

HARI PRASAD JAISHI

Assistant Professor & Head

Dept. of Physics

University of Science & Technology Meghalaya

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AREA OF EXPERTISE/INTEREST

Radiation Physics, Natural Radioactivity, Heavy Metals & Environmental Pollution, Electronics, Geophysics.

EDUCATION

Sl. No	Exam Passed	Name of Institution/ Board	Year	Subjects	Percentage	Class/ Division
1.	PhD	Mizoram University	2014	Physics	NA	NA
2.	M.Sc.	Mizoram University	2010	Physics	70.06	I
3.	B.Sc.	Mizoram University	2008	Physics	64.13	I
4.	HSSLC	Mizoram Board of School Education	2005	Phys., Chem., Math, Eng., IT	60.2	I
5.	HSLC	Mizoram Board of School Education	2003	Eng., MIL(Hindi), Math, Science, SS, IT	63.6	I

PROFESSIONAL EXPERIENCE

Sl. No	Name of the Institution	Designation	Period
1.	University of Science & Technology Meghalaya	Assistant Professor	August 2018 to Present
2.	Mizoram University	Guest Faculty	Feb. 2016 to Nov. 2017
3.	Mizoram University	Guest Lecturer	Aug. 2015 to Dec. 2015
4.	Mizoram University	Junior Research Fellow	Dec. 2010 to Dec. 2013

ADMINISTRATIVE/EVENT COORDINATORS

1. Head, Department of Physics, University of Science and Technology Meghalaya from 02/05/2025 to present.
2. Exam Coordinator of Block-C at University of Science and Technology Meghalaya for the following End Semester Examinations: May-June 2025; Nov.-Dec., 2024; May-June

2024; December 2023; June-July 2023; December 2022; July-August 2022; February-March 2022.

3. Exam Coordinator of the Department of Physics, University of Science & Technology Meghalaya from February 2021 to April 2025
4. NET Coordinator of the Department of Physics, University of Science & Technology Meghalaya from August 2019 to January 2023.

MEMBERSHIPS

Life Member (LM-0187) of the Physics Academy of the North East admitted on 19-12-2012

PROJECT

1. Faculty Mentorship for Student Project on “Advanced Agricultural Drone for Pest Control in Tea Gardens”. A prototype development project funded by NSTEDB-DST (Govt. of India) and implemented by EDII Ahmedabad, vide letter no EDII/DST-NewGen IEDC/17-18/07 dated 15/06/2017. **Project Duration:** April 2021 to March 2022. **Total Amount granted:** Rs. 2,50,000/-

MSC/BSC PROJECT GUIDED

1. Total Students Guided (M.Sc. Phys.): 32
2. Total Students Guided (B.Sc. Phys.): 11

PHD SUPERVISOR

1. Ongoing: 02
2. To be Registered (new in 2025): 01

PATENT FILED/PUBLISHED/GRANTED

1. **Application Number:** 201831014505, dated 17.04.2018. **Title:** Time Series Analysis of Soil Radon Data Using Multiple Linear Regression and Artificial Neural Network in Seismic Precursory Studies. **Status:** Filed
2. **Application Number:** 202231061349, dated 28.10.2022. **Title:** Supercontinuum source by living biosilica diatoms. **Status:** Published

PEER REVIEWER FOR JOURNALS

1. Journal of Trace Elements and Minerals (Elsevier)
2. Environmental Earth Sciences (Springer Nature)
3. Scientific Reports (Springer Nature)
4. Current World Environment
5. Geomatics, Natural Hazards and Risk (Taylor & Francis)
6. Journal of Radioanalytical and Nuclear Chemistry (Springer Nature)
7. Academia Letters (Academia)

