Wasikul Islam

Curriculum Vitae

Academic Positions & Experiences

Nov. 2024 - University of Wisconsin-Madison, USA.

Present Scientist I

May 2023 - SLAC National Accelerator Laboratory, Stanford University, USA.

Present Visiting Researcher, Advisor/Collaborator: Prof. Ariel Schwartzman

May 2021 - University of Wisconsin-Madison, USA.

October 2024 Postdoctoral Research Associate, Advisor: Prof. Sau Lan Wu

Jan 2016 - ATLAS Experiment, European Organization for Nuclear Research (CERN).

Present Physicist researcher (Based at CERN in 2019-2020 and 2021-2023)

Aug 2015 - Oklahoma State University, USA.

April 2021 Graduate Research Assistant, Advisor: Prof. Alexander Khanov (Ph.D. Advisor)

Jan 2018 - Argonne National Laboratory, USA.

Dec 2018 Resident Associate

Nov 2017 - Fermi National Accelerator Laboratory, USA.

Dec 2018 Visitor (Worked at Test Beam Facility)

Jun 2017 - HEP-CCE of Argonne National Laboratory, USA.

Aug 2017 Graduate Research Aide

Jun 2015 - European Organization for Nuclear Research (CERN), Switzerland.

July 2015 Summer Intern

Education

2015–2021 Ph.D. in Physics, Oklahoma State University, Stillwater, OK, USA.

Dissertation: Searches for beyond the Standard Model Physics in dijet resonances and development of a new b-tagging calibration algorithm at the ATLAS detector of CERN.

2013–2015 M.Sc. in Physics, Aligarh Muslim University, Aligarh, India.

Dissertation: Neutrino Oscillations & its future Experiments.

2010–2013 B.Sc. in Physics, Aligarh Muslim University, Aligarh, India.

Honors/Awards/Grants

- As a member of the ATLAS Collaboration at CERN, co-recipient of the '2025 Breakthrough Prize in Fundamental Physics' by https://breakthroughprize.org.
- o Elected as a Full Member of 'Sigma Xi The Scientific Research Honor Society' (2025).
- Awarded 'Wisconsin Initiative for Scientific Literacy Award 2024' by University of Wisconsin-Madison USA.
- Awarded '2023 Postdoc Excellence Award' by Postdoctoral Association, University of Wisconsin-Madison USA.
- o Selected 'APS Career Mentoring Fellow 2022' by American Physical Society, USA.
- Finalist award in 'Department of Particles & Fields Grand Slam competition 2020' of American Physical Society, USA.
- o 'APS Travel Award 2018' by Department of Particles and Fields (DPF), American Physical Society for APS April meet 2018, Columbus, Ohio, USA.

- o 'ANL-ATLAS Graduate Fellowship' by Argonne National Lab., USA for a year (2018).
- Summer Research Fellowship by High Energy Physics Center for Computational Excellence (HEPCCE), Argonne National Lab., USA to work as 'Research Aide' for summer 2017.
- o 'Departmental competitive Travel award 2017 for Graduate Students' by Physics Department, OSU to visit SLAC Laboratory, Stanford University, USA.
- o 'APS Travel Award 2017' by Department of Particles & Fields (DPF), American Physical Society for APS April meeting 2017, Washington DC, USA.
- o 'Summer Internship at CERN' in the ALICE Experiment of CERN in summer 2015.
- o Awarded 'Sir Syed Global Scholar Award 2014' by Sir Syed Edu. Soc. of North America.
- o INSPIRE-SHE scholarship by Department of Science & Technology (DST), Govt. of India for 5 years (2010-2015) for securing position among the top 1% students of India in Higher Secondary Exam.
- o 'University Post Graduate Merit Scholarship' by Department of Physics, Aligarh Muslim University, India for 2 years (2013-2015).
- Secured 1st Position in M.Sc. (Physics) 1st Semester, AMU, India among 50 students.
- o 'Best Student of the Year' in the Non-Residential Category by the Sargachi Ramakrishna Mission High School, West Bengal, India in 2008.

Research experiences

Currently working as one of the members of ATLAS collaboration of CERN. My research experiences are: 2023-Present **Tracking and vertexing studies for HL-LHC upgrades & future colliders:**

With Prof. Ariel Schwartzman of SLAC/Stanford University, developed multiple novel techniques for selecting Primary Vertices at the HL-LHC and beyond. Developed techniques for 4-dimensional tracking using timing information for future upgrades. Developing new machine learning techniques, such as Anomaly detection and Graph Neural networks, to improve Jet-PileUp suppression and tracking performance with possible applications to future colliders such as HL-LHC, FCC, EIC etc.

