

Harikrishnan S. Nair (Hari Nair)

Assistant Professor
Department of Physics, 500 W University Ave
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EDUCATION

Doctor of Philosophy, Experimental Condensed Matter Physics, Indian Institute of Science, Bangalore, India, 2009

- *Thesis: Phase transitions and magnetic order in multiferroic and ferromagnetic rare earth manganites, supervisor: Dr Suja Elizabeth*

Master of Science, Physics, M. G. University, Kottayam, Kerala, India, 2002

- First Class, 70.35%

Bachelor of Science, Physics, Kerala University, Kollam, Kerala, India, 2000

- First Class, 90.5%

RESEARCH INTERESTS / RESEARCH PROFILE

Discovery and study of novel magnetic systems, focusing on quantum magnets, multiferroics and materials for energy storage. My current interest is in layered honeycomb magnets.

RESEARCH EXPERIENCE/ EMPLOYMENT HISTORY

Assistant Professor, Department of Physics, The University of Texas at El Paso, El Paso, Texas, Sep 2017 – present.

- *Novel quantum magnets, multiferroics and energy materials for sustainable storage of data and energy.*

Postdoctoral Fellow, Department of Physics, Colorado State University, Fort Collins, Colorado, Feb 2016-Aug 2017

- *Studies on rare earth silicate pyrochlore quantum magnets as spin liquids. Supervisor: Prof. Kate Ross.*

Postdoctoral Fellow, Department of Physics, University of Johannesburg, Johannesburg, South Africa, Oct 2014-Dec 2015

- *Rare earth and transition metal caged structure intermetallic thermoelectrics. Supervisor: Prof. Andre M. Strydom.*

Scientific Staff, Juelich Center for Neutron Scattering-2, Forschungszentrum Juelich GmbH, Juelich, NRW, Germany, Apr 2011-Jul 2014

- *Frustrated A-site spinel quantum spin liquids. Supervisor: Prof. Thomas Brueckel.*

Postdoctoral Fellow, Department of Physics, Indian Institute of Science, Bangalore, India, Feb 2011-Apr 2011

Researcher, Department of Physics, Indian Institute of Science, Bangalore, India, Oct 2009-Sep 2010

PhD Scholar, Department of Physics, Indian Institute of Science, Bangalore, India, Jun 2002-Dec 2009

- *Rare earth perovskite multiferroics.*

Visiting Scholar, Physikalisches Institut II, Universität zu Köln, Germany, Oct 2010- Jan 2011

Visiting Scholar, Forschungszentrum Jülich GmbH, Germany, Jun 2009-Sep 2009

Visiting Scholar, Max Planck Institute for Chemical Physics of Solids, Germany, May 2008 - Jul 2008

Visiting Scholar, Leibniz Institute for Solid State and Materials Research, Germany, Oct 2006 - Dec 2006

AREAS OF TEACHING EXPERTISE

Experienced in teaching undergraduate physics courses to large and diverse classes. Have taught electromagnetism to senior undergraduates and to graduate classes. Developed a graduate level course on experimental methods in condensed matter physics.

TEACHING EXPERIENCE

Lecturer: Introductory Mechanics PHYS 2320, Department of Physics, UTEP. spring '22, spring '23. *Undergraduate level calculus-based course. Typically, 70-120 students attend.*

Lecturer: Introductory Mechanics PHYS 2420, Department of Physics, UTEP. fall '18, fall '19. *Undergraduate level calculus-based course. Typically, 70-120 students attend.*

Lecturer: General Physics II Electricity and Magnetism PHYS 1404, Department of Physics, UTEP. fall '17, fall '21, fall '22. *Undergraduate level algebra-based course. Typically, 70-120 students attend.*

Lecturer: General Physics I Mechanics PHYS 1403, Department of Physics, UTEP. spring '18, spring '19. *Undergraduate level algebra-based course. Typically, 70-120 students attend.*

Lecturer: Electromagnetism I PHYS 4341, Department of Physics, UTEP. spring '20. *Electromagnetism for junior level physics majors. Typically, 15 students attend. Textbook used – Introduction to Electrodynamics by David J. Griffiths.*

Lecturer: Electromagnetics II PHYS 4342, Department of Physics, UTEP. spring '20, spring '21, spring '22, spring '23. *Electromagnetism for senior level physics majors. Typically, 15 students attend. Textbook used – Introduction to Electrodynamics by David J. Griffiths.*

Lecturer: Special Topics in Physics PHYS 5393, Department of Physics, UTEP. fall '19. *Experimental methods in condensed matter physics for physics graduates. Was offered as an independent study.*

Lecturer: Physics Seminar PHYS 3280, Department of Physics, UTEP. spring '19, spring '20. *A seminar course for undergraduate physics majors. Typically, 10-15 students.*

Lecturer: Conceptual Physics PSCI 2303, Department of Physics, UTEP. fall '18. *Basic conceptual level physics for education majors. Typically, 10-15 students.*

Lecturer: Physical Science II PSCI 3304, Department of Physics, UTEP. fall '22. *Basic conceptual level physics for education majors. Typically, 10-15 students.*

Lecturer: Electrodynamics PHYS 5341, Department of Physics, UTEP. spring '21. *Electrodynamics for physics graduates. Textbook used – Electrodynamics by J. D. Jackson.*

Lecturer: Advanced Statistical Mechanics PHYS 5365, Department of Physics, UTEP. fall '20. *Statistical mechanics for physics graduates. Textbook used – Statistical Mechanics by Pathria.*

GRANTS

McKee Foundation Grant, 2023
ISSR Wolfschlagel Funds, College of Science, UTEP, 2022
Acquisition of an MPMS, NSF MRI, 2020 (coPI)
The Eppley Foundation Award for Advanced Scientific Research, 2019
University Research Initiative, UTEP, 2019
Rising Star Award, University of Texas, 2018

AWARDS / DISTINCTIONS

Nominated to Alfred P Sloan Research Fellowship, 2019
Senior Research Fellowship, Indian Institute of Science, India, 2004
Junior Research Fellowship, Indian Institute of Science, India, 2002
Graduate Aptitude Test in Engineering (GATE) 97 percentile, MHRD, India, 2002
Joint CSIR-UGC National Eligibility Test, India, 2002

BOOKS/ BOOK CHAPTERS

Magnetocaloric effect in frustrated magnetic systems: from bulk to nano, Chapter 8 in "Magnetic Nanostructured Materials", Ed. A. A. El-Gendy, J. M. Barandaran and R. L. Hadimani, Elsevier, 2018

PROFESSIONAL MEMBERSHIPS / ORGANIZATIONS

American Physical Society, 2017-2023
Materials Research Society, 2018-2021
Neutron Scattering Society of America, 2019 –

COMMUNITY INVOLVEMENT / ADMINISTRATIVE ACTIVITY / SERVICE

2023

- *Member*, MS thesis committee of Philip Oyedele, Department of Physics, UTEP.
- *Reviewer*, neutron scattering user proposals, Oak Ridge National Laboratory.
- *Department Chair of Awards Committee*, Best Thesis and Dissertation Awards Committee of CoS, UTEP.
- *Department Representative*, Faculty Senate, UTEP.
- *Member*, Graduate Admissions Committee, Department of Physics, UTEP.
- *Organizing member*, Invited Speaker Selection Committee, Focus Topic 09.01.01, “Fe-based superconductors”, APS March Meeting 2023 [January 2023]
- *Member*, Awards committee, GSRG awards from College of Science UTEP [February 2023]
- *Judge*, El Paso STEM Expo competition, a science and technology fair for high school students in El Paso, 11 February 2023

2022

- *Chair*, MS thesis committee of Melaku S. Tafere, Department of Physics, UTEP.
- *Co-Chair*, MS thesis committee of Mariana Castellanos, Department of Physics, UTEP.
- *Member*, PhD dissertation committee of Mohamed F. Sanad, Department of Chemistry, UTEP.
- *Department Chair of Awards Committee*, Best Thesis and Dissertation Awards Committee of CoS, UTEP.
- *Department Representative*, Faculty Senate, UTEP.
- *Member*, Graduate Admissions Committee, Department of Physics, UTEP.
- *Organizing member*, Invited Speaker Selection Committee, Focus Topic 09.01.01, “Fe-based superconductors”, APS March Meeting 2023 [August 2022].

2021

- *Member*, Graduate Admissions Committee, Department of Physics, UTEP.
- *Member*, MS thesis committee of Sujit Bati, Tribhuvan University, 10 January 2021.
- *Member*, MS thesis committee of Bhishm Shankar Joshi, Tribhuvan University, 2 March 2021.
- *Session Chair*, B43: Charge Density Waves, APS March Meeting Virtual, 15-19 March.
- *Session Chair*, NM06: Manipulation and Detection of Physical Properties of Two-Dimensional Quantum Materials, MRS Spring Meeting Virtual, 17-23 April.
- *Member*, Summer Research Fellowship selection committee, UTEP, May.
- *Chair*, MS thesis committee of Nathan Episcopo, Dept. Physics, UTEP, May.
- *Chair*, MS thesis committee of Cein H. Mandujano, Dept. Physics, UTEP, July.
- *Member*, PhD thesis proposal committee of Mohamed Sanad, Dept. Chemistry, UTEP, July.
- *Reviewer*, Grant proposals, Basic Energy Sciences, Department of Energy.
- *Reviewer*, Neutron scattering user proposals, Oak Ridge National Laboratory.

2020

- *Judge*, COURI symposia, 27-30 April 2020.
- *Member*, Advisory committee, Two-day seminar in Recent trends and innovations in physics, 12-13 March at C. M. S. College, Kerala, India.

- *Reviewer*, Neutron scattering user proposals, Oak Ridge National Laboratory.
- *Reviewer*, Neutron scattering user proposals, NIST Center for Neutron Scattering.
- *Member*, PhD thesis proposal committee of Luis M. Matinez, Department of Physics/MASE.
- *Member*, Faculty search committee to hire an assistant professor in quantum information science in department of physics, UTEP.
- *Member*, Department Committee to revise undergraduate introductory physics course structure (PHYS 2420).

2019

- *Co-chair*, Symposium session "Defects in 2D Materials", Materials Research Society Spring Meeting, Phoenix, AZ, 22-26 April.
- *Judge*, El Paso STEM Expo competition, a science and technology fair for high school students in El Paso, 27 April.

2018

- *Judge*, COURI Symposia, UTEP.
- *Member*, Core committee for X ray diffractometers.
- *Referee*, Rutherford International Fellowship Program, Rutherford Appleton Laboratory, UK.
- *Member*, MS thesis committee (Luis M. Martinez), Department of physics, UTEP.

STUDENT THESES

Magnetic structures of sawtooth olivines Mn_2SiX_4 ($X = S, Se$) determined through neutron powder diffraction, Melaku S. Tafere, MS thesis, November 2022.

Lead-free piezoelectric ceramics, Omar A. Salas, SURPASS thesis, August 2021.

Sawtooth-based chromate multiferroic: insight into structure and magnetism, Cein H. Mandujano, MS Thesis, July 2021.

A study of the frustrated honeycomb battery material $Na_2Ni_2TeO_6$, Nathan Episcopo, MS Thesis, May 2021.

Investigation of thermoelectric and optical properties of $CoTa_2O_6$ and $MgTa_2O_6$, Sujit Bati (MSc physics, Tribhuvan University, Nepal), 10 February 2021.

Study of electronic and thermoelectric properties of perovskite $CaNiO_3$, Bhishm Shankar Joshi (MSc physics, Tribhuvan University, Nepal), 8 March 2021.

Can corundum realize a multiferroic? Cristian Rueda, MERITUS thesis, February 2020.

Realizing novel quantum magnets with a honeycomb architecture, Kinley Wangmo, MERITUS thesis, February 2020.

Low dimensionality of magnetism in trirutile $CoTa_2O_6$ and its derivatives, Raju Baral, MS Thesis, June 2019.