RESEARCH PUBLICATIONS

1. Singh, S., **Jaishi, H.P.**, Tiwari, R.P. and Tiwari, R.C., **2024**. STL decomposition analysis for anomaly detection in soil radon and thoron concentrations along Chite fault in Aizawl. *J Radioanal Nucl Chem*, 333, 5323–5334 IF: 1.5. <https://doi.org/10.1007/s10967-024-09685-2>
2. **Jaishi, H.P.**, Mahanta, B., Ali, I., Baishya, K., Roy, D. K., & Sarma, M., **2024**. Evaluation of ground water quality using heavy metal pollution indices and estimation of health risk. *International Journal of Environmental Analytical Chemistry*, IF: 2.3, 1–23. <https://doi.org/10.1080/03067319.2024.2382365>
3. Borgohain, D., Lanong, S. & **Jaishi, H.P.**, **2024**. Heavy metal contamination and health risks in ground water at Byrnihat industrial area: urgent need for remediation and public health safeguards. *Proceedings of the Indian National Science Academy*, 90, 931-942. IF: 1.2 <https://doi.org/10.1007/s43538-024-00273-2>
4. Sangma, T.K., Momin, N.G., Marak, S.R., Sangma, G.S and **Jaishi, H.P.**, **2024**. Assessment of heavy metal concentrations in industrial samples near Byrnihat, Meghalaya: Implications for human health. *Analytical Chemistry Letters*, 14(1), 69-81. IF: 1.0. <https://doi.org/10.1080/22297928.2024.2318298>
5. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C, **2024**. Comparing wavelet-based artificial neural network, multiple linear regression, and ARIMA models for detecting genuine radon anomalies associated with seismic events. *Proceedings of the Indian National Science Academy*, IF: 1.2. <https://doi.org/10.1007/s43538-024-00239-4>
6. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2023**. Analysis of Subsurface Soil Radon with the Environmental Parameters and Its Relation with Seismic Events. *Journal of the Geological Society of India*, 99(6), pp.847-858. IF: 1.2 <https://doi.org/10.1007/s12594-023-2392-z>
7. Tiwari, R.C., **Jaishi, H.P.**, Singh, S. and Tiwari, R.P., **2023**. A study of soil radon and seismicity along active fault region in northeastern India. *Arab Journal of Geosciences*, 16 (4), pp.1-9. <https://doi.org/10.1007/s12517-023-11341-0>
8. Singh, S., **Jaishi, H.P.**, Tiwari, R.P. and Tiwari, R.C., **2017**. Time series analysis of soil radon data using multiple linear regression and artificial neural network in seismic precursory studies. *Pure and Applied Geophysics*, 174(7), pp.2793-2802. IF: 1.9. <https://doi.org/10.1007/s00024-017-1556-4>
9. Singh, S., **Jaishi, H.P.**, Tiwari, R.P. and Tiwari, R.C., **2016**. A study of variation in soil gas concentration associated with earthquakes near Indo-Burma Subduction zone. *Geoenvironmental Disasters*, 3(1), pp.1-8. IF: 3.8. <https://doi.org/10.1186/s40677-016-0055-8>
10. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2015**. Soil-gas thoron concentration associated with seismic activity. *Chiang Mai J Sci*, 42(4), pp.972-979. IF: 0.6 <https://epg.science.cmu.ac.th/ejournal/journal-detail.php?id=6252>

11. Singh, S., **Jaishi, H.P.**, Tiwari, R.P. and Tiwari, R.C., **2014**. Variations of soil radon concentrations along Chite Fault in Aizawl district, Mizoram, India. *Radiation Protection Dosimetry*, 162(1-2), pp.73-77. IF: 0.8 <https://doi.org/10.1093/rpd/ncu221>
12. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2014**. Analysis of soil radon data in earthquake precursory studies. *Annals of Geophysics*, 57(5), pp. S0544-S0544. IF: 1.2. <https://doi.org/10.4401/ag-6513>
13. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2014**. Temporal variation of soil radon and thoron concentrations in Mizoram (India), associated with earthquakes. *Natural Hazards*, 72(2), pp.443-454. IF: 3.3 <https://doi.org/10.1007/s11069-013-1020-4>
14. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2014**. Correlation of radon anomalies with seismic events along Mat fault in Serchhip District, Mizoram, India. *Applied radiation and isotopes*, 86, pp.79-84. IF: 1.6. <https://doi.org/10.1016/j.apradiso.2013.12.040>
15. **Jaishi, H.P.**, Singh, S., Tiwari, R.P. and Tiwari, R.C., **2013**. Radon and thoron anomalies along Mat fault in Mizoram, India. *Journal of earth system science*, 122(6), pp.1507-1513. IF: 1.3. <https://doi.org/10.1007/s12040-013-0361-4>

PUBLICATIONS OF BOOK CHAPTERS/CONFERENCE PROCEEDINGS

1. Borgohain D., **Jaishi H.P.**, Singh S., Tiwari R.P. and Tiwari R.C., **2024**. Modeling Techniques for Estimating Soil Radon Concentrations. *Journal of Physics: Conference Series*, 2919, 012036. <https://dx.doi.org/10.1088/1742-6596/2919/1/012036>
2. Hussain F., **Jaishi H.P.** and Roy S., **2024**. Attribute of antibacterial response of *Black turmeric* at different temperatures supported by light scattering signature. *Journal of Physics: Conference Series*, 2919, 012046. <https://dx.doi.org/10.1088/1742-6596/2919/1/012046>
3. Borgohain D and **Jaishi H.P.** **2024**. Comprehensive Investigation of Natural Radioactivity in Meghalaya, India: Implications for Health. In: *Emerging Trends in Physical Science*. Eds. Dr. Bandita Choudhury Mr. Deva Pratim Mahanta and Mr. Saurabh Kr. Sharma. **Anundoram Borooah Academic Society**. Guwahati, Assam. pp 35-46. ISBN: 978-93-90706-80-8.
4. Hussain F, **Jaishi H.P.** and Roy S. **2024**. Polystyrene microsphere exploration using light scattering tool at different temperatures. In: *Emerging Trends in Physical Science*. Eds. Dr. Bandita Choudhury Mr. Deva Pratim Mahanta and Mr. Saurabh Kr. Sharma. **Anundoram Borooah Academic Society**. Guwahati, Assam. pp 59-68. ISBN: 978-93-90706-80-8.
5. Borgohain D and **Jaishi H.P.** **2023**. Assessment of Natural Radioactivity and Radionuclide Distribution in Assam, India. In: *EUNOIA*. Eds. Nibedita Baruah, Gayatri Mohan and Pranami Handique. **Purbayan Publication**, Guwahati, Assam. pp 77-85. ISBN: 978-93-5860-685-0.
6. **Jaishi H.P.**, Singh S and Tiwari R.C. **2020**. Seasonal Variation analysis of Soil Radon Data. In: *Radon: Detection, Exposure and Control*. Ed. Ramesh Chandra Tiwari. **NOVA Science Publishers**, NY,USA. pp-257-272. ISBN:978-1-53616-791-7.

<http://www.scopus.com/inward/record.url?eid=2-s2.0-85097202074&partnerID=MN8TOARS>

7. Tiwari, R.C., Singh, S., **Jaishi, H.P.** and Tiwari, R.P., **2018**. Analysis of Soil Gas and Their Correlation with Seismic Events along Indo-Burmese Subduction Zone. In *24th European Meeting of Environmental and Engineering Geophysics* (Vol. 2018, No. 1, pp. 1-5). European Association of Geoscientists & Engineers. <https://doi.org/10.3997/2214-4609.201802487>
8. Singh S., **Jaishi H.P.**, Tiwari R.P. and Tiwari R.C., **2016**. Variations of radon and Thoron concentrations in soil with respect to climatic parameters in Mizoram. In: *Basic and Applied Physics Recent Advances*. **Narosa Publishing House**, New Delhi. pp131-137; ISBN:978-81-8487-517-1.
9. **Jaishi, H.P.**, Singh, S., Tiwari, R.C. and Tiwari, R.P., **2013**. Temporal variation in thoron concentration as a precursor to earthquakes along Mat Fault in Mizoram, India. In *Proceedings of the eighteenth national symposium on solid state nuclear track detectors and their applications: abstracts*. <https://inis.iaea.org/records/eqmkg-yrv22>

SEMINAR/CONFERENCES/WORKSHOP/EXHIBITION ORGANISED

1. Co-coordinator of *XI IAPT National Student Symposium on Physics* (NSSP-2024) jointly organized by Indian Association of Physics Teachers (IAPT), Regional Council-17 and Department of Physics, University of Science and Technology Meghalaya. The symposium was held at Department of Physics, USTM during 12 to 14 November, 2024.
2. Co-Convener of *International Conference on Frontiers in Physics and Applied Physics* (ICFPAP-24) organized by Department of Physics, University of Science and Technology Meghalaya in collaboration with Physics Academy of North East (PANE). The event was held at the Dept. of Physics, USTM during 29th February 2024 to 2nd March 2024.
3. Co-Convener of *National Exhibition & Seminar on Plasma Physics* (NESPP-2022) organized by Department of Physics, University of Science and Technology Meghalaya in association with Centre of Plasma Physics-Institute for Plasma Research (CPP-IPR) Guwahati. The event was held at the Dept. of Physics, USTM during August 1st to 5th 2022.

CONFERENCES ATTENDED/PAPER PRESENTED

1. International Conference on Signal Processing and Communications (SPCOM) held virtually during **July 19-24 2020**, organized by Indian Institute of Science, Bangalore.
2. CONDENSED MATTER DAYS-2016 (CMDAYS-2016), **29th -31st August, 2016**. A National Conference, Organised by Department of Physics, Mizoram University.
3. National Seminar on “Geology, Tectonics, Geo-Hazards & Natural Resources of North East India” during **3rd-4th November, 2014**, Organized by Dept. of Geology, Pachhunga University College, Aizawl Mizoram.

4. 18th NATIONAL SYMPOSIUM on Solid State Nuclear Track Detectors and Their Applications (SSNTDs-18), **October 18-20, 2013**. Organized by Faculty of Science Aggarwal College Ballabgarh, Farizabad (Haryana), India.
5. 8th National Conference of the Physics Academy of North East (**17th-19th December, 2012**). Organized by Department of Physics, Mizoram University, Aizawl.
6. One day State level Seminar on Recent Advances in Radiation Physics, organized by the Dept. of Physics, Mizoram University and UGC-DAE Centre for Scientific Research (CSR), on **15th April 2011** at Mizoram University.

WORKSHOP/TRAINING/SHORT TERM COURSE ATTENDED

1. Online Workshop on NEP 2020 Implementation from 28-29 December 2022 organized by the UGC Human Resource Development Centre, Aligarh Muslim University, Aligarh.
2. Attended the 3rd International Virtual Workshop on Global Seismology and Tectonics (IVWGST 2022), from 20th to 30th September 2022, organized by Geoscience and Technology Division, CSIR- North East Institute of Science & Technology, Jorhat, Assam, India.
3. Faculty Development programme on “Hands on Training Workshop on LMS Moodle” held at USTM during 3rd to 10th September 2022.
4. Online Weeklong FDP on E-Content Development organized by Teaching Learning Centre, Tezpur University in association with University of Science and Technology, Meghalaya (USTM) during **04-08 April 2022**.
5. One Week Faculty Development Programme (Online) on “Implementation of NEP-2020 in Higher Education” organized by RKDF University Bhopal (MP) and supported by Makhanlal Chaturvedi Rashtriya Patrakarita Vishwavidyalaya, Bhopal (PM), held on **17th February to 22nd February 2022**.
6. IIRS (Indian Institute of Remote Sensing) Online Course On “Overview of Geoprocessing using Python” This Online Course was Conducted During **17-01-2022 to 28-01-2022** (Total course duration was = 10 hours and 30 minutes).
7. Commacad e-workshop on “Data Analysis with R programming” held from **10th to 12th December 2021**.
8. Faculty development programme on “Student & Institutional Growth & Success” organized by University of science & Technology Meghalaya from 5th April to 12th April 2019.
9. 98th National Workshop on “Radiochemistry and Application of Radioisotopes” jointly organized by USTM and IANCAS held at USTM during **October 01-06, 2018**.
10. Three Day lecture workshop on “Air pollution, Greenhouse Gases and Climate Change: Global and Regional Perspective” Organised by Centre for Atmospheric Studies and Department of Physics, Dibrugarh University, Dibrugarh from **27 April 2017 to 29 April 2017**.

11. One Day State Level Acquaintance Programme, on **March 28, 2014** held at Dept. of Physics, Mizoram University, sponsored by Inter University Accelerator Center (IUAC), New Delhi.
12. UGC-SPONSORED SHORTTERM COURSE. One week workshop on SPSS from **2nd to 7th December, 2013** at Mizoram University.
13. National Workshop on Dynamical Systems, held from **26th to 27th November, 2013** at the Department of Mathematics and Computer Science, Mizoram University.
14. National Workshop on Mathematical Analysis, **7th & 8th March, 2013**. Organized by Dept. of Mathematics and Computer Science, Mizoram University.
15. National Workshop on “Advances in Electronics, Communication and Information Technology (AECI-2011)” at Mizoram University, Aizawl, during **March 23 to 26, 2011**.
16. National Workshop on Computational Physics held during February 14 – 19, 2011 at the Dept of Physics, Mizoram University. Organized by Dept. of Physics, Mizoram University in collaboration with University of Hyderabad (Centre for Modelling Simulation and Design)

DECLARATION

I declare that the information given here are true to the best of my knowledge. I am willing to provide more information on request.

Last Updated: June 18, 2025