2021-Present Anomaly detection studies using machine learning in the search for new Physics:.

With the novel techniques of anomaly detection using machine learning, working to find new Physics in the form of anomalous events at the ATLAS detector at LHC. Served as Editor and main analyzer for a PRL publication. Serving as Editor for a new publication at LHC Run 3.

2024-Present Development of ADFilter web tool for new physics searches:.

Co-developed web tool <u>ADFilter</u> for Anomaly detection using the trained autoencoder from our previous ATLAS studies. The online tool provides reinterpretations of BSM models using Anomaly detection.

2025-Present Development of WIPUNet, for image denoising with pileup mitigation techniques:.

Developed developed <u>WIPUNet</u>, a proof-of-concept neural network embedding pileup-mitigation principles from high-energy physics into deep learning, demonstrating enhanced robustness under extreme noise. Currently applying to particle physics problems: Jet images and calorimeter data.

2024-Present Di-Higgs phenomenological studies with Machine learning:.

Investigated and developed <u>machine learning techniques</u> for improving di-Higgs boson search sensitivities at the LHC using both Anomaly detection techniques and supervised classifiers using multiple di-Higgs decay channels.

2021-2022 Search for the Higgs boson decaying to a pair of muons:.

For designing an ATLAS analysis, worked on background modeling studies and implementation of various ML techniques for sensitivity improvements in preparation for Run 3 analysis.

2020-2022 Search for new physics in multi-body invariant masses in events with a lepton:

Served as Editor of the paper and one of the main analyzers for the 3-body, 4-body resonances search with jets and leptons in ATLAS. Was responsible for various new physics BSM models, including the simplified Dark Matter, Composite Higgs model & Radion model etc.

- 2018-2021 Search for Exotic Particle W' hadronically decaying into top and bottom quarks:
 - For the ATLAS W prime boson(W') analysis, was responsible for b-tagging optimization for the $\underline{\text{analysis}}$ in all hadronic decay channel. Also contributed to uncertainty calculation studies.
- 2016-2020 Identification of B quarks and Light Jet Calibrations with ATLAS, CERN:.

During my Authorship qualification task in ATLAS collaboration, worked on developing a completely new data-driven calibration method ("Direct Tag method") for Light Jet Calibration in ATLAS to improve B-tagging performance.

2018-2020 Searches for Dark Matter and Heavy Charged Higgs in dijet + lepton channels:.

Have been one of main analyzers. Responsible for dark matter and heavy charged Higgs models $(H+ \to tb \text{ resonance search})$ within $\frac{\text{Dijet} + \text{lepton analysis}}{\text{dijet search}}$ with the ATLAS detector. This was the first dijet search of ATLAS while using a lepton as a trigger.

2018-2018 ITK Pixels R&D for High Luminosity LHC with the Argonne National lab's group:

Being 'ANL ASC Graduate Fellow 2018' at Argonne National Lab, worked for the ITK Pixels R & D for HL-LHC. With Fermilab's Test beam facility, performed different tests on ITK Pixels, developed 3D printing models for Test beam studies.

2017-2018 Application of machine learning techniques on LHC (ATLAS) physics:.

Under the summer research fellowship by 'High Energy Physics Center for Computational Excellence' (HEPCCE), worked at Argonne National Lab to apply machine learning classification techniques on ATLAS data sets and found promising results.

2015-2015 Accelerator Physics:.

As a summer student at CERN in 2015, worked on Accelerator-Physics and developed different outreach materials for CERN on similar topics.

2014-2015 Neutrino Oscillation studies:.

Worked on Masters' Project on 'Neutrino Oscillations & its future Experiments' where I analyzed Physics prospects of 23 different Neutrino experiments during 2014-2015.

Research Publications

Have been an author of 650+ peer-reviewed research papers. **Google Scholar profile** can be found at the following <u>link</u>. My ORCID: 0000-0002-5624-5934.

All the research papers can also be found at **INSPIRE-HEP**: http://inspirehep.net/author/profile/W.Islam.1. Selected research papers with my significant contributions are listed below:

A. Selected research publications

- 1. S.V. Chekanov, W. Islam, N. Luongo-"Enhancing Sensitivity for Di-Higgs Boson Searches Using Anomaly Detection and Supervised Machine Learning Techniques", 2025 (arXiv: 2504.12418)[Submitted to PRD]
- 2. Wasikul Islam-"WIPUNet: A Physics-inspired Network with Weighted Inductive Biases for Image Denoising", 2025 (arXiv: 2509.05662).
- 3. ATLAS Collaboration- "Search for new phenomena in two-body invariant mass distributions using unsupervised machine learning for anomaly detection at $\sqrt{s}=13$ TeV with the ATLAS detector", 2024.(Phys-RevLett.132.081801), (arXiv: 2307.01612).
- 4. S. Chekanov, W. Islam, R. Zhang, N. Luongo- "ADFilter-a web tool for New Physics Searches with Autoencoder-Based Anomaly Detection Using Deep Unsupervised Neural Networks", 2024 (Information 2025, 16(4), 258), (arXiv: 2409.03065).
- 5. Wasikul Islam- "Searches for new physics with leptons using the ATLAS detector", 2024, PoS(PIC2024)011, Submitted to *Proceedings of Science*, <u>ATL-PHYS-PROC-2024-120</u>.
- 6. ATLAS Collaboration- "Search for vector-boson resonances decaying into a top quark and a bottom quark using pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector", 2023 (JHEP12(2023)073),(arXiv).
- 7. ATLAS Collaboration- "Search for new phenomena in two-body invariant mass distributions using unsupervised machine learning for anomaly detection at $\sqrt{s}=13$ TeV with the ATLAS detector", 2023 (Link: ATLAS-CONF-2023-022).[Presented in LHCP-2023 conference]
- 8. ATLAS Collaboration- "Search for new phenomena in multi-body invariant masses in events with at least one isolated lepton and two jets using $\sqrt{s} = 13$ TeV proton-proton collision data collected by the ATLAS

- detector, 2022 (JHEP07(2023)202), (arXiv:2211.08945).
- Tulika Bose et al.- "Report of the Topical Group on Physics Beyond the Standard Model at Energy Frontier for Snowmass 2021", 2022 (arXiv:2209.13128).
- 10. F. Maltoni et al.- "Theory of Collider Phenomena", TF07 Snowmass Report, 2022 (arXiv:2210.02591).
- 11. ATLAS Collaboration- "Search for new phenomena in multi-body invariant masses in events with at least one isolated lepton and two jets using $\sqrt{s}=13$ TeV proton-proton collision data collected by the ATLAS detector", 2022 (Link: ATLAS-CONF-2022-048).[Presented in ICHEP-2022 conference]
- 12. Wasikul Islam- "Increasing Multilingualism in ATLAS' Science Communication", 2022. Published in Proceedings of science: (ICHEP2022)973.
- 13. ATLAS Collaboration- "Search for vector boson resonances decaying to a top quark and a bottom quark in hadronic final states using pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector", 2021 (Link: ATLAS-CONF-2021-043).
- 14. S.V. Chekanov, S. Darmora, W. Islam, C.E.M. Wagner, J. Zhang- "Model-independent searches for new physics in multi-body invariant masses", 2021 (Universe 2021, 7(9), 333),(arXiv:2103.10217).
- 15. ATLAS Collaboration-"Search for dijet resonances in events with an isolated charged lepton using $\sqrt{s}=13$ TeV proton-proton collision data collected by the ATLAS detector", 2020 (JHEP 06 (2020) 151), (arXiv:2002.11325).
- 16. M. Rominsky et al. Fermilab Test Beam Facility Annual Report: FY19 (Fermilab technical publication: FERMILAB-TM-2734-DI), (doi:10.2172/1668714).
- 17. M. Rominsky et al. Fermilab Test Beam Facility Annual Report: FY18 (Fermilab technical publication: FERMILAB-TM-2702-DI).
- 18. [Manuscript in review] W. Islam, A. Schwartzman "Primary Vertex Selection at the HL-LHC Overcoming Challenges with New strategies" (ATL-COM-PHYS-2025-890).
- 19. [Manuscript in review] W. Islam, "Searches for Dijet Resonances with the ATLAS Detector" (ATL-COM-2025-892).

B. Popular articles/Others

- 1. 'Navigating Anomalies in the Pursuit of New Physics', for Wisconsin Initiative for Scientific Literacy Award 2024, Madison, WI, USA. Link
- 2. 'Excitements over restarting the LHC for its Run 3', in the Physics E-Magazine 2022 published by SPS, Department of Physics, University of Kansas, USA.
- 3. 'Mystery of TIME', in the Physics Bulletin 2014 published by Department of Physics, AMU, India.
- 4. 'My beautiful days at CERN', published in the newsletter of CERN, 'ALICE Matters' in 2015.
- 5. S. Jana, W. Islam, A. Khanov Probing New Physics with Boosted Di-Higgs Signal using Fat Jet Signature.

C. Other creative writings & books

- 1. Authored and published a poetry book in Bangla language: "Nakkhatra Punja Sakkhi" ("Stars are the witness") by Manan Publication, Kolkata, India in 2023 (ISBN: 978-93-91027-20-9).
- 2. [Book in preparation] "Tai Tsun Wu Memorial Volume" by World Scientific Publishing. Edited by: Sau Lan Wu, Hung Cheng, Wasikul Islam, Barry McCoy, John Myers, Per Osland (ISBN: 978-981-98-2190-7).

Selected Talks/Presentations:

- o 'Searches for dijet resonances with the ATLAS detector' at Lepton-Photon-2025, Madison, USA, Aug. 2025.
- 'New Physics Searches at the LHC through Event based Anomaly Detection and Development of ADFilter Web-tool' at Lepton-Photon-2025, Madison, WI, USA, in August 2025.
- o 'Searches for BSM Higgs boson decays in ATLAS' at Pheno2025, Pittsburgh, USA, May 2025.
- 'Vertex Classification in High PU scenario at HI-LHC using Anomaly detection algorithms', 8th ATLAS Machine Learning Workshop, CERN, Switzerland in March 2025.
- 'ADFilter A Web Tool for processing collision events for New Physics Searches with Anomaly Detection', APS Global Physics Summit, Anaheim, CA, USA in March 2025.
- 'Searches for new physics with leptons using the ATLAS detector', The 43rd International Symposium on Physics in Collision - PIC 2024, Athens, Greece in October 2024.

- 'Search for new physics using Event-based anomaly detection & development of ADFilter web tool', IAIFI
 workshop, MIT, MA, USA in August 2024.
- 'Search for new physics using unsupervised ML for anomaly detection at ATLAS detector', APS April Meeting, Sacramento, CA, USA in April 2024.
- 'Search for new physics in two-body mass distributions using unsupervised ML for anomaly detection' at 'SLAC Summer Institute-2023', SLAC National Lab, USA in August 2023.
- 'Search for new phenomena in two-body invariant mass distributions using unsupervised machine learning for anomaly detection with the ATLAS detector' in BOOST2023 at Lawrence Berkeley National Laboratory, Berkeley, USA in August 2023.
- 'Search for new physics using event-based anomaly detection technique for Jets+X' at ATLAS Machine Learning Workshop, CERN, Switzerland in January 2023.
- o 'Search for new physics in multi-body invariant masses in dijet events with an isolated lepton in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector' at XI International Conference on New Frontiers in Physics, Crete, Greece, Sept. 2022.
- 'Increasing Multilingualism in ATLAS' Science Communication' at 41st International Conference on High Energy Physics (ICHEP 2022), Italy, July 2022.
- o 'Search for new physics in multi-body invariant masses in events with an isolated lepton using $\sqrt{s}=13$ TeV pp collision data collected by the ATLAS detector' at Early Career Scientists session, ATLAS Collaboration Week, CERN, Switzerland in June 2022.
- 'Search for di-jet resonances along with an isolated charged lepton at $\sqrt{s}=13$ TeV pp collision with the ATLAS detector' at Lepton-Photon Conference 2021, University of Manchester, UK in January, 2022.
- o 'Search for di-jet resonances along with an isolated charged lepton at $\sqrt{s} = 13$ TeV p-p collision with the ATLAS detector' at DPF Conference 2021, Florida State University, USA in July, 2021.
- 'Model-independent searches for new physics in multi-body invariant masses' at APS April Meeting 2021, (Virtual) in April, 2021.
- o 'Search for charged Higgs Boson in di-jet resonances along with a charged lepton at $\sqrt{s}=13$ TeV p-p collision with the ATLAS detector' at APS April Meeting 2020, Washington DC (virtual) in April 2020.
- Poster on 'Search for dijet resonances in events with isolated lepton using $\sqrt{s}=13$ TeV pp collision data with the ATLAS detector' ATLAS Week, CERN, June 2019.
- 'Performance of b jet identification with the ATLAS detector at CERN' at 'New Perspectives 2018' during 51st Annual Users Meeting of Fermilab, June, 2018.
- o 'Mistag rate calibration using Direct Tag method in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector' at APS April Meeting, Columbus, USA in April 2018.
- o 'Identifying objects in ATLAS through machine learning techniques' as 'Young Physicist's Lightning talk' at US-LHC Users Association Meeting 2017 at Fermilab, Batavia, IL, USA in November, 2017.
- 'Identifying objects in ATLAS through machine learning techniques' at 'Young Scientists Symposium', Argonne National Laboratory, IL, USA in July, 2017.
- 'Mistag rate calibration using Direct Tag method with the ATLAS detector' at US-ATLAS workshop, Argonne National Laboratory, IL, USA in July, 2017.
- o 'Performance of b jet identification in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector' at APS April Meeting 2017, Washington DC, USA in Feb. 2017.

Teaching & mentoring Experiences

I taught Physics at undergraduate level courses for 4 years at Oklahoma State University (OSU), USA as a Graduate Teaching Assistant. I worked with multiple graduate students of Univ. of Wisconsin and undergrad students of Stanford University at SLAC lab during 2023-2024 and mentored many of them while collaborating. I also have been mentoring many students from India for higher studies since 2016. A few courses & some teaching/mentoring responsibilities are listed below:

Physics 1/PHYS1224: Grader TA:.

During 2015-2016, Taught physics course PHYS1224 to undergrad students. I worked as a grader TA and also, taught classes on problem-solving skills in Physics.

Physics 1214/PHYS2114: Laboratory classes: .

During semester Fall 2016 through Spring 2017, taught PHYS1224 and PHYS2114, introductory laboratory courses at OSU to undergrad students mostly from Engineering backgrounds.

Physics 2/PHYS2114: Recitation classes:.

In Spring 2020, Summer 2020, Fall 2020 & Spring 2021 semesters, taught recitation classes of Physics 2 to undergrad students covering Electricity, Magnetism, Optics etc at OSU.

Physics 2/PHYS2114: Laboratory classes: .

I taught PHYS 2114 lab classes across Spring 2020, Summer 2020, Fall 2020, and Spring 2021, guiding students in verifying Physics concepts through simple experiments.

Mentoring Physics students for higher studies : .

Mentored 24 undergrad and masters students for higher studies through <u>SSGSA program</u> since 2016. 21 students got admitted into PhD Physics programs across US and European universities.

Software skills

Expertise on Languages, softwares : C++, Python, FORTRAN, Linux/UNIX, shell scripting, Git, ROOT, Mathematica, MadGraph, YAML, HTML, basic ML algorithms..

Familiarity with ML packages : Numpy, Scipy, Scikit-learn, TensorFlow, PyTorch, Keras, Theano, PyTorch, Matplotlib etc..

Workshops/Independent courses attended

- Attended "Machine Learning with Graphs" course by Stanford University, US in 2023.
- Attended 'CERN-Fermilab Hadron Collider Physics Summer School 2018' at Fermilab.
- Attended workshop on 'Machine learning & B-tagging' at SLAC, California, May 2017.
- Attended 'CERN Summer School on Particle Physics', Geneva in 2015.
- Attended a condensed course on 'Atomic, Molecular & Radiation Physics: Astronomy to Biomedicine' & workshop on 'Superstructure & R-Matrix codes' jointly organized by AMU and Ohio State University, US in 2014.
- o Completed an online course 'From Big Bang to Dark Energy'-Tokyo University in 2014.

Professional Membership

- o ATLAS Experiment of CERN, Geneva, Switzerland
- o American Physical Society (APS), USA

Leadership/Activities/Outreach

- o Co-Editor of 'Tai Tsun Wu Memorial Volume' by World Scientific Publishing, 2025.
- Guest Editor for the Special Issue "Symmetry and Asymmetry in Plasma and High Energy Physics" (2026, currently open for submissions) in the journal Symmetry.
- Serving as a Reviewer for European Physical Journal (EPJ) and AIP Advances journal.
- Serving as Contact person of Derivations for the Flavor tagging group of ATLAS, CERN.
- Served as Editorial Board member of CWola Hunting Anomaly detection analysis/publication of ATLAS collaboration.
- \circ Served as Editor for an ATLAS/CERN publication & a conference paper on Event based Anomaly detection searches in Jets+X
- Served as a reviewer of multiple undergraduate sessions (posters & talks) during APS April Meeting 2024, