Madhab Neupane

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• Educational background

Los Alamos National Laboratory, Los Alamos, New Mexico, USA
Director's Fellow; January 2015 to December 2015
Advisor: Tomasz Durakiewicz and John Joyce (http://www.lanl.gov/orgs/mpa/mpa10/arpes.shtml)

Princeton University, Princeton, New Jersey, USA
Postdoctoral Research Associate, January 2011 to 2014
Advisor: Zahid Hasan (http://www.princeton.edu/physics/people/faculty/zahid-hasan/)

Boston College, Chestnut Hill, Massachusetts, USA
Ph. D in Physics, graduated in 2010.
Dissertation title: Angle-Resolved Photoemission Studies on Ruthenates and Iron-Based Superconductor
Advisors: Ziqiang Wang (http://www.bc.edu/schools/cas/physics/people/ziqiang_wang.html)
& Hong Ding (http://ex7.iphy.ac.cn/)

Tribhuvan University, Kirtipur, Kathmandu, Nepal
Master's degree in Physics, 2001.
Dissertation title: Electronic Structure Study of Simple Metal Clusters
Advisor: Devendra Raj Mishra
Mahendra Morang Campus, Biratnagar, Nepal
Bachelor's degree, Major in Physics & Mathematics, 1998

• Employment history

Department of Physics, University of Central Florida, Orlando, FL, 32816
Associate Professor of Physics: August 2020 to present (https://physics.cos.ucf.edu/people/neupane-madhab/)
Assistant Professor of Physics: January 2016 - August 2020

Los Alamos National Laboratory, Los Alamos, New Mexico, USA
Director's Fellow; January 2015 to December 2015
Advisor: Tomasz Durakiewicz (http://www.lanl.gov/orgs/mpa/mpa10/arpes.shtml)

Princeton University, Princeton, New Jersey, USA
Postdoctoral Research Associate, January 2011 to 2014
Advisor: Zahid Hasan (http://www.princeton.edu/physics/people/faculty/zahid-hasan/)

- **Honors and awards**

- Recognized as a highly cited researcher by Web of Science in 2020 (cited as a top 1% in the field)
- National Science Foundation (NSF) Career Award (2019)
- UCF Luminary Award (2019)
- Recognized as a highly cited researcher by Web of Science in 2019 (mentioned as a top 1% in the field)
- Directors Funded Postdoctoral Fellow, Los Alamos National Laboratory (2015)

Students/postdocs under Supervision:

Postdoctoral research associate:

Anup Shakya, March 2021 to present
Yang Yang Liu, started from February 2018 (joint with Professor Michael Chini) to present

Graduate students:

1. *Md. Mofazzel Hosen*, started from January 2016, graduated in May 2020; Currently postdoctoral researcher at Boston College, ***coauthored 19 peer-reviewed papers including 7 lead author papers***
2. *Gyanendra Dhakal*, current 4th year Ph.D. student, started from November 2016: ***coauthored 12 peer-reviewed papers***
3. *Firoza Kabir*, current 4th year Ph.D. student, started from March 2017: ***coauthored 11 peer-reviewed papers***
4. *Sabin Regmi*, current 3rd year Ph.D. student, started from March 2018: ***coauthored 6 peer-reviewed papers including a lead author paper***
5. *Christopher Sims*, APS bridge fellow, fall 2017 - spring 2019, enrolled in PhD from summer 2019: ***coauthored 10 peer-reviewed papers including a lead author paper***

PhD dissertation committee (chair)

For graduate students: (1) *Md Mofazzel Hosen,* (2) *Gyanendra Dhakal,* and (3) *Firoza Kabir, (4) Sabin Regmi*

PhD dissertation committee (member)

For graduate students (1) *Priyanka Vaidya, (2) K A M Hasan Siddiquee, (3) Shruti Jayaprakash (external member: CREOL),*

Undergraduate students:

1. *Klauss Dmitri*, current undergraduate student, Spring 2016-present: ***coauthored 17 peer-reviewed papers including one lead author paper***
2. *William Neff*, undergraduate student, Fall 2018 – summer 2019: ***coauthored 2 peer-reviewed paper***
3. *Luis Persaud*, current undergraduate student, Summer 2019 –present
4. *Robert Smith*, current undergraduate student, Fall 2020-present
5. *Tiason Cole*, undergraduate student, Fall 2016: ***coauthored 1 peer-reviewed paper***
6. *Robert Smith*, undergraduate student, Fall 2020-present

7. *Isabella Pardo*, undergraduate student, Spring 2021-present
8. *Arsene Landry Tatke*, undergraduate student, Spring 2021-present

High School student:

Diego Perez, Lyman High School, Longwood, FL, Summer 2017
Elizabeth Ameyibor, Jones High School, Orlando, FL, Summer 2021
Omar Kousa, University High School, Orlando, FL, Summer 2021

Prize/award won by students:

Klauss Dimitri (undergraduate student):

- UCF Undergraduate Research Showcase – Presented a poster on the published paper on alpha-$PdBi_2$.
    - Awarded 1st Place Judge's Award amongst hundreds of other students and interviewed for news story (won cash prize)
        - https://sciences.ucf.edu/news/undergraduate-researcher-recognized-for-new-compound/
- 2018 May FL-AVS – Presented a poster on the published paper on alpha-$PdBi_2$.
    - Awarded 3rd place amongst both Undergraduate and Graduate presenters (won cash prize).
- 2018 ANPA e-conference – Gave a talk on the published paper on alpha-$PdBi_2$.
  One of 3 awarded Best Student Presenter Award (won cash prize)

Md Mofazzel Hosen (graduate student):

- *Recipient of the Outstanding Dissertation Award from College of Science 2021*
- Winner of poster presentation session (3rd place) at the 2019 FLAVS symposium, March 11-12, 2019; University of Central Florida, Orlando FL
- Winner of poster presentation session (first place) at 46th annual applied vacuum science and technology symposium on 7th May 2018. University of Central Florida, Orlando, Florida. Distinct Multiple Fermionic States in a Single Topological Metal.

Sabin Regmi (graduate student):

- 2020 ANPA e-conference – Gave a talk on *higher order topological state in* $EuIn_2As_2$.
  One of 3 awarded Best Student Presenter Award (won cash prize)

Firoza Kabir (graduate student)

- Received an internship from 03/15/2020 for three months from **Idaho National Laboratory (INL),** Idaho Falls
- Received the summer internship (2019) from **INL**

- **Research and creative activity**

Citations of the published peer-review papers (Google Scholar, updated 5/01/2021):

Citation indices	All	Since 2015
Citations	13,300	11.450
h-index	44	38
i10-index	81	71

Complete list of publications: http://arxiv.org/find/all/1/all:+AND+M+Neupane/0/1/0/all/0/1

Publications and citations: http://scholar.google.com/citations?user=8D0GBPgAAAAJ&hl=en&oi=ao

Research Grants and Contracts Awarded: total $2.63 millions

1. *$720 K as **a single PI** by Air Force Office of Scientific Research Program for 4 year from 08/14/2017 to 08/15/2021*
2. *$550 K as **a single PI** by National Science Foundation **NSF Career Award** for 5 year from 02/15/2019 to 02/14/2024*
3. *$45 K as **a single PI** by NSF as a supplemental award for 2021-2021*
4. *$44 K as **a single PI** by NSF as a supplemental award from 08/15/2019 for one year;*
5. *$875 K as a co-PI by Multidisciplinary University Research Initiative (MURI) grant from 09/01/2020 for five year; Total grants = $6 millions for 7 co-PIs*
6. *$400 K as a co-PI by Department of Energy, Energy Frontier Research Center for 4 year 01/01/2018 to 12/30/2022 (other co-PIs include from three national labs and three universities), total grant ~$10 millions: https://teti.inl.gov/SitePages/Home.aspx*

Publications *(at Peer-reviewed Journals, * = graduate student from my group, **=undergraduate student from my group)*

2021

1. G. Dhakal*, M. M. Hosen*, W.-C. Chu, B. Singh, Cheng-Yi Huang, K. Dimitri**, B.K Wang, F. Kabir*, C. Sims*, S. Regmi*, W. Neff**, Jonathan Denlinger, Hsin Lin, D. Kaczorowski, A. Bansil, and **Madhab Neupane**, *Cleaving plane-dependent electronic structures of transition metal diarsenides, to appear in Physical Review Research* ; preprint at arXiv:1908.00154

2020

2. Sabin Regmi*, Md Mofazzel Hosen*, Barun Ghosh, Bahadur Singh, Gyanendra Dhakal*, Christopher Sims*, Baokai Wang, Firoza Kabir*, Klauss Dimitri**, Yangyang Liu*, Amit Agarwal, Hsin Lin, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**, *Temperature Dependent Electronic Structure in a Higher Order Topological Insulator Candidate $EuIn_2As_2$*; Phys. Rev. B **102**,165153(2020). **https://journals.aps.org/prb/abstract/10.1103/PhysRevB.102.165153**

3. M. Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Narayan Poudel, Bahadur Singh, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Anan Bari Sarkar, Amit Agarwal, Daniel Murray, Franziska Weickert, Krzysztof Gofryk, Orest Pavlosiuk, Piotr Wisniewski, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**; *Observation of gapped state in a rare-earth monopnictide compound*, Scientific Reports **10**, 12961 (2020). **https://www.nature.com/articles/s41598-020-69414-z**

4. M. M. Hosen*, G. Dhakal*, K. Dimitri**, H. Choi, F. Kabir*, C. Sims*, O. Pavlosiuk, P. Wisniewski, T. Durakiewicz, J.-X. Zhu, D. Kaczorowski, **M. Neupane**, *Observation of Dirac state in half-Heusler material YPtBi*, Scientific Reports 10, 12343(2020) **https://www.nature.com/articles/s41598-020-69284-5**

