauer, F. Ronning, R. D. McDonald. *Quantum limit transport and destruction of the Weyl nodes in TaAs*, *Nature Communications* 9, 2217 (2018).
- [39] A. P. Dioguardi, P. Guzman, P. F. S. Rosa, N. J. Ghimire, S. E. Brown, J. D. Thompson, E. D. Bauer, and F. Ronning, *Nuclear magnetic resonance investigation of the heavy fermion system Ce₂CoAl₇Ge₄*, *Phys. Rev. B* 96, 245132 (2017).
- [38] David M Fobes, Shi-Zeng Lin, Nirmal J Ghimire, Eric D Bauer, Joe D Thompson, Markus Bleuel, Lisa M DeBeer-Schmitt, Marc Janoschek, *Realization of the Axial Next-Nearest-Neighbor Ising model in U₃Al₂Ge₃*, *Phys. Rev. B* 96, 174413 (2017).
- [37] J. Xu, N. J. Ghimire, J. S. Jiang, Z. L. Xiao, A. S. Botana, Y. L. Wang, Y. Hao, J. E. Pearson, W. K. Kwok, *Origin of the Extremely Large Magnetoresistance in the Semimetal YSb*, *Phys. Rev. B* 96, 075159 (2017).
- [36] Maja D Bachmann, Nityan Nair, Felix Flicker, Roni Ilan, Tobias Meng, Nirmal J Ghimire, Eric D Bauer, Filip Ronning, James G Analytis, Philip JW Moll, *Inducing superconductivity in Weyl semimetal microstructures by selective ion sputtering*, *Science*

[Advances 3, e1602983 \(2017\).](#)

- [35] H Sakai, T Hattori, Y Tokunaga, S Kambe, [NJ Ghimire](#), F Ronning, ED Bauer, JD Thompson, *Anisotropy of Spin Fluctuations in a Tetragonal Heavy Fermion Antiferromagnet $CeRhAl_4Si_2$* , [Journal of Physics: Conf. Series 868, 012012 \(2017\).](#)
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- [33] K. Chen, F. Strigari, M. Sundermann, S. Agrestini, [N. J. Ghimire](#), S.-Z. Lin, C. D. Batista, E. D. Bauer, J. D. Thompson, E. Otero, A. Tanaka, and A. Severing, *Exchange field effect in the crystal-field ground state of $CeMAl_4Si_2$* , [Physical Review B 94, 115111 \(2016\).](#)
- [32] Philip JW Moll, Andrew C Potter, Nityan L Nair, BJ Ramshaw, KA Modic, Scott Riggs, Bin Zeng, [Nirmal J Ghimire](#), Eric D Bauer, Robert Kealhofer, Filip Ronning, James G Analytis, *Magnetic torque anomaly in the quantum limit of the Weyl semi-metal $NbAs$* , [Nature Communications 7, 12492 \(2016\).](#)
- [31] N Sirica, S-K Mo, F Bondino, I Pis, S Nappini, P Vilmercati, J Yi, Z Gai, PC Snijders, PK Das, I Vobornik, [N Ghimire](#), MR Koehler, L Li, D Sapkota, DS Parker, DG Mandrus, N Mannella, *Electronic structure of the chiral helimagnet and 3 d-intercalated transition metal dichalcogenide $Cr_{1/3}NbS_2$* , [Physical Review B 94, 075141 \(2016\).](#)
- [30] Yongkang Luo, RD McDonald, PFS Rosa, B Scott, N Wakeham, [NJ Ghimire](#), ED Bauer, JD Thompson, F Ronning, *Anomalous electronic structure and magnetoresistance in $TaAs_2$* , [Scientific Report 6, 27294 \(2016\).](#)
- [29] [N. J. Ghimire](#), D. Phelan, H. Zheng, and J. F. Mitchell, *Magnetotransport of single crystalline YSb* , [Journal of Physics Condensed Matter 28, 235601 \(2016\).](#)
- [28] [N. J. Ghimire](#), S. Cary, S. Eley, N. A. Wakeham, P. R. F. S. Rosa, T. Albrecht-Schmitt, Y. Lee, L. Civale, R. Movshovich, Joe D. Thompson, F. Ronning, E. D. Bauer, *Physical properties of the $Ce_2MAl_7Ge_4$ ($M = Co, Ir, Ni, Pd$) heavy fermion compounds*, [Physical Review B 93, 205141 \(2016\).](#)
- [27] Y. Luo, [N. J. Ghimire](#), E. D. Bauer, J. D. Thompson, F. Ronning, *“Hard” crystalline lattice in the Weyl Semimetal $NbAs$* , [Journal of Physics Condensed Matter 28, 055502\(2016\).](#)
- [26] H. Sakai, T. Hattori, Y. Tokunaga, S. Kambe, [N. J. Ghimire](#), F. Ronning, E. D. Bauer, and J. D. Thompson, *Incommensurate to commensurate antiferromagnetism in $CeRhAl_4Si_2$: An ^{27}Al NMR Study*, [Physical Review B 93, 014402 \(2016\).](#)
- [25] Y. Luo, [N. J. Ghimire](#), M. Wartenbel, M. Neupane, R. D. McDonald, E. D. Bauer, J. D. Thompson, F. Ronning, *Electron-hole compensation effect between topologically trivial electrons and nontrivial holes in $NbAs$* , [Physical Review B 92, 205134 \(2015\)](#)
- [24] [N. J. Ghimire](#), S. Calder, M. Janoschek and E. D. Bauer; *Magnetic structure of the Kondo lattice compounds $CeRhAl_4Si_2$ and $CeIrAl_4Si_2$* , [Journal of Physics: Condensed Matter 27, 245603 \(2015\).](#)

- [23] Alexander C. Bornstein, Benjamin J. Chapman, [Nirmal J. Ghimire](#), David G. Mandrus, David S. Parker, Minhya Lee; *Out-of-plane spin-orientation dependent magnetotransport in the anisotropic helimagnet $Cr_{1/3}NbS_2$* , [Physical Review B 91, 184401 \(2015\)](#).
- [22] David S. Parker, [Nirmal Ghimire](#), R. Baumbach, Ling Li, John Singleton, Eric D. Bauer, David Mandrus, David J. Singh; Magnetocrystalline anisotropy in UMn_2Ge_2 and related Mn-based actinide ferromagnets, [Physical Review B 91, 174401 \(2015\)](#).
- [21] [N. J. Ghimire](#), Yongkang Luo, D. J. Williams, E. D. Bauer and F. Ronning; Magnetotransport of single crystalline NbAs, [Journal of Physics: Condensed Matter 27, 152201 \(2015\)](#).
- [20] Pasqual Rivera, John R. Schaibley, Aaron M. Jones, Jason S. Ross, Sanfeng Wu, Grant Aivazian, Philip Klement, [Nirmal J. Ghimire](#), Jiaqiang Yan, D. G. Mandrus, Wang Yao, Xiaodong Xu; *Observation of Long-Lived Interlayer Excitons in Monolayer $MoSe_2$ - WSe_2 Heterostructures*, [Nature Communications 6, 6242 \(2015\)](#).
- [19] [N. J. Ghimire](#), F. Ronning, D. J. Williams, B. L. Scott, Yongkang, Luo, J. D. Thompson, E. D. Bauer; *Investigation of the physical properties of the tetragonal $CeMAl_4Si_2$ ($M = Rh, Ir, Pt$) compounds*, [Journal of Physics: Condensed Matter 27, 025601 \(2015\)](#).
- [18] Pinaki Das, S. -Z. Lin, [N. J. Ghimire](#), K. Huang, F. Ronning, E. D. Bauer, J. D. Thompson, C. D. Batista, G. Ehlers, M. Janoschek; The magnitude of the magnetic exchange interaction in the heavy fermion antiferromagnet $CeRhIn_5$, [Physical Review Letters 113, 246403 \(2014\)](#).
- [17] R. Klots, A. K. M. Newaz, Bin Wang, D. Prasai, H. Krzyzanowska, Junhao Lin, D. Caudel, [N. J. Ghimire](#), J. Yan, B. L. Ivanov, K. A. Velizhanin, A. Burger, D. G. Mandrus, N. H. Tolks, S. T. Pantelides & K. I. Bolotin; Probing excitonic states in suspended two-dimensional semiconductors by photocurrent spectroscopy, [Scientific Reports 4, 6608 \(2014\)](#).
- [16] Benjamin J. Chapman, Alexander C. Bornstein, [Nirmal J. Ghimire](#), David Mandrus and Minhya Lee; *Spin structure of the anisotropic helimagnet $Cr_{1/3}NbS_2$ in a magnetic field*, [Applied Physics Letters 105, 072405\(2014\)](#).
- [15] Akshay Singh, Galan Moody, Sanfeng Wu, Yanwen Wu, [Nirmal J. Ghimire](#), Jiaqiang Yan, David G. Mandrus, Xiaodong Xu, and Xiaoqin Li; *Coherent Electronic Coupling in Atomically Thin $MoSe_2$* , [Physical Review Letters 112, 216804 \(2014\)](#).
- [14] Hsun-Jen Chuang, Xuebin Tan, [Nirmal Jeevi Ghimire](#), Meeghage Madusanka Perera, Bhim Chamlagain, Mark Ming-Cheng Cheng, Jiaqiang Yan, David Mandrus, David Tománek, and Zhixian Zhou; High Mobility WSe_2 p- and n-Type Field-Effect Transistors Contacted by Highly Doped Graphene for Low-Resistance Contacts, [Nano Letters 14, 3594-3601 \(2014\)](#).
- [13] Junhao Lin, Ovidiu Cretu, Wu Zhou, Kazu Suenaga, Dhiraj Prasai, Kirill I. Bolotin, Nguyen Thanh Cuong, Minoru Otani, Susumu Okada, Andrew R. Lupini, Juan-Carlos Idrobo, Dave Caudel, Arnold Burger, [Nirmal J. Ghimire](#), Jiaqiang Yan, David G. Mandrus, Stephen J. Pennycook & Sokrates T. Pantelides; *Flexible metallic nanowires with self-adaptive contacts to semiconducting transition-metal dichalcogenide monolayers*, [Nature Nanotechnology 9, 436-442 \(2014\)](#).

- [12] Bhim Chamlagain, Qing Li, [Nirmal Jeevi Ghimire](#), Hsun-Jen Chuang, Meehage Madusanka Perera, Honggen Tu, Yong Xu, Minghu Pan, Di Xaio, Jiaqiang Yan, David Mandrus, and Zhixian Zhou; *Mobility Improvement and Temperature Dependence in MoSe₂ Field-Effect Transistors on Parylene-C Substrate*, [ACS Nano 8, 5079-5088 \(2014\)](#).
- [11] Sanfeng Wu, Sonia Buckley, Aaron M. Jones, Jason S. Ross, [Nirmal J. Ghimire](#), Jiaqiang Yan, David G. Mandrus, Wang Yao, Fariba Hatami, Jelena Vučković, Arka Majumdar and Xiaodong Xu; *Control of two-dimensional excitonic light emission via photonic crystal*, [2D Materials 1, 011001 \(2014\)](#).
- [10] R. E. Baumbach, V. A. Sidorov, Xin Lu, [N. J. Ghimire](#), F. Ronning, B. L. Scott, D. J. Williams, E. D. Bauer, and J. D. Thompson; *Suppression of antiferromagnetism by pressure in CaCo₂P₂*, [Physical Review B 89, 094408 \(2014\)](#).
- [9] Jason S. Ross, Philip Klement, Aaron M. Jones, [Nirmal J. Ghimire](#), Jiaqiang Yan, D. G. Mandrus, Takashi Taniguchi, Kenji Watanabe, Kenji Kitamura, Wang Yao, David H Cobden & Xiaodong Xu; *Electrically tunable excitonic light emitting diodes based on monolayer WSe₂ p-n junctions*, [Nature Nanotechnology 9, 268-272 \(2014\)](#).
- [8] Aaron M. Jones, Hongyi Yu, Jason S. Ross, Philip Klement, [Nirmal J. Ghimire](#), Jiaqiang Yan, David G. Mandrus, Wang Yao & Xiaodong Xu; *Spin-layer locking effects in optical orientation of exciton spin in bilayer WSe₂*, [Nature Physics 10, 130-134 \(2014\)](#).
- [7] Sanfeng Wu, Jason, S. Ross, Chunming Huang, [Nirmal J. Ghimire](#), Jiaqiang Yan, David G. Mandrus, Di Xiao, Wang, Yao, David H Cobden, Xiaodong Xu; *Optical manipulation and electrical control of valley pseudo-spins in atomically thin semiconductors*, [Proceedings of SPIE 8813, 88132I \(2013\)](#).
- [6] Aaron M. Jones, Hongyi Yu, [Nirmal Ghimire](#), Sanfeng Wu, Grant Aivazian, Jason S. Ross, Bo Zhao, Jiaqiang Yan, David G. Mandrus, Di Xiao, Wang Yao & Xiaodong Xu; *Optical generation of excitonic valley coherence in monolayer WSe₂*, [Nature Nanotechnology 8, 634 \(2013\)](#).
- [5] Jason S. Ross, Sanfeng Wu, Hongyi Yu, [Nirmal J. Ghimire](#), Aaron M. Jones, Grant Aivazian, Jiaqiang Yan, David G. Mandrus, Di Xiao, Wang Yao & Xiaodong Xu; *Electrical control of neutral and charged excitons in a monolayer semiconductor*, [Nature Communications 4, 1474 \(2013\)](#).
- [4] [N. J. Ghimire](#), M. A. McGuire, D. S. Parker, B. Sipos, S. Tang, J.-Q. Yan, B. C. Sales, and D. Mandrus; *Magnetic phase transition in single crystals of the chiral helimagnet Cr_{1/3}NbS₂*, [Physical Review B 87, 104403 \(2013\)](#).
- [3] Michael A. McGuire, Orlando Rios, [Nirmal J. Ghimire](#) and Michael Koehler; *Hard ferromagnetism in melt-spun Hf₂Co₁₁B alloys*, [Applied Physics Letters 101, 202401 \(2012\)](#).
- [2] [N. J. Ghimire](#), M. A. McGuire, D. S. Parker, B. C. Sales, J.-Q. Yan, V. Keppens, M. Koehler, R. M. Latture, and D. Mandrus; *Complex itinerant ferromagnetism in noncentrosymmetric Cr₁₁Ge₁₉*, [Physical Review B 85, 224405 \(2012\)](#).
- [1] Michael A. McGuire, [Nirmal Ghimire](#) and David J. Singh, *Ferromagnetism in ZrFe_{12-x}Al_x and HfFe_{12-x}Al_x (x=6.0, 6.5, 7.0)*, [Journal of Applied Physics 111, 093918 \(2012\)](#).

Invited Talks:

- [14] Electronic and magnetic topological states in the kagome-net magnet YMn_6Sn_6 , Workshop on “Correlated and topological states in Kagome metals”, University of California Santa Barbara, October 20, 2021 (Virtual).
- [13] Electronic and magnetic topological states in the kagome-net magnet YMn_6Sn_6 , University of Tennessee, Condensed Matter Seminar, October 20, 2021 (Virtual).
- [12] Electronic and magnetic topological states in the kagome-net magnet YMn_6Sn_6 , University of Notre Dame Condensed Matter Seminar, October 7, 2021.
- [11] Topological Magnets, Central Department of Physics, Tribhuvan University, Kathmandu, Nepal, October 5, 2021 (Virtual).
- [10] Refresher course in materials science, materials synthesis and structure of crystalline solids, Central Department of Physics, Tribhuvan University, Kathmandu, Nepal, Sept 16-17, 2021 (Virtual).
- [9] Hall effect that Edwin Hall never imagined: A probe for topological electronic and magnetic states in quantum material, Physics Colloquium, South Dakota State University, Feb 8, 2021 (Virtual).
- [9] New Quantum Magnets: Design and Discovery, Physics, Applied Physics and Astronomy Colloquia, Rensselaer Polytechnic Institute, Feb 3, 2021 (Virtual).
- [8] New Quantum Magnets: Design and Discovery, Frontiers of Energy Sciences seminar series, Idaho National Laboratory, September 14, 2020 (Virtual).
- [7] Magnetism and topology in Kagome lattice magnets, Quantum Materials Young Investigators Workshop at Oak Ridge National Laboratory, June 6-7, 2019.
- [6] Synthesis approach to topological states of matter, TSRC workshop on Competing Interactions and Colossal Responses in Transition Metal Oxides and Related Compounds, Telluride, Co, June 25 – 29, 2019.
- [5] Synthesis approach to topological materials, Condensed Matter Seminar, Johns Hopkins University, March 27, 2019.
- [4] A materials Driven Approach to the Novel Topological States of Matter, Condensed Matter Seminar, University of Virginia, Sept. 20, 2018.
- [3] A materials Driven Approach to Condensed Matter Physics, Physics Department Colloquium, Western Illinois University, April. 20, 2018.
- [2] Magnetism, Topology and Their Interplay in Inversion Asymmetric Crystals, LDRD Seminar Series, Argonne National Laboratory, Dec. 5, 2017 (Featured in Argonne National Lab).
- [1] New magnets for energy and spintronics, Condensed Matter Seminar, University of Colorado, Boulder, May 1, 2014.

Contributed Talks:

- [10] Electronic structure and quantum oscillations of the kagome metal YMn_6Sn_6 . APS March Meeting 2021 (Virtual).
- [9] Shubnikov-de Haas oscillations of topological metal Pd_3Pb . March Meeting of the American Physical Society, Boston, Massachusetts, USA (2019).
- [8] Hall Effect in a Noncentrosymmetric Antiferromagnet CoNb_3S_6 , March Meeting of the American Physical Society, Los Angeles, CA, USA (2018).
- [7] Negative longitudinal magnetoresistance in ErSb , March Meeting of the American Physical Society, New Orleans, LA, USA (2017)
- [6] Investigation of the physical properties of the new heavy fermion compounds $\text{Ce}_2\text{MAl}_7\text{Ge}_4$ ($M = \text{Co, Ir, Ni, Pd}$), March Meeting of the American Physical Society, Baltimore, MD, USA (2016).
- [5] Structural and physical properties of new Ce-based silicides $\text{CeMAl}_4\text{Si}_2$ ($M = \text{Rh, Ir, Pt}$) and germanides, March Meeting of the American Physical Society, San Antonio, TX, USA (2015).
- [4] Doping study of the heavy fermion superconductor CePt_2In_7 , March Meeting of the American Physical Society, Denver, CO, USA (2014).
- [3] Magnetic phase transition in the chiral helimagnet $\text{Cr}_{1/3}\text{NbS}_2$, March Meeting of the American Physical Society, Baltimore MD, USA (2013).
- [2] Magnetic structure and site occupancies in Fe containing m-phases AFe ($A = \text{Ta, Nb, Mo}$), March Meeting of the American Physical Society, Boston MA, USA (2012).
- [1] Synthesis and basic characterization of the itinerant ferromagnet $\text{Cr}_{11}\text{Ge}_{19}$, March Meeting of the American Physical Society, Dallas TX, USA (2011).