PUBLICATIONS / PRESENTATIONS / ABSTRACTS

- (79) *Evidence of long-range and short-range magnetic ordering in the honeycomb $\text{Na}_3\text{Mn}_2\text{SbO}_6$ oxide*, D. Yadav, Q. Zhang, K. Gofryk, H. S. Nair, S. Uma, **Inorganic Chemistry** 62, 7403, 2023.
- (78) *Magnetic structures and excitations in sawtooth olivine chalcogenides Mn_2SiX_4 ($X = \text{S}, \text{Se}$)*, H. C. Mandujano, M. S. Tafere, Naveen Kumar C. M., T. D. Creason, T. M. McWhorter, K. Gofryk, T. W. Heitmann, Q. Zhang, B. Saporov, H. S. Nair, **Dalton Transactions** 52, 5652, 2023.
- (77) *Magnetic structure and crystal field states of $\text{Pr}_2\text{Pd}_3\text{Ge}_5$: μSR and neutron scattering investigations*, V. K. Anand, D. T. Adroja, C. Ritter, D. Das, H. S. Nair, A. Bhattacharyya, L. Liborio, S. Sturniolo, F. L. Pratt, Duc Le, G. Andre, H. Luetkens, A. D. Hillier, and Z. Hossain, **Physical Review B** 107, 104412, 2023.
- (76) *Sawtooth lattice multiferroic BeCr_2O_4 : Non-collinear magnetic structure and multiple magnetic transitions*, H. C. Mandujano, A. Metta, N. Barić, Q. Zhang, W. Tabis, Naveen Kumar C. M., H. S. Nair, **Physical Review Materials** 7, 024422, 2023.
- (75) *A ferrotoroidic candidate with well-separated spin chains*, J. Zhang, X. Wang, L. Zhou, G. Liu, D. T. Adroja, I. da Silva, F. Demmel, D. Khalyavin, J. Sannigrahi, H. S. Nair, L. Duan, J. Zhao, Z. Deng, R. Yu, X. Shen, R. Yu, H. Zhao, J. Zhao, Y. Long, Z. Hu, H.-J. Lin, T.-S. Chan, C.-T. Chen, W. Wu, C. Jin, **Advanced Materials** 34, 2106728, 2022.
- (74) *Spin reorientation to a Γ_3 (C_x, F_y, A_z) configuration and anisotropic spin-phonon coupling in a $\text{Sm}_{0.5}\text{Y}_{0.5}\text{FeO}_3$ single crystal*, B. Mali, J. Sunil, H. S. Nair, C. Narayana, and S. Elizabeth, **Physical Review B** 105, 214417, 2022.
- (73) *Magnetic frustration-driven ground state properties of rare-earth magnetic ions on a breathing kagome lattice: A review of the $\text{Gd}_3\text{Ru}_4\text{Al}_{12}$ structure type magnets*, M. O. Ogunbunmi, H. S. Nair, A. M. Strydom, **Critical Reviews in Solid State and Materials Sciences** 1-22, 2022.
- (72) *Low temperature domain wall freezing and non-equilibrium dynamics in the transverse-field Ising model material CoNb_2O_6* , C. L. Sarkis, S. Säubert, V. Williams, E. S. Choi, T. R. Reeder, H. S. Nair, and K. A. Ross, **Physical Review B** 104, 214424, 2021.
- (71) *Magnetic structure, excitations and short-range order in honeycomb $\text{Na}_2\text{Ni}_2\text{TeO}_6$* , N. Episcopo, P. -H. Chang, T. W. Heitmann, K. Wangmo, J. M. Guthrie, M. Fitta, R. A. Klein, N. Poudel, K. Gofryk, R. R. Zope, C. M. Brown, H. S. Nair, **Journal of Physics Condensed Matter**, 33, 375803, 2021.
- (70) *Absence of long-range magnetic order in lithium-containing honeycombs in the Li-Cr-Sb(Te)-O phases*, H. C. Mandujano, S. L. Gonzalez, N. Episcopo, U. Sitharaman, N. Poudel, K. Gofryk, Y. E. Garay, J. A. Lopez, Q. Zhang, S. Calder, H. S. Nair, **Journal of Physics Condensed Matter**, 33, 295802, 2021.
- (69) *Semiconducting behaviour in the Remeika phase $\text{Pr}_3\text{Ir}_4\text{Ge}_{13}$* , R. K. Kamadurai, M. O. Ogunbunmi, H. S. Nair, A. M. Strydom, **Journal of Alloys and Compounds**, 872, 159481,

2021.

(68) *Magnetocaloric effect in a frustrated Gd-garnet with no long-range magnetic order*, C. M. N. Kumar, R. Baral, Y. Tian, R. Li, N. Poudel, K. Gofryk, N. Barišić, B. Kiefer, J. H. Ross Jr., H. S. Nair, **Inorganic Chemistry** 59, 15144, 2020.

(67) *Unravelling competing microscopic interactions at a phase boundary: A single-crystal study of the metastable antiferromagnetic pyrochlore $\text{Yb}_2\text{Ge}_2\text{O}_7$* , C. L. Sarkis, J. G. Rau, L. D. Sanjeewa, M. Powell, J. Kolis, J. Marbey, S. Hill, J. A. Rodriguez-Rivera, H. S. Nair, D. R. Yahne, S. Säubert, M. J. P. Gingras, and K. A. Ross, **Physical Review B** 102, 134418, 2020.

(66) *Spin reorientation in antiferromagnetic $\text{Dy}_2\text{FeCoO}_6$ double perovskite*, G. R. Haripriya, T. W. Heitmann, D. K. Yadav, G. C. Kaphle, M. P. Ghimire, R. Pradheesh, J. Joshi, P. Vora, K. Sethupathi, V. Sankaranarayanan, H. S. Nair, **Journal of Physics Condensed Matter** 33, 025802, 2020.

(65) *Reentrant spin reorientation transition and Griffiths-like phase in antiferromagnetic $\text{TbFe}_{0.5}\text{Cr}_{0.5}\text{O}_3$* , B. Mali, H. S. Nair, T. W. Heitmann, H. Nhalil, D. Antonio, K. Gofryk, S. R. Bhandari, M. P. Ghimire, S. Elizabeth, **Physical Review B** 102, 014418, 2020.

(64) *Magnetic phase transitions and magnetocaloric effect in ternary rhombohedral Laves phases of $\text{Gd}_2\text{Rh}_3\text{Ge}$ and $\text{Er}_2\text{Rh}_3\text{Ge}$* , B. Sahu, J. Y. Law, A. M. Strydom, V. Franco, H. S. Nair, **Journal of Magnetism and Magnetic Materials** 514, 166988, 2020.

(63) *Superzone gap formation and possible Kondo-like features in the quasi-skutterudite PrFe_2Ga_8 compound*, M. O. Ogunbunmi, H. S. Nair, A. M. Strydom, **Journal of Physical Society of Japan** 30, 011114, 2020.

(62) *Signatures of low-dimensional magnetism and short-range magnetic order in Co-based trirutiles*, R. Baral, H. S. Fierro, C. Rueda, B. Sahu, A. M. Strydom, N. Poudel, K. Gofryk, F. S. Manciu, C. Ritter, T. W. Heitmann, B. P. Belbase, S. Bati, M. P. Ghimire, H. S. Nair, **Physical Review B** 100, 184407, 2019.

(61) *A novel strongly spin-orbit coupled quantum dimer magnet: $\text{Yb}_2\text{Si}_2\text{O}_7$* , G. Hester, H. S. Nair, T. Reeder, D. R. Yahne, T. N. DeLazzer, L. Berges, D. Ziat, J. R. Neilson, A. A. Aczel, G. Sala, J. A. Quilliam, K. A. Ross, **Physical Review Letters** 123, 027201, 2019.

(60) *Field-independent features in the magnetization and specific heat of $\text{Sm}_3\text{Co}_4\text{Ge}_{13}$* , H. S. Nair, K. R. Kumar, B. Sahu, S. P. Xhakaza, P. Mishra, D. Samal, S. K. Ghosh, B. R. Sekhar, A. M. Strydom, **Crystals (Invited)** 9, 322, 2019.

(59) *Antiferromagnetism and the emergence of frustration in saw-tooth lattice chalcogenide olivines $\text{Mn}_2\text{SiS}_{4-x}\text{Se}_x$ ($x = 0-4$)*, H. Nhalil, R. Baral, B. O. Khamala, A. Cosio, S. R. Singamaneni, M. Fitta, D. Antonio, K. Gofryk, R. R. Zope, T. Baruah, B. Saparov, and H. S. Nair, **Physical Review B** 99, 184434, 2019.

(58) *Contrasting the magnetism in $\text{La}_{2-x}\text{Sr}_x\text{FeCoO}_6$ ($x = 0, 1, 2$) double perovskites: the role of electronic and cationic disorder*, G. R. Haripriya, C. M. N. Kumar, R. Pradheesh, L. M. Martinez, C. L. Saiz, S. R. Singamaneni, T. Chatterji, V. Sankaranarayanan, K. Sethupathi, B. Kiefer, H. S. Nair, **Physical Review B** 99, 184411, 2019.

(57) *Crystal growth of quantum magnets in the rare-earth pyrosilicate family $R_2Si_2O_7$ ($R = Yb, Er$) using the optical floating zone method*, H. S. Nair, T. DeLazzer, T. Reeder, A. Sikorski, G. Hester, K. A. Ross, **Crystals (Invited)** 9, 196, 2019.

(56) *Low dimensional magnetism in the trirutile tantalates $Co_{1-x}Mg_xTa_2O_6$ with weak ferromagnetic features*, R. Baral, H. S. Fierro, L. M. Martinez, S. R. Singamaneni, H. S. Nair, **Journal of Applied Physics** 125, 033904, 2019.

(55) *Single crystals of cubic rare-earth pyrochlore germanates: $RE_2Ge_2O_7$ ($RE = Yb$ and Lu) grown by a high-temperature hydrothermal technique*, L. D. Sanjeewa, K. A. Ross, C. L. Sarkis, H. S. Nair, C. D. McMillen, J. W. Kolis, **Inorganic Chemistry** 57, 12456, 2018.

(54) *Magnetic structure and field-dependent magnetic phase diagram of Ni_2In -type $PrCuSi$* , H. S. Nair, C. M. N. Kumar, D. T. Adroja, C. Ritter, A. S. Wills, W. A. Kockelmann, P. P. Deen, A. Bhattacharyya, A. M. Strydom, **Journal of Physics Condensed Matter** 30, 435803, 2018 (artwork selected for cover).

(53) *Hyperfine interaction and electronic spin fluctuation study on $Sr_{2-x}La_xFeCoO_6$ ($x = 0, 1, 2$) by high-resolution back-scattering neutron spectroscopy*, T. Chatterji, B. Frick, M. Zamponi, M. Appel, H. S. Nair, R. Pradheesh, G. R. Hariprya, V. Sankaranarayanan, K. Sethupathi, **Physical Review B** 98, 094429, 2018 (Editor's suggestion).

(52) *Behavior of the breathing pyrochlore lattice $Ba_3Yb_2Zn_5O_{11}$ in applied magnetic field*, J. G. Rau, L. S. Wu, A. F. May, A. E. Taylor, I. -L. Liu, J. Higgins, N. P. Butch, K. A. Ross, H. S. Nair, M. D. Lumsden, M. J. P. Gingras, A. D. Christianson, **Journal of Physics Condensed Matter** 30, 455801, 2018.

(51) *Large magnetocaloric effect and critical behaviour analysis in Gd_2Cu_2In* , K. R. Kumar, H. S. Nair, B. N. Sahu, S. Xhakaza, A. M. Strydom, **Europhysics Letters** 122, 17003, 2018.

(50) *Short range order in the quantum XXZ honeycomb lattice material $BaCo_2(PO_4)_2$* , H. S. Nair, J. M. Brown, E. Coldren, G. Hester, M. P. Gelfand, A. Podlesnyak, Q. Huang, K. A. Ross, **Physical Review B** 97, 134409, 2018.

(49) *Absence of a long-range ordered magnetic ground state in $Pr_3Rh_4Sn_{13}$ studied through specific heat and inelastic neutron scattering*, H. S. Nair, M. O. Ogunbunmi, S. K. Ghosh, D. T. Adroja, M. M. Koza, T. Guidi, A. M. Strydom, **Journal of Physics Condensed Matter** 30, 145601, 2018.

(48) *Electronic and magnetic properties of quasi-skutterudite $PrCo_2Ga_8$ compound*, M. O. Ogunbunmi, B. M. Sondezi, H. S. Nair, A. M. Strydom, **Physica B** 536, 128, 2018.

(47) *Metamagnetism, sign reversal and low temperature magnetocaloric effect in single crystalline EuV_2Al_{20}* , K. R. Kumar, H. S. Nair, A. Bhattacharyya, A. Thamizhavel, A. M. Strydom, **Journal of Magnetism and Magnetic Materials** 452, 205, 2017.

(46) *Spin reorientation and disordered rare earth magnetism in Ho_2FeCoO_6* , G. R. Haripriya, H. S. Nair, R. Pradheesh, S. Rayaprol, V. Siruguri, D. Singh, R. Venkatesh, V. Ganesan, K. Sethupathi, V. Sankaranarayanan, **Journal of Physics Condensed Matter** 29, 475804, 2017.

- (45) *Pr-magnetism in the quasi-skutterudite compound PrFe_2Al_8* , H. S. Nair, M. O. Ogunbunmi, C. M. N. Kumar, D. T. Adroja, P. Manuel, D. Fortes, J. Taylor, A. M. Strydom, **Journal of Physics Condensed Matter** 29, 345801, 2017.
- (44) *Magnetic glass state and magnetoresistance in SrLaFeCoO_6 double perovskite*, R. Pradheesh, H. S. Nair, G. R. Haripriya, A. Senyshyn, T. Chatterji, V. Sankaranarayanan, K. Sethupathi, **Journal of Physics Condensed Matter** 29, 095801, 2017.
- (43) *Disordered ferromagnetism in $\text{Ho}_2\text{NiMnO}_6$ double perovskite*, T. Chakraborty, H. S. Nair, H. Nhalil, K. R. Kumar, A. M. Strydom, S. Elizabeth, **Journal of Physics Condensed Matter** 29, 025804, 2017 (selected as Highlights).
- (42) *Critical behaviour of Y_2NiMnO_6 double perovskite*, H. Nhalil, H. S. Nair, S. Elizabeth, **AIP Proceedings** 1728, 020184, 2016.
- (41) *Magnetocaloric effect in the metamagnet ErRhSi compound*, J. C. Debnath, H. S. Nair, A. M. Strydom, K. R. Kumar, J. Wang, **Journal of Applied Physics** 120, 233902, 2016.
- (40) *Magnetic structures and magnetoelastic coupling of Fe-doped hexagonal manganites $\text{LuMn}_{1-x}\text{Fe}_x\text{O}_3$ ($0 \leq x \leq 0.3$)*, Z. Fu, H. S. Nair, Y. Xiao, A. Senyshyn, V. Y. Pomjakushin, E. Feng, Y. Su, W. T. Jin, T. Brückel, **Physical Review B** 94, 125150, 2016.
- (39) *Hyperfine and crystal field interactions in multiferroic HoCrO_3* , C. M. N. Kumar, Y. Xiao, H. S. Nair, J. Voigt, B. Schmitz, T. Chatterji, N. H. Jalarvo, T. Brückel, **Journal of Physics Condensed Matter** 28, 476001, 2016.
- (38) *Magnetic, specific heat and electrical transport properties of Frank-Kasper cage compounds $\text{RTM}_2\text{Al}_{20}$ [$R = \text{Eu, Gd and La}$; $\text{TM} = \text{V, Ti}$]*, K. R. Kumar, H. S. Nair, R. Christian, A. Thamizhavel, A. M. Strydom, **Journal of Physics Condensed Matter** 28, 436002, 2016.
- (37) *Exchange bias-like effect in TbFeAl intermetallic induced by atomic disorder*, H. S. Nair, A. M. Strydom, **Europhysics Letters** 114, 37001, 2016.
- (36) *Polarity-tunable spin transport in all-oxide multiferroic tunnel junctions*, R. Soni, A. Petraru, H. S. Nair, O. Vavra, M. Ziegler, S. K. Kim, D. S. Jeong, H. Kohlstedt, **Nanoscale** 8, 10799, 2016.
- (35) *Double-phase transition and giant positive magnetoresistance in the quasi-skutterudite $\text{Gd}_3\text{Ir}_4\text{Sn}_{13}$* , H. S. Nair, S. K. Ghosh, R. K. Kamadurai, A. M. Strydom, **Journal of Applied Physics** 119, 123901, 2016.
- (34) *Field-insensitive heavy fermion features and phase transition in the caged-structure quasi-skutterudite $\text{Sm}_3\text{Ru}_4\text{Ge}_{13}$* , H. S. Nair, R. K. Kamadurai, D. Britz, S. K. Ghosh, C. Reinke, A. M. Strydom, **Journal of Alloys and Compounds** 669, 254, 2016.
- (33) *Magnetic structures and magnetic phase transitions in the Mn-doped orthoferrite TbFeO_3 studied by neutron powder diffraction*, H. S. Nair, T. Chatterji, C. M. N. Kumar, T. Hansen, H. Nhalil, S. Elizabeth, A. M. Strydom, **Journal of Applied Physics** 119, 053901, 2016.

- (32) *Ferromagnetism and the effect of free charge carriers on electric polarization in Y_2NiMnO_6 double perovskite*, H. Nhalil, H. S. Nair, C. M. N. Kumar, A. M. Strydom, S. Elizabeth, **Physical Review B** 92, 214426, 2015.
- (31) *Magnetic ordering and crystal field effects in quasi caged structure compound $PrFe_2Al_8$* , H. S. Nair, S. K. Ghosh, K. R. Kumar, A. M. Strydom, **Journal of Physics and Chemistry of Solids** 91, 69, 2015.
- (30) *Spin-lattice coupling and frustrated magnetism in Fe-doped hexagonal $LuMnO_3$* , H. S. Nair, Z. Fu, C. M. N. Kumar, V. Y. Pomjakushin, Y. Xiao, T. Chatterji, A. M. Strydom, **Europhysics Letters** 110, 37007, 2015.
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- (22) *Approaching the true ground state of frustrated A-site spinels: A combined magnetization and polarized neutron scattering study*, H. S. Nair, Z. Fu, J. Voigt, Y. Su, and T. Brückel, **Physical Review B** 89, 174431, 2014.
- (21) *Electronic structure of $Nd_{1-x}Y_xMnO_3$ from Mn-K edge absorption spectroscopy and DFT methods*, P. Balasubramanian, R. Yadav, H. S. Nair, H. M. Tsai, Y. Joly, J. F. Lee, S. Elizabeth, B. R. Sekhar, C. W. Pao, W. F. Pong, **Solid State Communications** 181, 50, 2014.
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- (17) Influence of growth ambience and doping on the structural and magnetic properties of multiferroic $DyMnO_3$, H. S. Nair, S. Elizabeth, **Journal of Crystal Growth** 362, 24, 2013.
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- (11) Griffiths phase-like behaviour and spin-phonon coupling in double perovskite Tb_2NiMnO_6 , H. S. Nair, D. Swain, H. Nhalil, S. Adiga, C. Narayana, S. Elizabeth, **Journal of Applied Physics** 110, 123919, 2011.
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- (9) Magnetic order of the hexagonal rare earth manganite $Dy_{0.5}Y_{0.5}MnO_3$, J. S. Helton, D. K. Singh, H. S. Nair, S. Elizabeth, **Physical Review B** 84, 064434, 2011.
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- (7) Disorder driven electronic localization and phase separation in superconducting $Fe_{1+y}Te_{0.5}Se_{0.5}$ single crystals, S. Rößler, D. Cherian, S. Harikrishnan, H. L. Bhat, S. Elizabeth, J. A. Mydosh, L. H. Tjeng, F. Steglich, and S. Wirth, **Physical Review B** 82, 144523, 2010.

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(3) *Phase transition and anomalous low temperature ferromagnetic phase in $Pr_{0.6}Sr_{0.4}MnO_3$ single crystals*, S. Rößler, S. Harikrishnan, C.M. Naveen Kumar, H. L. Bhat, S. Elizabeth, U. K. Rößler, F. Steglich, S. Wirth, **Journal of Superconductivity and Novel Magnetism** 22, 205, 2009.

(2) *Investigations on the spin-glass state in $Dy_{0.5}Sr_{0.5}MnO_3$ single crystals through structural, magnetic and thermal properties*, S. Harikrishnan, C. M. Naveen Kumar, H. L. Bhat, S. Elizabeth, U. K. Rößler, K. Dörr, S. Rößler, S. Wirth, **Journal of Physics Condensed Matter** 20, 275234, 2008.

(1) *EPR studies on multiferroic $DyMnO_3$ and $Dy_{0.5}Sr_{0.5}MnO_3$* , S. Harikrishnan, C. M. Naveen Kumar, S. S. Rao, H. L. Bhat, S. V. Bhat, S. Elizabeth, **Journal of Applied Physics** 104, 023902, 2008.

CONFERENCES/ WORKSHOPS/ PROFESSIONAL DEVELOPMENT/ STUDENT AWARDS

2023

<i>Effect of Cr and La doping in the physical properties of Aurivillius $Bi_5Ti_3FeO_{15}$</i> , Omar Alejandro Salas, F. Kabir, K. Gofryk, H. S. Nair	APS March Meeting, Las Vegas, Nevada, March 5-10, 2023	Poster by student OAS
<i>Spectroscopic study of $Bi_5Ti_3FeO_{15}$ Aurivillius compound for multifunctional applications</i> , M. Castellanos, H. S. Nair, F. S. Manciu	APS March Meeting, Las Vegas, Nevada, March 5-10, 2023	Poster by student MC
<i>Evolution of low-dimensional magnetism in Mg-substituted $CoTa_2O_6$</i> , Thomas W. Heitmann, R. Baral, H. S. Nair	APS March Meeting, Las Vegas, Nevada, March 5-10, 2023	Poster by TWH

2022

• <i>Drylands Resilience Workshop</i> ,	University of New Mexico, NM, January 14, 2022	Nair
• <i>Magnetic structures of sawtooth olivines Mn_2SiX_4 ($X = S, Se$) determined through neutron powder</i>	Texas Academy of Science (TAS) Annual Meeting, University of Houston Clear	Talk by student MST

<i>diffraction, Melaku Sisay Tafere, K. Gofryk, B. Saparov, Q. Zhang, H. S. Nair,</i>	Lake, TX, February 25-27, 2022	
• <i>Neutrons and Complementary Techniques for Quantum Materials</i>	Oak Ridge National Lab, TN, September 6-8, 2022 [online workshop].	Nair
• <i>Study of Electronic and Thermoelectric Properties of CaNiO₃ Perovskite, B. S. Joshi, S. Mahatara, H. S. Nair, M. Ghimire, B. Kiefer.</i>	American Physical Society Four Corners Meeting, University of New Mexico, Albuquerque, NM, October 14-15, 2022.	Nair contributed

2021

• <i>B43 Charge density waves.</i>	American Physical Society March Meeting Virtual, March 15-19, 2021	session chair
• <i>NM06.09 Doping and electric field effects in low dimensional systems.</i>	MRS Virtual Spring Meeting, April 17-23, 2021	session chair
• <i>Neutrons and Complementary Techniques for Quantum Materials.</i>	Oak Ridge National Lab, TN, September 6-8, 2022 [online workshop].	Nair
• <i>NM06.04 Ultrafast/Light/Photonics.</i>	MRS Virtual Spring Meeting, April 17-23, 2021	session chair
• <i>Long and short-range ordered magnetism in honeycomb Na₂Ni₂TeO₆</i>	MRS Virtual Spring Meeting, April 17-23, 2021	invited talk
• <i>CT04.01.06 Proximate Double Magnetic Transitions in BeCr₂O₄, Hector Cein Mandujano, C. M. N. Kumar, N. Poudel, K. Gofryk, T. W. Heitmann, H. S. Nair</i>	MRS Virtual Spring Meeting, April 17-23, 2021	Best poster award to HCM
• <i>NM06.07.07 Probing the stability of Shastry Sutherland lattice in Er₂Pd₂Sn and Er₂Pd₂In, Gicela Saucedo Salas, B. Sahu, C. M. N. Kumar, A. M. Strydom, S. Calder, Q. Zhang, H. S. Nair.</i>	MRS Virtual Spring Meeting, April 17-23, 2021	Poster by student, GSS
• <i>Long and short-range ordered magnetism in honeycomb Na₂Ni₂TeO₆.</i>	Department Colloquium, UTEP, April 25, 2021	Talk
• <i>SURPASS award, UTEP</i>	28 April 2021	Omar A. Salas
• <i>Lead-free piezoelectric ceramics, Omar A. Salas, H. S. Nair.</i>	COURI Symposia, UTEP, August 7, 2021	Poster by student, OAS.
• <i>Quantum magnetism in honeycomb lattices.</i>	International Conference on Recent Trends and Hurdles in Physical Sciences Research,	Invited webinar

	<i>Christ Nagar College, Kerala, India, October 27-28, 2021</i>	
• Certificate course on Teaching Online Academy	<i>Center for Instructional Design, UTEP, October 31, 2021</i>	<i>Professional development</i>
• Structural investigations of super-ionic Cu _{2-x} Se, M. Zorić, C. M. N. Kumar, N. Barišić, H. S. Nair, Ž. Skoko, T. Klaser, P. Gille, P. Popčević.	<i>ECMetAC Days, Croatia, December, 2021</i>	<i>Contributed</i>

2020

• Phase transitions in novel Li-containing honeycombs Li ₈ Cr ₂ (Te/Sb) ₂ O ₁₂ , H. C. Mandujano, S. L. Gonzalez, N. Episcopo, Q. Zhang, N. Poudel, K. Gofryk, S. Calder, H. S. Nair.	<i>CUWiP 2020 (Conference for Undergraduate Women in Physics, American Physical Society), TAMU Corpus Christi, TX, January 17-19, 2020.</i>	Poster by student, SLG
• Probing the stability of Shastry Sutherland lattice in Er ₂ Pd ₂ Sn and Er ₂ Pd ₂ In, Gicela Saucedo Salas, B. Sahu, A. M. Strydom, S. Calder, H. S. Nair.	<i>CUWiP 2020 (Conference for Undergraduate Women in Physics, American Physical Society), TAMU Corpus Christi, TX, January 17-19, 2020.</i>	Poster by student, GSS
• Can corundum realize a multiferroic? Cristian Rueda, K. Gofryk, H. S. Nair.	<i>COURI Symposia, UTEP, April 2020.</i>	Poster by student, CR
• Realizing quantum magnets in the family of honeycomb lattice compounds, Kinley Wangmo, K. Gofryk, H. S. Nair.	<i>COURI Symposia, UTEP, April 2020.</i>	Poster by student, KW
• Dodson's Research Grant, UTEP	April 2020	Nathan Episcopo
• Quantum magnetism in honeycomb lattices.	<i>All-India webinar for 100 participants organized by IQAC and Department of Physics, Marthoma College for Women, Kerala, India, June 15, 2020</i>	<i>Invited webinar HSN</i>
• Magnetism in honeycomb Na ₂ Ni ₂ TeO ₆ with chiral layers of Na, N. Episcopo, K. Wangmo, N. Poudel, K. Gofryk, M. Fitta, P. -H. Chang, R. R. Zope, R. Klein, C. Brown, T. Heitmann, H. S. Nair.	<i>American Conference on Neutron Scattering, Boulder, CO, June 12-16, 2020.</i>	Poster HSN
• Probing room temperature magnetism in nano-MnCr ₂ O ₄ spinels using polarization-analyzed vSANS, K. Krycka, H. Mandujano, Eduardo Martinez-Teran, Ahmed El-Gendy, H. S. Nair.	<i>American Conference on Neutron Scattering, Boulder, CO, June 12-16, 2020</i>	Poster by KK
• Machine Learning for Materials Research Boot Camp 2020	<i>University of Maryland, June 20-24, 2020</i>	HSN

Phase transitions in novel Li-containing honeycombs $\text{Li}_8\text{Cr}_2(\text{Te/Sb})_2\text{O}_{12}$, C. Mandujano, S. L. Gonzalez, N. Episcopo, N. Poudel, K. Gofryk, S. Calder, H. S. Nair.	American Conference on Neutron Scattering (virtual), July 12-16, 2020.	Poster by student, NE.
Phase transitions in novel Li-containing honeycombs $\text{Li}_8\text{Cr}_2(\text{Te/Sb})_2\text{O}_{12}$, H. C. Mandujano, S. L. Gonzalez, N. Episcopo, Q. Zhang, N. Poudel, K. Gofryk, S. Calder, H. S. Nair.	COURI Symposia, UTEP, July 27-31, 2020.	Best poster award to SLG
Undergraduate Research Award to attend the Undergraduate School on Experimental Quantum Information Processing (USEQIP)	University of Waterloo, Canada, May-August, 2020.	Gicela Saucedo Salas
Quantum magnetism in honeycomb lattices.	All-India webinar for 100 participants organized by Department of Physics, C. M. S. College, Kerala, India, August 26, 2020.	Invited webinar
Virtual Workshop for Magnetic Structure Determination from Neutron Diffraction.	Oak Ridge National Laboratory, Nathan Episcopo, September 28-October 1, 2020.	Workshop attended by student, NE
Phase transitions in novel Li-containing honeycombs $\text{Li}_8\text{Cr}_2(\text{Te/Sb})_2\text{O}_{12}$, Hector Cein Mandujano, S. L. Gonzalez, N. Poudel, K. Gofryk, S. Calder, H. S. Nair.	MRS Virtual Spring/Fall Meeting, November 27-December 4, 2020.	Poster by student, HCM
Magnetism in Honeycomb $\text{Na}_2\text{Ni}_2\text{TeO}_6$ with Chiral Layers of Na N. Episcopo, K. Wangmo, N. Poudel, K. Gofryk, P. -H. Chang, R. R. Zope, R. Klein, C. Brown, T. Heitmann, H. S. Nair.	MRS Virtual Spring/Fall Meeting, November 27-December 4, 2020.	Poster by student, NE

2019

A Magnetocaloric investigation of the frustrated magnetic ground state in the garnet, $\text{Gd}_3\text{Ga}_4\text{O}_{12}$, Karma Dema, R. Baral, N. Poudel, K. Gofryk, H. S. Nair.	CUWiP 2019: Conference for Undergraduate Women in Physics, American Physical Society, TAMU, Corpus Christi, TX, January 18-20, 2019	Poster by student, KD
Evolution of the spin-flop antiferromagnetic transition and the emergence of frustration in saw-tooth lattice $\text{Mn}_2\text{SiS}_{4-x}\text{Se}_x$ ($x = 0-4$) chalcogenides.	APS March Meeting, Boston, MA, March 4-8, 2019.	Talk HSN

• Room temperature ferromagnetic MnCr_2O_4 spinel chromite nanoparticles.	APS March Meeting, Boston, MA, March 4-8, 2019	Talk HSN
• Magnetic instabilities in low-dimensional $\text{Co}_{1-x}\text{Mg}_x\text{Ta}_2\text{O}_6$ trirutile, C. Rueda, H. S. Fierro, R. Baral, B. Sahu, B. P. Belbase, S. Bati, A. M. Strydom, T. W. Heitmann, M. P. Ghimire, H. S. Nair.	Materials Research Society Spring Meeting 2019, Phoenix, AZ, April 21-26, 2019	Poster by student, CR
• Olivine $\text{Mn}_2\text{SiS}_4-x\text{Sex}$: Magnetic frustration and spin-flop transition in triangular sawtooth lattice, H. Nhalil, R. Baral, A. Cosio, B. O. Khamala, S. R. Singamaneni, M. Fitta, R. R. Zope, T. Baruah, D. Antonio, K. Gofryk, B. Saparov, H. S. Nair.	Materials Research Society Spring Meeting 2019, Phoenix, AZ, April 21-26, 2019	Poster by student, RB
• Magnetic frustration and antiferromagnetism in saw-tooth lattice $\text{Mn}_2\text{SiS}_4-x\text{Sex}$ ($x = 0-4$) chalcogenides.	Materials Research Society Spring Meeting 2019, Phoenix, AZ, April 21-26, 2019	Talk HSN
• Frustrated magnets with sawtooth, hyperkagome, honeycomb and Shastry Sutherland lattices.	Quantum Materials Young Investigators Workshop, Oak Ridge National Laboratory, TN, June 6-7, 2019	Invited talk, Workshop, HSN
• Phase transitions in novel Li-containing honeycombs $\text{Li}_8\text{Cr}_2(\text{Te/Sb})_2\text{O}_{12}$, S. L. Gonzalez, N. Episcopo, R. Baral, N. Poudel, K. Gofryk, H. S. Nair.	COURI Symposia, UTEP, August 3, 2019.	Poster by student, SLG
• Magnetic instabilities in low-dimensional $\text{Co}_{1-x}\text{Mg}_x\text{Ta}_2\text{O}_6$ trirutile, C. Rueda, H. S. Fierro, R. Baral, B. Sahu, B. P. Belbase, S. Bati, A. M. Strydom, T. W. Heitmann, M. P. Ghimire, H. S. Nair.	COURI Symposia, UTEP, August 3, 2019.	Poster by student, CR
• MERITUS scholarship, UTEP	September 2019	Cristian Rueda
• MERITUS scholarship	September 2019	Kinley Wangmo
• Broadening Participation: 2019 MPS Workshop for New Investigators, National Science Foundation.	Virginia, September 8-12, 2019	Workshop, professional development
• Frustrated magnetism and emergence.	A 5-min talk to the Society of Physics Students, Department of Physics, UTEP, October 2, 2019	Talk, HSN
• Probing the stability of Shastry Sutherland lattice in $\text{Er}_2\text{Pd}_2\text{Sn}$ and	Texas Section of American Physical Society conference	Best presentation

<i>Er₂Pd₂In</i> , Gicela Saucedo Salas, B. Sahu, A. M. Strydom, H. S. Nair.	(TSAPS), Lubbock, TX, October 24-26, 2019.	award to GSS.
• C. Sharp Cook Scholarship	UTEP	Nathan Episcopo

2018

• Research Career Workshop	UTEP, 17 Feb 2018	Workshop, HSN
• Short range order in the quantum XXZ honeycomb lattice material γ -BaCo ₂ (PO ₄) ₂ , H. S. Nair, J. M. Brown, E. Coldren, G. Hester, M. Gelfand, A. Podlesnyak, K. A. Ross.	APS March Meeting, Los Angeles, CA, March 5-9, 2018	Talk, HSN
• Contrasting antiferromagnetic, spin-glass and magnetic glass states in the double perovskite Sr _{2-x} La _x FeCoO ₆ , Pradheesh R., Haripriya G. R., C. M. N. Kumar, L. M. Martinez, C. L. Saiz, S. R. Singamaneni, P. Manuel, A. Senyshyn, T. Chatterji, V. Sankaranarayanan, K. Sethupathi, H. S. Nair.	APS March Meeting, Los Angeles, CA, March 5-9, 2018	Poster, HSN
• Very high frequency electron paramagnetic resonance studies on γ -BaCo ₂ (PO ₄) ₂ , L. M. Martinez, C. Saiz, H. S. Nair, J. M. Brown, K. Ross, J. van Tol, S. R. Singamaneni.	APS March Meeting, Los Angeles, CA, March 5-9, 2018.	Poster, HSN
• Discovery of a new quantum dimer magnet in a strongly spin-orbit coupled material, G. Hester, H.S. Nair, T. Reeder, J.A. Quilliam, J.R. Neilson, G. Sala, K.A. Ross.	APS March Meeting, Los Angeles, CA, March 5-9, 2018.	Contributed
• Short range order in the quantum XXZ honeycomb lattice material γ -BaCo ₂ (PO ₄) ₂	Department of Physics, New Mexico State University, Las Cruces, NM, April 19, 2018	Invited talk, HSN
• Discovery of a new quantum dimer magnet on a strongly spin-orbit coupled honeycomb lattice: Yb ₂ Si ₂ O ₇ , G. Hester, H.S. Nair, T. Reeder, J.A. Quilliam, J.R. Neilson, G. Sala, K.A. Ross.	International Conference on Highly Frustrated Magnetism, University of California Davis, CA, July 9, 2018	Contributed
• Short range order in the quantum XXZ honeycomb lattice material BaCo ₂ (PO ₄) ₂ , H. S. Nair, J. M. Brown, E. Coldren, G. Hester, M. Gelfand, A. Podlesnyak, K. A. Ross.	International Conference on Highly Frustrated Magnetism, University of California Davis, CA, July 9, 2018.	Contributed

• <i>Low-dimensional magnetism in trirutile $\text{Co}_{1-x}\text{Mg}_x\text{Ta}_2\text{O}_6$ studied using neutron diffraction and specific heat, H. S. Fierro, R. Baral, B. Sahu, A. M. Strydom, T. W. Heitmann, H. S. Nair.</i>	<i>COURI symposia, UTEP, August 4, 2018</i>	<i>Poster by student, HSF</i>
2017		
• <i>Creating and investigating disorder in the Ising chain.</i>	<i>Celebrate Undergraduate Research and Creativity Showcase, Fort Collins, CO, April 18, 2017</i>	Contributed
• <i>Evolution of magnetic frustration and spin-flop transition in the triangular sawtooth lattice olivines $\text{Mn}_2\text{SiS}_4-x\text{Se}_x$, Raju Baral, H. S. Nair.</i>	<i>Gordon Research Seminar on Correlated electron Systems, Mount Holyoke College, MA, June 23-24, 2017</i>	Poster by student, RB
• <i>Electronic and magnetic properties of quasi-skutterudite PrCo_2Ga_8 compound.</i>	<i>Strongly Correlated Electron Systems SCES 2017, Prague, Czech Republic, July 17, 2017</i>	Contributed
• <i>^{27}Al NMR Spectroscopy Study of Frustrated Spinel Compound FeAl_2O_4</i>	<i>Moscow International Symposium on Magnetism, Moscow, Russia, July 1, 2017</i>	Contributed
• <i>Magnetic susceptibility of CoNb_2O_6</i>	<i>Annual Meeting of the APS Four Corners Section, Las Cruces, NM, October 21, 2017</i>	Contributed
2016		
• <i>American Crystallography Association Workshop on Magnetic Structure Analysis by Unpolarized Neutron Diffraction Techniques.</i>	<i>The University of Colorado/AHEC, Denver, CO, July 22, 2016.</i>	Workshop, HSN
2014		
• <i>Approaching the ground state of frustrated A-site spinels.</i>	<i>Indian Institute of Technology Ropar, Rupnagar, Punjab, India, 2014.</i>	Invited talk, HSN
2013		
• <i>Approaching the ground state of frustrated A-site spinels, JCNS Workshop 2013.</i>	<i>Trends and perspectives in neutron scattering: Magnetism and correlated electron systems, Tutzing, Germany, 2013.</i>	Talk, HSN

• <i>"Magnetism and highly correlated electron systems".</i>	<i>PNI in-house workshop, Freising, Germany, June 11–12, 2013</i>	Poster, HSN
2012		
• <i>New Routes to Single Phase Multiferroics.</i>	<i>505 Wilhelm und Else Heraeus Seminar, Bad Honnef, Germany, April 23–25, 2012.</i>	Poster, HSN
•	<i>Intermag 2012, IEEE International Magnetism Conference, Vancouver, Canada, May 7–11, 2012</i>	Contributed