5. C. Sims*, M. M. Hosen*, H. Aramberri, C.-Y. Huang, G. Dhakal*, K. Dimitri**, F. Kabir*, S. Regmi*, X. Zhou, T.-R. Chang, H. Lin, D. Kaczorowski, N. Kioussis, and M. Neupane; *Termination Dependent Topological Surface States in a Nodal Loop Semimetal HfP_2*, Phys. Rev. Mater.**4**,054201(2020). https://journals.aps.org/prmaterials/abstract/10.1103/PhysRevMaterials.4.054201

6. M. M. Hosen*, B. Wang, G. Dhakal*, K. Dimitri**, F. Kabir*, C. Sims*, S. Regmi*, T. Durakiewicz, D. Kaczorowski, A. Bansil, **Madhab Neupane**; *Observation of topological nodal-loop state in RAs_3 (R = Ca, Sr)*, Sci. Rep. **10**, 2776 (2020). https://www.nature.com/articles/s41598-020-59200-2

7. Xiaxin Ding, Tiankai Yao, Lyuwen Fu, Zilong Hua, Jason Harp, Chris Marianetti, **Madhab Neupane**, Michael Manley, David Hurley, and Krzysztof Gofryky; *Magnetic, transport, and thermal properties of -delta-phase UZr2*, Philosophical Magazine Letters (2020) DOI: 10.1080/09500839.2020.1833375

8. Yangyang Liu*, John E Beetar, Md Mofazzel Hosen*, Gyanendra Dhakal*, Christopher Sims*, Firoza Kabir*, Marc B Etienne, Klauss Dimitri**, Sabin Regmi*, Yong Liu, Arjun K Pathak, Dariusz Kaczorowski, **Madhab Neupane**, Michael Chini; *Time- and Angle-Resolved Photoemission Spectroscopy using an Ultrafast Extreme Ultraviolet Source at 21.8 eV*, Rev. Sci. Instrum. **91**, 013102 (2020). https://aip.scitation.org/doi/10.1063/1.5121425

2019

9. Baokai Wang, Bahadur Singh, Barun Ghosh, Wei-Chi Chiu, M. Mofazzel Hosen*, Qitao Zhang, Li Ying, **Madhab Neupane**, Amit Agarwal, Hsin Lin, and Arun Bansil, *Topological crystalline insulator state with type-II Dirac fermions in transition metal dipnictides*, Phys. Rev. B **100**, 205118 (2019). https://doi.org/10.1103/PhysRevB.100.205118

10. J. Juraszek, L. Bochenek, A. Rudenko, M. M. Hosen*, M. Daszkiewicz, Z. Wang, J. Wosnitza, Z.

Henkie, M. Samsel-Czekała, **M. Neupane**, and T. Cichorek, *Nonsaturating extreme magnetoresistance and large electronic magnetostriction in LuAs,* Phys. Rev. Res. **1**, 032016(R) (2019). https://doi.org/10.1103/PhysRevResearch.1.032016

2018

11. M. Mofazzel Hosen*, Gyanendra Dhakal*, Klauss Dimitri**, Pablo Maldonado, Alex Aperis, Firoza Kabir*, Christopher Sims*, Peter Riseborough, Peter M. Oppeneer, Dariusz Kaczorowski, Tomasz Durakiewicz, **Madhab Neupane**; *Discovery of topological nodalline fermionic phase in a magnetic material GdSbTe.* Sci. Rep. **8**, 13283 (2018). https://doi.org/DOI:10.1038/s41598-018-31296-7

12. M. Mofazzel Hosen*, Klauss Dimitri**, Ashis K. Nandy, Alex Aperis, Raman Sankar, Gyanendra Dhakal*, Pablo Maldonado, Firoza Kabir*, Christopher Sims*, Fangcheng Chou, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter M. Oppeneer, **Madhab Neupane**; *Distinct multiple fermionic states in a single topological metal.* Nat. Commun. **9**, 3002(2018). https://doi-org/10.1038/s41467-018-05233-1

13. Klauss Dimitri**, M. Mofazzel Hosen*, Gyanendra Dhakal*, Hongchul Choi, Firoza Kabir*, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**; *Dirac State in a Centrosymmetric Superconductor alpha-$PdBi_2$*. Phys. Rev. B **97**, 144514 (2018). https://doi.org/ 10.1103/PhysRevB.97.1445141

14. M. Mofazzel Hosen*, Klauss Dimitri**, Alex Aperis, Pablo Maldonado, Ilya Belopolski*, Gyanendra Dhakal*, Firoza Kabir*, Christopher Sims*, M Zahid Hasan, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter M. Oppeneer, and **Madhab Neupane**; *Observation of Gapless Dirac Surface States in ZrGeTe*. Phys. Rev. B **97**, 121103 (2018). https://doi.org/ 10.1103/PhysRevB.97.121103

2017

15. M. Mofazzel Hosen*, Klauss Dimitri**, Ilya Belopolski, Raman Sankar, Maria Szlawska, Su-Yang Xu, Nagendra Dhakal*, Pablo Maldonado, Peter M. Oppeneer, Dariusz Kaczorowski, Fangcheng Chou, M. Zahid Hasan, Tomasz Durakiewicz, **Madhab Neupane**; *Tunability of the topological nodal line semimetal phase in ZrSiX-type materials.* Phys. Rev. B **95**, 161101 (R) (2017). https://doi.org/ 10.1103/PhysRevB.95.161101

16. H. Choi, **M. Neupane**, T. Sasagawa, E. M. Chia, and J.-X. Zhu; *Low-energy surface states in the normal state of alpha-$PdBi_2$ superconductor*. Phys. Rev. Materials **1**, 034201 (2017). https://doi.org/10.1103/PhysRevMaterials.1.034201

17. M. S. Lodge, G. Chang, B. Singh, J. Hellerstedt, M. Edmonds, D. Kaczorowski, M. M. Hosen*, **M. Neupane**, H. Lin, M. S. Fuhrer, B. Weber, and M. Ishigami; *Observation of Effective*

Pseudospin Scattering in ZrSiS. Nano Lett. **17**, 7213 (2017). https://doi.org/10.1021/acs.nanolett.7b02307

18. I. Belopolski, S.-Y. Xu, N. Koirala, C. Liu, G. Bian, V. N. Strocov, G. Chang, **Madhab Neupane**, N. Alidoust, D. Sanchez, H. Zheng, M. Brahlek, V. Rogalev, T. Kim, N. C. Plumb, C. Chen, F. Bertran, P. Le Fèvre, A. Taleb-Ibrahimi, M.-C. Asensio, M. Shi, H. Lin, M. Hoesch, S. Oh and M. Z. Hasan; *A novel artificial condensed matter lattice and a new platform for one-dimensional topological phases*. Science Advances **3**, e1501692 (2017). https://doi.org/ 10.1126/sciadv.1501692

19. R. Sankar, G. Peramaiyan, I. P. Muthuselvam, C. J. Butler, K. Dimitri**, **M. Neupane**, G. N. Rao, M.-T. Lin and F. C. Chou; *Crystal growth of Dirac semimetal ZrSiS with high magnetoresistance and mobility*. Sci. Rep. **7**, 40603(2017). https://doi.org/10.1038/srep40603

2016

20. **Madhab Neupane**, Nasser Alidoust, M. Mofazzel Hosen*, Jian-Xin Zhu, Klauss Dimitri**, Su-Yang Xu, Nagendra Dhakal*, Raman Sankar, Ilya Belopolski, Daniel S. Sanchez, Tay-Rong Chang, Horng-Tay Jeng, Koji Miyamoto, Taichi Okuda, Hsin Lin, Arun Bansil, Dariusz Kaczorowski, Fangcheng Chou, M. Zahid Hasan, Tomasz Durakiewicz; *Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd*. Nat. Commun. **7**, 13315 (2016). https://doi.org/10.1038/ncomms13315

21. **Madhab Neupane,** Ilya Belopolski, M. Mofazzel Hosen*, Daniel S. Sanchez, Raman Sankar, Maria Szlawska, Su-Yang Xu, Klauss Dimitri*, Nagendra Dhakal*, Pablo Maldonado, Peter M. Oppeneer, Dariusz Kaczorowski, Fangcheng Chou, M. Zahid Hasan, Tomasz Durakiewicz; *Observation of Topological Nodal Fermion Semimetal Phase in ZrSiS;* Phys. Rev. B **93**, 201104 (R) (2016) [Editors' Suggestion]. https://doi.org/10.1103/PhysRevB.93.201104

22. **Madhab Neupane,** M. Mofazzel Hosen*, I. Belopolski, Nicholas Wakeham, Klauss Dimitri**, Nagendra Dhakal*, Jian-Xin Zhu, M. Zahid Hasan, Eric D. Bauer, Filip Ronning*; Observation of Dirac-like semi-metallic phase in NdSb*. J. Phys.: Condens. Matter **28**, 23LT02 (2016). http://doi.org/10.1088/0953-8984/28/23/23LT02

23. **Madhab Neupane**, Yukiaki Ishida, Raman Sankar, Jian-Xin Zhu, Daniel S. Sanchez, Ilya Belopolski, Su-Yang Xu, Nasser Alidoust, M. Mofazzel Hosen*, Shik Shin, Fangcheng Chou, M. Zahid Hasan and Tomasz Durakiewicz; *Electronic structure and relaxation dynamics in a superconducting topological material*. Sci. Rep. **6**, 22557 (2016). https://doi.org/10.1038/srep22557

24. S.Y. Xu**, I. Belopolski**, D. S. Sanchez**, **M. Neupane**, Guoqing Chang, Koichiro Yaji, Zhujun Yuan, Chenglong Zhang, Kenta Kuroda, Guang Bian, Cheng Guo, Hong Lu, Tay-Rong

Chang, Nasser Alidoust, Hao Zheng, Chi-Cheng Lee, Shin-Ming Huang, Chuang-Han Hsu, Horng-Tay Jeng, Arun Bansil, Aris Alexandradinata, Titus Neupert, Takeshi Kondo, Fumio Komori, Shik Shin, Hsin Lin, Shuang Jia, M. Zahid Hasan; *Spin polarization and texture of the Fermi arcs in the Weyl Fermion semimetal TaAs,* Phys. Rev. Lett. **116**, 096801 (2016). [**= equally contributed] https://doi.org/10.1103/PhysRevLett.116.096801

25. I. Belopolski, D. S. Sanchez, Y. Ishida, X. Pan, P. Yu, S.-Y. Xu, G. Chang, T.-R. Chang, H. Zheng, N. Alidoust, G. Bian, **M. Neupane**, S.-M. Huang, C.-C. Lee, Y. Song, H. Bu, G. Wang, S. Li, G. Eda, H.-T. Jeng, T. Kondo, H. Lin, Z. Liu, F. Song, S. Shin and M. Z. Hasan, *Discovery of a new type of topological Weyl fermion semimetal state in MoxW1−xTe2*, Nat. Comm. **7**, 13643(2016). https://doi.org/10.1038/ncomms13643

26. N. Wakeham, ED Bauer, **M. Neupane**, and F. Ronning; *Large magnetoresistacne in the antiferromagnetic semimetal NdSb*. Phys. Rev. B **93**, 205152 (2016). https://doi.org/10.1103/PhysRevB.93.205152

27. I. Belopolski, S.-Y. Xu, Y. Ishida, X. Pan, P. Yu, D. S. Sanchez, **M. Neupane**, N. Alidoust, G. Chang, T. -R. Chang, Y. Wu, G. Bian, H. Zheng, S.-M. Huang, C.-C. Lee, D. Mou, L. Huang, Y. Song, B. Wang, G. Wang, Y.-W. Yeh, N. Yao, J. E. Rault, P. L. Fèvre, F. Bertran, H.-T. Jeng, T. Kondo, A. Kaminski, H. Lin, Z. Liu, F. Song, S. Shin, M. Z. Hasan; *Fermi arc electronic structure and Chern numbers in the type-II Weyl semimetal candidate Mo_xW1-xTe2*. Phys. Rev. B **94**, 085127 (2016). [Editors' Suggestion] https://doi.org/10.1103/PhysRevB.94.085127

28. S.-M. Huang, S.-Y. Xu, I. Belopolski, C.-C. Lee, G. Chang, B. Wang, N. Alidoust, **M. Neupane**, H. Zheng, D. Sanchez, A. Bansil, G. Bian, H. Lin, and M. Z. Hasan; *A new type of Weyl semimetal with quadratic double Weyl fermions in* $SrSi_2$. PNAS 133, **1180** (2016). https://doi.org/10.1073/pnas.1514581113

29. N. Alidoust, C. Liu, SY Xu, I. Belopolski, T. Qi, M. Zeng, D. S. Sanchez, H. Zheng, G. Bian, **M. Neupane**, Y.-T. Liu, S.D. Wilson, H. Lin, A. Bansil, G. Cao, M. Z. Hasan; *Observation of metallic surface states in the strongly correlated Kitaev-Heisenberg candidate* Na_2IrO_3. Phys. Rev. B **93**, 245132 (2016). https://doi.org/10.1103/PhysRevB.93.245132

30. T.-R. Chang, S.-Y. Xu, G. Chang, C.-C. Lee, S.-M. Huang, B. Wang, G. Bian, H. Zheng, D. S. Sanchez, I. Belopolski, N. Alidoust, **M. Neupane**, A. Bansil, H.-T. Jeng, H. Lin, M. Zahid Hasan; *Arc-tunable Weyl Fermion metallic state in* $Mo_xW_{1-x}Te_2$. Nat. Comm. **7**, 10639 (2016). https://doi.org/10.1038/ncomms10639

31. C. Zhang, S.-Y. Xu, I. Belopolski, Z. Yuan, Z. Lin, B. Tong, N. Alidoust, C.-C. Lee, S.-M. Huang, H. Lin, **M. Neupane**, D. S. Sanchez, H. Zheng, G. Bian, J. Wang, C. Zhang, T. Neupert, M. Z. Hasan, S. Jia; *Signature of the Adler-Bell-Jackiw Chiral anomaly in a Weyl fermion semimetal*.

Nat. Comm. **7**, 10556 (2016). https://doi.org/10.1038/ncomms10556

32. G. Bian, T.-R. Chang, R. Sankar, S.-Y. Xu, H. Zheng, T. Neupert, C.-K. Chiu, S.-M. Huang, G. Chang, I. Belopolski, D. S. Sanchez, **M. Neupane**, N. Alidoust, C. Liu, B. Wang, H.-T. Jeng, A. Bansil, F. Chou, H. Lin, and M. Z. Hasan; *Topological Nodal-Line Semimetal Fermions in spin-orbit metal $PbTaSe_2$.* Nat. Comm. **7**, 10556 (2016). https://doi.org/10.1038/ncomms10556

33. I. Belopolski, S.-Y. Xu, D. Sanchez, G. Chang, C. Guo, **M. Neupane,** H. Zheng, C.-C. Lee, S.-M. Huang, G. Bian, N. Alidoust, T.-R. Chang, B. Wang, X. Zhang, A. Bansil, H.-T. Jeng, H. Lin, S. Jia, M. Z. Hasan; *Criteria for directly detecting topological Fermi arcs in Weyl semimetals.* Phys. Rev. Lett. **116**, 066802 (2016). https://doi.org/10.1038/ncomms10735

Before joining UCF, @ Los Alamos National Lab, Princeton University, Boston College

2015

34. **Madhab Neupane**, Su-Yang Xu, Yukiaki Ishida, Shuang Jia, Benjamin M. Fregoso, Chang Liu, Ilya Belopolski, Guang Bian, Nasser Alidoust, Tomasz Durakiewicz, Victor Galitski, Shik Shin, Robert J. Cava, and M. Zahid Hasan; *Gigantic surface lifetime of an intrinsic topological insulators*. Phys.Rev.Lett. **115**,116801 (2015). https://doi.org/10.1103/PhysRevLett.115.116801

35. **Madhab Neupane**, Su-Yang Xu, Nasser Alidoust, Guang Bian, D. J. Kim, Chang Liu, I. Belopolski, T.-R. Chang, H.-T. Jeng, T. Durakiewicz, H. Lin, A. Bansil, Z. Fisk, and M. Z. Hasan; *Non-Kondo-like electronic structure in the correlated Rare-earth hexaboride YbB_6.* Phys. Rev. Lett. **114**, 016403 (2015). https://doi.org/10.1103/PhysRevLett.114.016403

36. **Madhab Neupane**, Su-Yang Xu, Nasser Alidoust, Raman Sankar, Ilya Belopolski, Daniel S. Sanchez, Guang Bian, Chang Liu, Tay-Rong Chang, Horng-Tay Jeng, BaoKai Wang, Guoqing Chang, Hsin Lin, Arun Bansil, Fangcheng Chou, and M. Zahid Hasan; *Surface versus bulk Dirac state tuning in a three-dimensional topological Dirac semimetal*. Phys. Rev. B 91, 241114(R) (2015). https://doi.org/10.1103/PhysRevB.91.241114

37. **Madhab Neupane**, Nasser Alidoust, Ilya Belopolski, Guang Bian, Su-Yang Xu, Dae-Jeong Kim, Pavel P. Shibayev, Daniel S. Sanchez, Hao Zheng, Tay-Rong Chang, Horng-Tay Jeng, Peter S. Riseborough, Hsin Lin, Arun Bansil, Tomasz Durakiewicz, Zachary Fisk, and M. Zahid Hasan; *Fermi surface topology and hot spot distribution in the Kondo lattice system CeB_6*. Phys. Rev. B **92**, 104420 (2015). https://doi.org/10.1103/PhysRevB.92.104420

38. **Madhab Neupane**, Su-Yang Xu, R. Sankar, Q. Gibson, Y. J. Wang, I. Belopolski, N. Alidoust, G. Bian, P. P. Shibayev, D. S. Sanchez, Y. Ohtsubo, A. Taleb-Ibrahimi, S. Basak, W.-F. Tsai, H. Lin, Tomasz Durakiewicz, R. J. Cava, A. Bansil, F. C. Chou, and M. Z. Hasan; *Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator*. Phys. Rev. B **92**, 075131 (2015). https://doi.org/10.1103/PhysRevB.92.075131

39. Su-Yang Xu* Ilya Belopolski*, Nasser Alidoust*, **Madhab Neupane***, Guang Bian, Chenglong

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Papers in pre-print and under review

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2. Firoza Kabir, M. Mofazzel Hosen, Xiaxin Ding, Christopher Lane, Gyanendra Dhakal, Yangyang Liu, Klauss Dimitri, Christopher Sims, Sabin Regmi, Luis Persaud, Yong Liu, Arjun K. Pathak, Jian-Xin Zhu, Krzysztof Gofryk, **Madhab Neupane**; *Effect of dilute magnetism in a topological insulator,* preprint: https://arxiv.org/pdf/2006.14130.pdf

3. F. Kabir, M. M. Hosen, F. C.-Kabeer, A. Aperis, X. Ding, G. Dhakal, K. Dimitri, C. Sims, S. Regmi, L. Persaud, K. Gofryk, P. M. Oppeneer, D. Kaczorowski, and **M. Neupane**, *Observation of multiple Dirac states in a magnetic topological material EuMg2Bi2* (2019) https://arxiv.org/pdf/1912.08645.pdf

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Patents:

1. Gigantic surface-life time of an intrinsic topological insulator; **M. Neupane**, S.-Y.Xu, R. J. Cava, M. Z. Hasan; Filing date: 2015, USA

2. Discovery of a topological Weyl semimetal; SY Xu, I. Belopolsky, N. Alidoust, **M. Neupane**, S. Jia, MZ Hasan; Filing date: 2015, USA

Selected Press and News Coverage of Research:

1. Neupane has been recognized as a **highly cited researcher** 2020 by Web of Science. https://recognition.webofscience.com/awards/highly-cited/2020/?fbclid=IwAR3wMG42VpIhRCAmSqpPRF5R2la6QKxDW7JAv-3JN8IDS6HIDrz5aahIC0s

2. Neupane has been recognized as a **highly cited researcher** 2019 by Web of Science. https://recognition.webofsciencegroup.com/awards/highly-cited/2019/?fbclid=IwAR22ka_442R50aqq1injaJOl9Ewc90UF_yaHqwp9bf1iqL4xkIPWmPBn6s0

3. The University of Central Florida honors Dr. Neupane with the prestigious **Luminary Award** for his active contribution to push the frontier of quantum materials. https://www.ucf.edu/news/nine-luminary-award-recipients-honored-for-making-an-impact-on-the-world/?fbclid=IwAR01AvjLDUKn0HGWCz4DvLkXlh1-WKJUhRhec8qe0EZlNEFCIIepLbHjKyk

4. Selected one of the groups for the UCF top 10 research findings of 2018 (https://www.ucf.edu/news/ucf-top-10-research 2018/?fbclid=IwAR0nZpeXkos9DMBiGe6eirAmCu7_R_GK93I3TmBKOTRdCvebtqcIZImVy0

5. Nature publication has selected one of my papers is the best paper of 2018 as well as placing it in the top 50 best paper list: https://www.nature.com/ncomms/top50.

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19. Discovery of topological Dirac semimetals Condmatjournalclub [http://www.condmatjournalclub.org/?p=2272]

20. Wonders of flat physics now seen in 3D, Nature News [http://www.nature.com/news/wonders-of-flat-physics-now-seen-in-3d-1.14538]

21. Resistance is low: New quantum effect. spectroscopyNOW.com (http://www.spectroscopynow.com/details/ezine/14641eb1833/Resistance-is-low-New-quantum-effect.html?tzcheck=1&tzcheck=1)

22. Topological insulator goes superconducting. (http://nanotechweb.org/cws/article/tech/59246)

23. Science Highlights at Los Alamos National Laboratory: September 30, 2015: Title: Discovery of new topological phases of matter (https://int.lanl.gov/science/science-highlights/docs/ScienceHighlights09-30-15.pdf)

Presentations:

Invited:

1. **Invited talk** online; Title of the talk: "Experimental realization of topological insulator and beyond" The international Conference on Solid Compounds of Transition Elements, April 15, Wroclaw, Poland, 2021

2. **Invited** talk at MURI kickoff meeting via Zoom; Title of the talk: "Electronic structure measurements of Weyl semimetals" January 20, 2021

3. **Invited** talk at Frontier of Energy Science seminar at Idaho National Laboratory, Idaho Falls, ID; Title of the talk: "Photoemission Investigation of Topological Quantum Materials" August 18, 2020 delivered online via bluejeans.

4. **Invited** seminar talk at Central Department of Physics, Tribhuwan University, Kathmandu, Nepal; Title of the talk: "Experimental realization of topological insulators and beyond" March 30, 2020 delivered online via Zoom.

5. **Invited** talk at APS March meeting 2020, Denver Colorado; Title of the talk: "Distinct multiple fermionic states in a single topological metal" March 5, 2020 (Scheduled). https://meetings.aps.org/Meeting/MAR20/Session/U64.8

6. **Invited** colloquium talk at SUNY Buffalo State College, NY, Title of the talk: "Experimental Realization of Topological Insulator and Beyond" February 13, 2020.

7. **Invited** talk at Thermal Energy Transport under Irradiation (TETI) All-Hands meeting, Purdue University, West Lafayette, Indiana. September 18-20, 2019.

8. **Invited** talk at AFOSR Program Review; Arlington, VA; Title of the talk: "Illumination of the

Emergent Quantum Materials by Attosecond Pulses" 10 June, 2019
https://community.apan.org/wg/afosr/m/kathy/279127

9. **Invited** talk at Thermal Energy Transport under Irradiation (TETI) All-Hands meeting 2019, April 15-17, Idaho Falls, ID

10. **Invited** talk at Plasma 2019 Workshop; University of Central Florida, Orlando, Florida; Title of the talk: "Experimental realization of topological Superconductor" 18-21 January 2019
https://plasma2019workshop.wordpress.com/about/

11. **Invited** talk at Condensed matter seminar 2018; University of Florida, Gainesville, Florida; Title of the talk: "Experimental realization of topological insulator and beyond" 5 November 2018
https://www.phys.ufl.edu/wp/index.php/event/condensed-matter-seminar-madhab-neupane-ucf/

12. **Invited** talk at 18th Kavli Frontier of Science Chinese-American symposium; Nanjing China; Title of the talk: "Experimental Realization of Topological Insulator and Beyond" 21 October 2018
http://www.nasonline.org/programs/kavli-frontiers-of-science/past-symposia/2018-cafos.html#topological

13. **Invited** talk at AFOSR Program Review; Arlington, VA; Title of the talk: "Illumination of the Emergent Quantum Materials by Attosecond Pulses" 5 June, 2018
https://community.apan.org/wg/afosr/m/kathy/232376

14. **Invited** talk at APS March meeting 2018, Los Angeles; Title of the talk: "Photoemission Studies of Topological Superconducting Materials", 5 March 2018
http://meetings.aps.org/Meeting/MAR18/Session/B04.3

15. **Invited** Condensed matter physic seminar talk at Georgia Institute of Technology; Dirac Materials; 29 March 2018 https://www.physics.gatech.edu/event/hard-condensed-matter-amo-1

16. **Invited** colloquium talk at University of South Florida "Experimental Realization of Topological insulators and beyond" 26 January 2018
http://physics.usf.edu/news/colloquium/colloquiumpdfs/Colloq%202018/20180126_Neupane.pdf

17. **Invited** talk at workshop on "Advances in Dirac and Weyl Materials", Title of the talk: "Experimental Realization of Weyl Semimetal", 14 December 2017, University of North Florida, Jacksonville
https://www.unf.edu/coas/physics/Dirac_and_Weyl_Materials_Workshop/Advances_in_Dirac_and_Weyl_Materials_Workshop.aspx

18. "One way motion electron in a superhighway" Physics Colloquium talk at University of

Montréal, Montréal, Canada; 24 November 2017. (**Invited**)
(http://calendrier.umontreal.ca/detail/776123-one-way-motion-electrons-in-a-superhighway-madhab-neupane-university-of-central-florida)

19. "Experimental realization of Weyl semimetal", Physics Colloquium talk at University of Arkansas, Fayetteville; 25 August 2017 (**Invited)**

20. Invited talk at workshop on "2D and Dirac material workshop", Title of the talk: "Experimental Realization of three dimensional Dirac semimetals", 12 December- 14 December 2016, University of North Florida, Jacksonville (**Invited**)
https://www.unf.edu/coas/physics/2D_and_Dirac_Materials_Workshop/2016_2D_and_Dirac_Materials_Workshop.aspx

21. **Invited** talk at workshop on "Spin orbit coupling and topology in low dimensions" Title of the talk: **"Relaxation dynamics on topological insulators",** 26 June - 02 July, 2016 Spetses, Greece (**Invited**) (http://qcn.physics.uoc.gr/socsis2016/content/programme).

22. **Invited** talk at APS March meeting 2016, Baltimore; **Experimental Realization of new topological phases of matter beyond the topological insulators** (**Invited)**
(http://meetings.aps.org/Meeting/MAR16/Session/R1.4)

23. **Photoemission studies on new topological phases of matter;** Condensed-matter seminar at Los Alamos National Laboratory, July 28, 2015. **(Invited**)

24. **Observation of new topological phases of matter;** Physics Colloquium talk at University of Central Florida, Orlando, Florida March 25, 2015. (**Invited**)

25. **Experimental realization of new topological phases of matter;** Physics Colloquium talk at University of California at Riverside, March 10, 2015 (**Invited**)

26. **Photoemission studies of topological insulators;** Physics Colloquium talk at University of North Florida, February 20, 2015. (**Invited**)

27. **Experimental realization of new topological phases of matter;** Physics Seminar talk at Rensselaer Polytechnic Institute, Troy, New York, December 11, 2014. (**Invited**)

28. **Surface electronic structure of the topological Kondo insulator candidate SmB6;** Invited talk, Workshop on Strongly Correlated Topological Insulators; October 6-7, Berkeley 2014 (https://sites.google.com/a/lbl.gov/scti2014/agenda) (**Invited**)

29. **Surface electronic structure of topological Kondo insulator candidate SmB_6 and three-**

dimensional Dirac materials; November 20, 2013, Condensed matter seminar at Princeton University, New Jersey. (**Invited**)

30. **Photoemission studies of topological insulators;** October 28, 2013, Colloquium talks at Saint Peters University, New Jersey. (**Invited**)
31. **Photoemission studies of ternary spin-orbit insulators;** November 12, 2012, Condensed Matter seminar, Northeastern University, Boston, MA. (**Invited**)
32. **ARPES studies on topological insulators**; December 7, 2011, SRC, WI. (**Invited**)
33. **Angle-resolved photoemission spectroscopy studies of 122 system of iron-based superconductors***;* June 2nd, 2010, Special Seminar, Columbia University, New York. (**Invited**)

Contributed:

1. Contributed talk at APS March meeting 2019, Boston; Title of the talk: "Distinct Multiple Fermionic States in a Single Topological System", scheduled 4 March 2019 (Contributed) https://meetings.aps.org/Meeting/MAR19/Session/A03.2
2. **Discovery of a 3D Dirac semimetal phase in high-mobility Cd_3As_2;** New Trends in Topological Insulators, Berlin 7-10 July 2014. (Contributed)
3. **Observation of a 3D Dirac semimetal phase in high-mobility Cd_3As_2;** 2014 APS March Meeting, Denver, Colorado. (Contributed)
4. **Tunneling tuned spin modulations in ultrathin topological insulator films;** 2013 APS March Meeting, Baltimore, MD. (Contributed)
5. **Topological surface states in ternary spin-orbit insulators: An ARPES viewpoint**; 2012 APS March Meeting, Boston, MA. (Contributed)
6. **Doping dependence of chemical potential in iron pnictides by photoemission***;* 2010 APS March Meeting, Portland, OR. (Contributed)
7. **Study of band structure and Fermi surface of $SrFe_2As_2$ & $BaFe_2As_2$ by ARPES;** 2009 APS March Meeting, Pittsburg, PA. (Contributed)
8. **Study of band structure and Fermi surface of $Ba_{1-x}K_xFe_2As_2$ by ARPES;** "ICAM Workshop on Fe-pnictide & Related Superconductors", November 2008, University of Maryland at College Park, MD. (Contributed)
9. **Observation of novel orbital selective Mott transition in $Ca_{1.8}Sr_{0.2}RuO_4$;** SRC User Meeting, 2008, Madison, WI. (Contributed)
10. **Angle-resolved Photoemission Study of $Ca_{1.8}Sr_{0.2}RuO_4$;** 2008 APS March Meeting, New Orleans, LA. (Contributed)
11. **ARPES study on electron doped cuprates;** "From BCS to Exotic Superconductivity" July 2007, Cargese, Corsica, France. (Contributed)
12. **ARPES study on $Ca_{1.8}Sr_{0.2}RuO_4$;** 2007 APS March Meeting, Denver, CO, Meeting, Baltimore, MD. (Contributed)
13. **ARPES study on calcium substituted strontium ruthenates;** 2006 APS March Meeting, Baltimore, MD. (Contributed)

Contributed talks
(* = graduate student/postdoc, **=undergraduate student)

2020

1. Yangyang Liu*, John E. Beetar, M. Nrisimhamurty, Shima Gholam-Mirzaei, Md Mofazzel Hosen*, Gyanendra Dhakal*, Christopher Sims*, Marc B. Etienne, Firoza Kabir*, Klauss Dimitri**, Sabin Regmi*, **Madhab Neupane,** and Michael Chini*. Contributed talk at CLEO 2020 San Jose (online presentation due to COVID-19). Title of the talk: "*High-Order Harmonic Source for Time- and Angle-Resolved Photoemission Spectroscopy based on Nonlinear Compression of a Yb:KGW Laser*", May 15, 2020. https://www.cleoconference.org/home/schedule/?day=Friday#FF2C

2. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Narayan Poudel, Bahadur Singh, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Daniel Murray, Franziska Weickert, Krzysztof Gofryk, Orest Pavlosiuk, Piotr Wisniewski, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Poster presentation at 2020 Annual Symposium organized by Florida Chapter of the AVS Science and Technology Society, University of Central Florida, Florida. Title of the poster "*Observation of gapped state in rare-earth monopnictide HoSb"* March 9, 2020. https://www.avs.org/AVS/files/49/4964034f-bf90-4aa7-b4b7-ab281a967794.pdf

3. Sabin Regmi*, Gyanendra Dhakal*, Md Mofazzel Hosen*, Wei-Chi Chiu, Bahadur Singh, Klauss Dimitri**, Baokai Wang, Firoza Kabir*, Christopher Sims*, William Neff**, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Poster presentation at 2020 Annual Symposium organized by Florida Chapter of the AVS Science and Technology Society, University of Central Florida, Florida. Title "Dirac State Switching in Transition Metal Diarsenides", March 9, 2020. https://www.avs.org/AVS/files/49/4964034f-bf90-4aa7-b4b7-ab281a967794.pdf

4. Klauss Dimitri**, M. Mofazzel Hosen*, Baokai Wang, Gyanendra Dhakal*, Christopher Sims*, Sabin Regmi*, Eric D. Bauer, Firoza Kabir*, Filip Ronning, and **Madhab Neupane**. Poster presentation at 2020 Annual Symposium organized by Florida Chapter of the AVS Science and Technology Society, University of Central Florida, Florida. Title of the poster "*Electronic structure study of rare-earth monopnictide* DySb" March 9, 2020. https://www.avs.org/AVS/files/49/4964034f-bf90-4aa7-b4b7-ab281a967794.pdf

5. Luis Persaud**, Christopher Sims*, Gyanendra Dhakal*, Md Mofazzel Hosen*, Firoza Kabir*, YangYang Liu*, **Madhab Neupane**. Poster presentation at 2020 Annual Symposium organized by Florida Chapter of the AVS Science and Technology Society, University of Central Florida, Florida. Title of the poster: "*Applications of edge detection techniques to analysis of ARPES data*", March 09, 2020. https://www.avs.org/AVS/files/49/4964034f-bf90-4aa7-b4b7-ab281a967794.pdf

6. Gyanendra Dhakal*, M. Mofazzel Hosen*, Ayana Ghosh, Christopher Lane, Karolina Gornicka, Michal J. Winiarski, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Luis Persaud**, Yangyang Liu*, Dariusz Kaczorowski, Jian-Xin Zhu, Tomasz Klimczuk, **Madhab Neupane**. Contributed talk at Mini March meeting 2020, Orlando. Title of the talk: "*Observation of topological surface state in a superconducting material*", March 4, 2020, organized by UCF Physics department as an alternative to the cancelled APS March meeting.

7. Gyanendra Dhakal*, M. Mofazzel Hosen*, Ayana Ghosh, Christopher Lane, Karolina Gornicka, Michal J. Winiarski, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Luis Persaud*, Yangyang Liu*, Dariusz Kaczorowski, Jian-Xin Zhu, Tomasz Klimczuk, **Madhab Neupane**. Contributed talk at APS March meeting 2020, Denver. Title of the talk: "*Observation of topological surface state in a superconducting material*", Scheduled for 3 March 2020, canceled due to covid-19 pandemic. https://meetings.aps.org/Meeting/MAR20/Session/J55.5

8. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Narayan Poudel, Bahadur Singh, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Daniel Murray, Franziska Weickert, Krzysztof Gofryk, Orest Pavlosiuk, Piotr Wisniewski, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Contributed talk at Mini March meeting 2020, Orlando. Title of the talk: "*Coexistence of topological nontrivial phase and Rashba-type surface state in HoSb*." March 4, 2020, organized by UCF Physics department as an alternative to the cancelled APS March meeting.

9. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Narayan Poudel, Bahadur Singh, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, William Neff**, Daniel Murray, Franziska Weickert, Krzysztof Gofryk, Orest Pavlosiuk, Piotr Wisniewski, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Contributed talk at APS March Meeting 2020, Denver. Title of the talk: "*Coexistence of topological nontrivial phase and Rashba-type surface state in HoSb*." Scheduled on March 3, 2020. Canceled due to COVID-19 pandemic. http://meetings.aps.org/Meeting/MAR20/Session/J55.10

10. Sabin Regmi*, Gyanendra Dhakal*, Md Mofazzel Hosen*, Wei-Chi Chiu, Bahadur Singh, Klauss Dimitri**, Baokai Wang, Firoza Kabir*, Christopher Sims*, William Neff**, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Contributed talk at Mini March Meeting – UCF physics, University of Central Florida, Florida. Title "*Dirac State Switching in Transition Metal Diarsenides*", March 4, 2020.

11. Sabin Regmi*, Gyanendra Dhakal*, Md Mofazzel Hosen*, Wei-Chi Chiu, Bahadur Singh, Klauss Dimitri**, Baokai Wang, Firoza Kabir*, Christopher Sims*, William Neff**, Dariusz Kaczorowski, Arun Bansil, **Madhab Neupane**. Poster presentation at APS March Meeting 2020, Denver. Title "*Dirac State Switching in Transition Metal Diarsenides*", Scheduled for March 3, 2020 (Canceled due to COVID-19 pandemic).

http://meetings.aps.org/Meeting/MAR20/Session/H71.43

12. Firoza Kabir*, M. Mofazzel Hosen*, Xiaxin Ding, Christopher Lane, Gyanendra Dhakal*, Yangyang Liu*, Klauss Dimitri**, Christopher Sims*, Sabin Regmi*, Luis Persaud**, Yong Liu, Arjun K. Pathak, Jian-Xin Zhu, Krzysztof Gofryk, and **Madhab Neupane**. Contributed talk at mini March meeting, Physics department, University of Central Florida, Florida, 2020. Title of the talk: "*Surface state single Dirac cone in magnetic material GdxSb2-xTe3*", March 04, 2020.

13. Firoza Kabir*, M. Mofazzel Hosen*, Xiaxin Ding, Christopher Lane, Gyanendra Dhakal*, Yangyang Liu*, Klauss Dimitri**, Christopher Sims*, Sabin Regmi*, Luis Persaud**, Yong Liu, Arjun K. Pathak, Jian-Xin Zhu, Krzysztof Gofryk, and **Madhab Neupane**. Contributed talk at APS March meeting, Denver, Colorado, 2020. Title of the talk*: Surface state single Dirac cone in magnetic material GdxSb2-xTe3*", scheduled on March 05, 2020 (scheduled). http://meetings.aps.org/Meeting/MAR20/Session/S55.11

14. Christopher Sims*, M. Mofazzel Hosen*, Hugo Aramberri, Cheng-Yi Huang, Gyanendra Dhakal*, Klauss Dimitri**, Firoza Kabir*, Sabin Regmi*, Xiaoting Zhou, Tay-Rong Chang, Hsin Lin, Dariusz Kaczorowski, Nicholas Kioussis, and **Madhab Neupane**. Contributed talk at mini March meeting 2020, Orlando. Title of the talk: "Termination Dependent Topological Surface States in Nodal Loop Semimetal HfP2" March 4, 2020, organized by UCF Physics department as an alternative to the cancelled APS March meeting.

15. Christopher Sims*, M. Mofazzel Hosen*, Hugo Aramberri, Cheng-Yi Huang, Gyanendra Dhakal*, Klauss Dimitri**, Firoza Kabir*, Sabin Regmi*, Xiaoting Zhou, Tay-Rong Chang, Hsin Lin, Dariusz Kaczorowski, Nicholas Kioussis, and **Madhab Neupane**. Contributed talk at APS March meeting 2020, Denver. Title of the talk: "*Termination Dependent Topological Surface States in Nodal Loop Semimetal HfP2*" March 3, 2020, canceled due to COVID-19 pandemic.
https://meetings.aps.org/Meeting/MAR20/Session/J55.11

16. Klauss Dimitri**, M. Mofazzel Hosen*, Baokai Wang, Gyanendra Dhakal*, Christopher Sims*, Sabin Regmi*, Eric D. Bauer, Firoza Kabir*, Filip Ronning, and **Madhab Neupane**. Poster presentation at 2020 Annual Symposium organized by Florida Chapter of the AVS Science and Technology Society, University of Central Florida, Florida. Title of the poster "*Electronic structure study of rare-earth monopnictide* DySb" March 9, 2020.
https://www.avs.org/AVS/files/49/4964034f-bf90-4aa7-b4b7-ab281a967794.pdf

17. Klauss Dimitri**, M. Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Eric D. Bauer, Filip Ronning, Arun bansil, and **Madhab Neupane**. Poster presentation at APS March Meeting 2020, Denver. Title of the poster: "*Observation of Dirac state in DySb*" Scheduled for March 3, 2020 (Canceled due to COVID-19

pandemic). http://meetings.aps.org/Meeting/MAR20/Session/H71.46

18. Yangyang Liu*, Md Mofazzel Hosen*, Gyanendra Dhakal*, Christopher Sims*, John E. Beetar, Sabin Regmi*, Klauss Dimitri**, Firoza Kabir*, Dariusz Kaczorowski, Michael Chini, and **Madhab Neupane**. Contributed talk at Mini March meeting 2020, Orlando. Title of the talk: "*Study of hot electrons in topological nodal-line semimetal ZrSiS using time- and angle-resolved photoemission spectroscopy*", Scheduled on March 4, 2020.

19. Yangyang Liu*, Md Mofazzel Hosen*, Gyanendra Dhakal**, Christopher Sims*, John E. Beetar, Sabin Regmi*, Klauss Dimitri*, Firoza Kabir*, Dariusz Kaczorowski, Michael Chini, and **Madhab Neupane**. Contributed talk at APS March meeting 2020 Denver. Title of the talk: "*Study of hot electrons in topological nodal-line semimetal ZrSiS using time- and angle-resolved photoemission spectroscopy*", Scheduled on March 5, 2020. Canceled due to COVID-19 pandemic.

20. Luis Persaud**, Christopher Sims*, Gyanendra Dhakal*, Firoza Kabir*, Md Mofazzel Hosen*, Yangyang Liu*, Sabin Regmi*, Klauss Dimitri**, **Madhab Neupane**. Poster presentation at Mini March Meeting – UCF physics, University of Central Florida, Florida. Title "*Application of edge detection techniques to ARPES data*", March 4, 2020.

21. Luis Persaud**, Christopher Sims*, Gyanendra Dhakal*, Firoza Kabir*, Md Mofazzel Hosen*, Yangyang Liu*, Sabin Regmi*, Klauss Dimitri**, **Madhab Neupane**. Poster presentation at APS March Meeting 2020, Denver. Title of the poster: "*Application of edge detection techniques to ARPES data*" Scheduled for March 2, 2020 (Canceled due to COVID-19 pandemic). https://meetings.aps.org/Meeting/MAR20/Session/C71.204

22. Firoza Kabir*, Md. Mofazzel Hosen*, Gyanendra Dhakal*, Xiaxin Ding, Narayan Poudel, Arjun Pathak, Yong Liu, Jianxin Zhu, Krzysztof Gofryk, and **Madhab Neupane**. Contributed talk at TMS 149th annual meeting and exhibition, 2020, San Diego, California. Title of the talk: "*Electronic structure and thermal transport measurement of GdxSb2-xTe3*", February 25, 2020. https://tms.zerista.com/event/member/661136

2019

23. Firoza Kabir*, Md. Mofazzel Hosen*, Gyanendra Dhakal*, Xiaxin Ding, Narayan Poudel, Krzysztof Gofryk, and **Madhab Neupane**. Contributed talk at TETI (https://teti.inl.gov/SitePages/Home.aspx) all-hands meeting, Purdue University, West Lafayette, Indiana, 2019. Title of the talk: "*ARPES measurement of model metallic fuel*", September 19, 2019.
24. Firoza Kabir*, Xiaxin Ding, M. Mofazzel Hosen*, Narayan Poudel, Gyanendra Dhakal*, Arjun K. Pathak, **Madhab Neupane,** and Krzysztof Gofryk. Poster presentation at Intern Poster Session (INL), 2019, Idaho state University, Idaho Falls, Idaho. Title of the poster: "*Electronic and transport properties of topological material GdxSb2-xTe3*", August 08, 2019.

25. Firoza Kabir*, Xiaxin Ding, Narayan Poudel, Tiankai Yao, Matthew Mann, Jason Harp, **Madhab Neupane**, Chris Marianetti, and Krzysztof Gofryk. Poster presentation at Energy Frontier Research Centers Principal Investigators (EFRCPI) meeting, 2019, Washington DC. Title of the poster: "*Electronic and thermodynamic properties of UZr2 and ThO2*", July 29, 2019. https://www.energyfrontier.us/content/2019-efrc-principal-investigators-meeting

26. Gyanendra Dhakal*, M. Mofazzel Hosen*, Wei-Chi Chu, Bahadur Singh, Klauss Dimitri**, BaoKai Wang, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**. Contributed talk at ANPA Conference 2019 (online presentation). Title of the talk: "*Observation of surface Dirac dispersion in transition metal dipnictides*", July 21, 2019. https://www.anpaglobal.org/p/anpa2019.html

27. Firoza Kabir*, M. Mofazzel Hosen*, Fairoja Cheenicode -Kabeer, Alex Aperis, Xiaxin Ding, Gyanendra Dhakal*, Klauss Dimitri**, Christopher Sims*, Sabin Regmi*, Luis Persaud*, Krzysztof Gofryk, Peter M. Oppeneer, Dariusz Kaczorowski, and **Madhab Neupane**. Contributed talk at ANPA Conference 2019 (online presentation). Title of the talk: "*Observation of multiple Dirac states in a magnetic topological material EuMg2Bi2*", July 21, 2019. https://www.anpaglobal.org/p/anpa2019.html

28. Klauss Dimitri**, M. Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Eric D. Bauer, Filip Ronning, Arun bansil, and **Madhab Neupane**. Contributed talk at ANPA Conference 2019 (online presentation). Title of the talk: "*Observation of Dirac-Like Surface State in Antiferromagnetic DySb*", July 21, 2019.

29. M. Mofazzel Hosen*, K. Dimitri**, A. K. Nandy, A. Aperis, R. Sankar, G. Dhakal*, P. Maldonado, F. Kabir*, C. Sims*, F. Chou, D. Kaczorowski, T. Durakiewicz, P. M. Oppeneer and **M. Neupane**. Competed for Nottingham presentation, PEC 2019, Florida. Title of the talk: "*Distinct multiple fermionic states in a single topological metal*." June 4, 2019
https://pec2019.com/wp-content/uploads/2019/06/79th-PHYSICAL-ELECTRONICS-CONFERENCE.pdf

30. Yangyang Liu*, John Beetar, Md Mofazzel Hosen*, Gyanendra Dhakal*, Christopher Sims*, Marc Etienne, Firoza Kabir*, Klauss Dimitri**, Sabin Regmi*, **Madhab Neupane**, and Michael Chini*. Contributed talk at CLEO 2019 San Jose. Title of the talk: "*Time- and Angle-Resolved Photoemission Spectroscopy using an Ultrafast XUV Source at 21.8 eV*", May 10, 2019.

31. Gyanendra Dhakal*, M. Mofazzel Hosen*, Wei-Chi Chu, Bahadur Singh, Klauss Dimitri**, BaoKai Wang, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**. Contributed talk at APS March meeting 2019 Boston. Title of the talk: "*Observation of surface Dirac dispersion in transition metal dipnictides*", March 5, 2019. https://meetings.aps.org/Meeting/MAR19/Session/E01

32. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane,** Contributed talk at APS March Meeting 2018, 8th March, 2019. Experimental observation of drumhead surface states in RAs_3 (R = Ca, Sr). http://meetings.aps.org/Meeting/MAR19/Session/X02.1

33. Firoza Kabir*, Md Mofazzel Hosen*, Fairoja Cheenicode-kabeer, Alex Aperis, Gyanendra Dhakal*, Klauss Dimitri**, Christotopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Peter Oppeneer, Dariusz Kaczorowski, **Madhab Neupane**. Poster presentation at FLAVS symposium 2019, University of Central Florida, Orlando, Florida. Title of the poster: *Observation of multiple Dirac states in* $EuMg_2Bi_2$, March 11, 2019.

34. Gyanendra Dhakal*, M. Mofazzel Hosen*, Wei-Chi Chu, Bahadur Singh, Klauss Dimitri**, BaoKai Wang, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**. Poster presentation at FLAVS symposium 2019, University of Central Florida, Orlando, Florida. Title of the poster: "*Observation of surface Dirac dispersion in transition metal dipnictides*," March 11, 2019.

35. Md Mofazzel Hosen*, Klauss Dimitri**, Ashis K Nandy, Alex Aperis, Raman Sankar, Gyanendra Dhakal*, Pablo Maldonado, Firoza Kabir*, Christopher Sims*, Fangcheng Chou, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter M Oppeneer, **Madhab Neupane**, Young Leaders contributor talk at 46th annual applied vacuum science and technology symposium 2018. 7th May, University of Central Florida, Orlando, Florida. *Distinct Multiple Fermionic States in a Single Topological Metal.* Chromeextension://oemmndcbldboiebfnladdacbdfmadadm/https://www.avs.org/AVS/files/49/497263a2-25ef-4b3c-bba0-7a2c49e18364.pdf

36. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**, Contributed talk at AVS symposium Florida chapter, 11th March, 2019. *Experimental observation of drumhead surface states in* RAs_3 *(R = Ca, Sr).* https://www.avs.org/Chapters/Florida/Annual-FLAVS-FSM-Symposium

37. Firoza Kabir*, Md Mofazzel Hosen*, Fairoja Cheenicode-kabeer, Alex Aperis, Gyanendra Dhakal*, Klauss Dimitri**, Christotopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Peter Oppeneer, Dariusz Kaczorowski, **Madhab Neupane**. Poster presentation at APS March meeting 2019, Boston. Title of the poster: *Observation of multiple Dirac states in* $EuMg_2Bi_2$, March 07, 2019. https://meetings.aps.org/Meeting/MAR19/Session/T70.78

38. Md Mofazzel Hosen*, Gyanendra Dhakal*, Baokai Wang, Klauss Dimitri**, Firoza Kabir*, Christopher Sims*, Sabin Regmi*, Tomasz Durakiewicz, Dariusz Kaczorowski, Arun Bansil, and **Madhab Neupane**, Poster presentations at AVS symposium Florida chapter, 11th March, 2019. *Experimental observation of drumhead surface states in RAs_3 (R = Ca, Sr)*. https://www.avs.org/Chapters/Florida/Annual-FLAVS-FSM-Symposium

- Award: Third place of the poster session.

39. Klauss Dimitri**, Md Mofazzel Hosen, Gyanendra Dhakal, Hongchul Choi, Firoza Kabir, Christopher Sims, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**, Poster presentation at the 2019 APS March meeting, Boston; Title of Poster: "*Observation of Dirac States in Superconducting Materials*", 7 March 2019 http://meetings.aps.org/Meeting/MAR19/Session/T70.86

40. Klauss Dimitri**, Md Mofazzel Hosen, Gyanendra Dhakal, Hongchul Choi, Firoza Kabir, Christopher Sims, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**, Poster presentation at the 2019 Undergraduate Research Showcase, Orlando, FL; Title of Poster: "*Observation of Dirac States in Superconducting Materials*", 4 April 2019

41. Klauss Dimitri**, Md Mofazzel Hosen, Gyanendra Dhakal, Hongchul Choi, Firoza Kabir, Christopher Sims, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane,** Poster presentation at the 2019 Plasma Conference, Orlando, FL; Title of Poster: "*Observation of Dirac States in Superconducting Materials*", January 2019

42. Klauss Dimitri**, Md Mofazzel Hosen, Gyanendra Dhakal, Hongchul Choi, Firoza Kabir, Christopher Sims, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**, Poster presentation at the 2019 AVS Conference, Orlando, FL; Title of Poster: "*Observation of Dirac States in Superconducting Materials*", 12 March 2019

43. Yangyang Liu*, John Beetar, Md Mofazzel Hosen, Gyanendra Dhakal, Christopher Sims, Marc Etienne, Firoza Kabir, Klauss Dimitri, Sabin Regmi, **Madhab Neupane**, and Michael Chini, Contributed talk at APS March meeting 2019, Boston; Title of the talk: "*Time- and angle-resolved photoemission spectroscopy using ultrafast XUV source at around 20 eV*", 5 March 2019 (Contributed) http://meetings.aps.org/Meeting/MAR19/Session/F23.13

44. Yangyang Liu*, John Beetar, Md Mofazzel Hosen*, Gyanendra Dhakal*, Christopher Sims*, Marc Etienne, Firoza Kabir*, Klauss Dimitri*, Sabin Regmi*, **Madhab Neupane**, and Michael Chini, Contributed talk at CLEO 2019, San Jose; Title of the talk: **"***Time- and angle-resolved photoemission spectroscopy using an ultrafast XUV source at 21.8 eV***",** 8 March 2019 (Contributed) https://event.crowdcompass.com/cleo2019/activity/W5Db7HJnQS

45. Sabin Regmi*, Md Mofazzel Hosen*, Gyanendra Dhakal*, Klauss Dimitri**, Pablo Maldonado, Alex Aperis, Firoza Kabir*, Christopher Sims*, Peter Riseborough, Peter Oppeneer, Darius Kaczorowski, Tomasz Durakiewicz, **Madhab Neupane**, Poster presentation at APS March meeting 2019, Boston; Title: "*Discovery of topological nodal-line fermionic phase in a magnetic material GdSbTe*", 7 March 2019 http://meetings.aps.org/Meeting/MAR19/Session

46. Firoza Kabir*, M. Mofazzel Hosen*, Hugo Aramberri, Gyanendra Dhakal*, Klauss Dimitri**, Christopher Sims*, Sabin Regmi*, Peter M. Oppeneer, Hsin Lin, Tomasz Durakiewicz, Dariusz Kaczorowski, Nicholas Kioussis and **Madhab Neupane**. Poster presentation at Plasma 2019 workshop, University of Central Florida, Orlando, Florida. Title of the poster: "*Dirac like dispersion in nearly compensated semimetal* $ZrAs_2$", January 18, 2019.

2018

47. Klauss Dimitri**, M Mofazzel Hosen*, Gyanendra Dhakal*, Hongchul Choi, Firoza Kabir*, Christopher Sims*, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**, Poster presentation at 2018 UCF Undergraduate Research Showcase, Orlando, FL. Title: *"Dirac state in a centrosymmetric superconductor α-*$PdBi_2$*"*, April 5, 2018.

- **Awarded 1st Place Judge's Award amongst hundreds of other students and interviewed for news story**. https://sciences.ucf.edu/news/undergraduate-researcher-recognized-for-new-compound/

48. Klauss Dimitri**, M Mofazzel Hosen*, Gyanendra Dhakal*, Hongchul Choi, Firoza Kabir*, Christopher Sims*, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**. Poster presentation at 2018 FL-AVS, Orlando, FL. Title: *"Dirac state in a centrosymmetric superconductor α-*$PdBi_2$*"*, May 12, 2018.

- **Awarded 3rd Place amongst both Undergraduate and Graduate presenters.**

49. Klauss Dimitri**, M Mofazzel Hosen, Gyanendra Dhakal, Hongchul Choi, Firoza Kabir*, Christopher Sims*, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane**. Oral Presentation at 2018 ANPA e-conference. Title: *"Dirac state in a centrosymmetric superconductor α-*$PdBi_2$*"*, July 21, 2018.

- **One of 3 to be awarded Best Student Presenter Award**

50. Klauss Dimitri**, M Mofazzel Hosen*, Gyanendra Dhakal*, Hongchul Choi, Firoza Kabir*, Christopher Sims*, Dariusz Kaczorowski, Tomasz Durakiewicz, Jian-Xin Zhu, **Madhab Neupane.** Oral Presentation at 2018 APS March Meeting. Title: *"Dirac state in a centrosymmetric superconductor α-*$PdBi_2$*"*, March 28, 2018.

51. Gyanendra Dhakal*, M. Mofazzel Hosen*, Klauss Dimitri**, Alex Aperis, Pablo Maldonado, Ilya Belopolski, Firoza Kabir*, Christopher Sims**, Zahid Hasan, Dariusz Kaczorowski, Tomasz

Durakiewicz, Peter Oppeneer, **Madhab Neupane**. Contributed talk at ANPA web conference 2018. Title of the talk: "*Observation of Gapless Dirac Surface States in ZrGeTe*", July 22, 2018. https://conference.anpaglobal.org/p/anpa-2018.html

52. Gyanendra Dhakal*, M. Mofazzel Hosen*, Klauss Dimitri**, Alex Aperis, Pablo Maldonado, Ilya Belopolski, Firoza Kabir*, Christopher Sims*, Zahid Hasan, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter Oppeneer, **Madhab Neupane**, Poster presentation at FLAVS symposium 2019, University of Central Florida, Orlando, Florida. Title of the poster: "*Observation of Gapless Dirac Surface States in ZrGeTe"*, May7, 2018

53. Gyanendra Dhakal*, M. Mofazzel Hosen*, Klauss Dimitri**, Alex Aperis, Pablo Maldonado, Ilya Belopolski, Firoza Kabir*, Christopher Sims*, Zahid Hasan, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter Oppeneer, **Madhab Neupane**, Contributed talk at APS March meeting 2018 Los-Angeles, Title of the talk: "*Observation of Gapless Dirac Surface States in ZrGeTe"*, March 5, 2018. https://meetings.aps.org/Meeting/MAR18/Session/C10.3

54. Md Mofazzel Hosen*, Gyanendra Dhakal*, Klauss Dimitri**, Pablo Maldonado, Alex Aperis, Firoza Kabir*, Christopher Sims*, Peter Riseborough, Peter M Oppeneer, Dariusz Kaczorowski, Tomasz Durakiewicz, **Madhab Neupane**, Contributed talk at APS March Meeting 2018, 6th March, Los Angeles, California. *Discovery of topological nodal-line fermionic phase in a magnetic material GdSbTe*. https://meetings.aps.org/Meeting/MAR18/Session/H08.5

55. Firoza Kabir*, M. Mofazzel Hosen*, Hugo Aramberri, Gyanendra Dhakal*, Klauss Dimitri**, Christopher Sims*, Sabin Regmi*, Peter M. Oppeneer, Hsin Lin, Tomasz Durakiewicz, Dariusz Kaczorowski, Nicholas Kioussis and **Madhab Neupane**. Poster presentation at FLAVS symposium 2018, University of Central Florida, Orlando, Florida. Title of the poster: "*Dirac like dispersion in nearly compensated semimetal* $ZrAs_2$", May 07, 2018

56. Md Mofazzel Hosen*, Klauss Dimitri**, Ashis K Nandy, Alex Aperis, Raman Sankar, Gyanendra Dhakal*, Pablo Maldonado, Firoza Kabir*, Christopher Sims*, Fangcheng Chou, Dariusz Kaczorowski, Tomasz Durakiewicz, Peter M Oppeneer, **Madhab Neupane**, Poster presentation at 46th annual applied vacuum science and technology symposium 2018. 7th May, University of Central Florida, Orlando, Florida. *Distinct Multiple Fermionic States in a Single Topological Metal.* Chromeextension://oemmndcbldboiebfnladdacbdfmadadm/https://www.avs.org/AVS/files/49/497263a2-25ef-4b3c-bba0-7a2c49e18364.pdf

- Award: Winner of the poster session (first place).

2017

57. Md Mofazzel Hosen*, Klauss Dimitri**, Ilya Belopolski, Pablo Maldonado, Raman Sankar, Nagendra Dhakal*, Gyanendra Dhakal*, Taiason Cole**, Peter M. Oppeneer, Dariusz

Kaczorowski, Fangcheng Chou, M. Zahid Hasan, Tomasz Durakiewicz, and **Madhab Neupane**, Contributed talk at APS March Meeting 2017, 13th March, New Orleans, Louisiana. *Tunability of the topological nodal-line semimetal phase in ZrSiX-type materials.* http://meetings.aps.org/Meeting/MAR17/Session/B44.3.

58. Md Mofazzel Hosen*, Klauss Dimitri**, Ilya Belopolski, Pablo Maldonado, Raman Sankar, Nagendra Dhakal*, Gyanendra Dhakal*, Taiason Cole**, Peter M. Oppeneer, Dariusz Kaczorowski, Fangcheng Chou, M. Zahid Hasan, Tomasz Durakiewicz, and **Madhab Neupane**, poster presentation at AVS symposium Florida chapter 2017, 6th March, University of Central Florida, Orlando , Florida. *Tunability of the topological nodal-line semimetal phase in ZrSiX-type materials*.chromeextension://oemmndcbldboiebfnladdacbdfmadadm/https://www.avs.org/AVS/files/cf/cf1ceb23-df0e-4834-95d6-6050cbf869e0.pdf

59. Klauss Dimitri**, M Mofazzel Hosen*, Ilya Belopolski, Nicholas Wakeham, Nagendra Dhakal*, Jian-Xin Zhu, M Zahid Hasan, Eric D Bauer, Filip Ronning, **Madhab Neupane**. Poster presentation at APS March Meeting 2017, New Orleans, LA. Title: *"Observation of Dirac-Like Semi-Metallic Phase in NdSb"* , March 15th, 2017.

60. Klauss Dimitri**, M Mofazzel Hosen*, Ilya Belopolski, Nicholas Wakeham, Nagendra Dhakal*, Jian-Xin Zhu, M Zahid Hasan, Eric D Bauer, Filip Ronning, **Madhab Neupane**. Poster presentation at 2017 FL-AVS/FSM joint symposium, Orlando, FL. Title: *"Observation of Dirac-Like Semi-Metallic Phase in NdSb"*, March 3, 2017.

2016

61. Md Mofazzel Hosen*, Klauss Dmitri*, Gyanendra Dhakal*, Due Lee, Talat Rahman, **Madhab Neupane**, poster presentation at Nano Florida symposium 2016. 25th September, Orlando, Fl. *Thickness dependent electronic structure of monochalcogenide*s. http://nanoscience.ucf.edu/nanoflorida/

62. M Mofazzel Hosen*, Klauss Dimitri**, Ilya Belopolski, Daniel S Sanchez, Raman Sankar, Maria Szlawska, Su-Yang Xu, Klauss Dimitri, Nagendra Dhakal, Pablo Maldonado, Peter M Oppeneer, Dariusz Kaczorowski, Fangcheng Chou, M Zahid Hasan, Tomasz Durakiewicz, **Madhab Neupane**. Poster presentation at NANOFLORIDA 2016, Orlando, FL. Title: *"Observation of Dirac-Like Semi-Metallic Phase in NdSb"*, September 25, 2016.

- **Teaching activity**

Class Taught:

2021 Spring: Phys 2048C Studio, 99 students
2020 Fall: Modern Physics Phy3101, 90 students
2019 Fall: Phys 2048C Studio, 94 students

2019 Spring: Phys2048C Studio, 99 students
2018 Fall: Phys2048C Studio, 99 students
2018 Spring: Phys2048C, Physics for Engineers & Scientist-I, 286 students
2017 Fall: Phys2048C, Physics for Engineers & Scientists-I, 286 students
2017 Spring: Phys2048C, Physics for Engineers & Scientists-I, honors class, 26 students
2016 Fall: Phys2048C, Physics for Engineers & Scientists-I, honors class, 22 students
2011-2014: Helping teaching and grading undergraduates' courses; supervised undergraduate junior thesis and experimental projects of graduate students at Princeton University
2004-2008: Teaching assistance (TA) at Boston College; Homework grading, office hours, teaching for undergraduates and graduates students
2001-2003: Lecturer at Tribhuvan University, Kathmandu Nepal; taught master level courses

- **Service activity**

Professional Service

- Member of the ATTO-2021 organizing committee

- Session co-chair at 2019 annual symposium Florida Chapter of the AVS science and technology society symposium, Session: Thin films and 2D materials on March 11-12, 2019; Member of organizing committee; https://www.avs.org/Chapters/Florida/Annual-FLAVS-FSM-Symposium

- Session chair at APS March meeting 2019; Session R05: Topological Superconductivity: Bi2Se3, SrRuO4, and Other Materials Scheduled on March 07, 2019 (https://meetings.aps.org/Meeting/MAR19/Session/R05)

- Session chair at APS March meeting 2019; Session A03: Interaction and dynamics in Topological Systems: Scheduled on March 04, 2019 http://meetings.aps.org/Meeting/MAR19/Session/A03

- Plasma 2019 Workshop; University of Central Florida, Orlando, Florida; member of the local organizing committee, January 18-21, 2019 https://plasma2019workshop.wordpress.com/about/

- Session chair at APS March meeting 2018; Session F40: Properties of Dirac Materials: Scheduled on March 6, 2018 (http://meetings.aps.org/Meeting/MAR18/Session/F40)

- Session chair at workshop on "Advances in Dirac and Weyl Materials": Session II (1:00pm-4:00pm), December 14, 2017, University of North Florida, Jacksonville (https://www.unf.edu/coas/physics/Dirac_and_Weyl_Materials_Workshop/Advances_in_Dirac_and_Weyl_Materials_Workshop.aspx)

- Session chair at APS March meeting 2017; Session V44: Dirac and Weyl Semimetal: Theory V

March 16, 2017, 2:30 PM 391 (http://meetings.aps.org/Meeting/MAR17/Session/V44)

- Session chair at APS March meeting 2015; Session S7: Dirac & Weyl Semimetals (http://meeting.aps.org/Meeting/MAR15/Session/S7)

- Session chair at APS March meeting 2014; Session Y43: Topological insulators: Engineered structure II (http://meetings.aps.org/Meeting/MAR14/Session/Y43)

- Peer reviewer of various journals: (a) Physical Review Letter (PRL) and Physical Review B (PRB), (b) Nature sub-journals including Nature Materials, Nature Physics, Nature Communication, Scientific Report, etc.; (c) Science and Science Advanced.

- Grant proposal reviewer for (i) National Science foundation (CMP), (ii) Department of Energy (DOE) Basic Energy Science (CMP) , (iii) Air force office of scientific research (AFOSR) and (iv) for the beamline proposals at various national laboratories.
- Grant reviewer panelist at National Science Foundation
- Co-organizer of a focus topic on "Topological Materials: Synthesis, Characterization, and Modeling" for DMP's 2017 program of APS March Meeting.
- Judge @ meeting of the Florida chapter of the AVS, 2017.
- FL-vacuum society; Organizing committee, career panel member, session co-chair, May 2018.

University/Department Service/Outreach

(1) Member of three departmental committees:
- Colloquium committee: proposing, inviting and hosting various experts in the field of Physics for the colloquium at UCF physics (member from fall 2016); serving as **a chair of the colloquium committee from Spring 2019**.
- Graduate admission committee: screening and recruiting graduate applicants from fall 2016 to present
- Candidacy exam committee: preparing and running the PhD candidacy exam fall 2018

(2) Member of the Atto 2022 conference
(3) College of Science Research Incentive Award (RIA) committee: elected as a committee member spring 2019
(4) Judge at the meeting of the Florida chapter of the AVS 2016, 2017 held at UCF
(5) Gave a talk on Physics Career exploration day "One-way motion electrons in a superhighway", an outreach program conducted by UCF to high school students, October 21, 2017.
(6) Judge at the meeting of nano Florida 2016 held at UCF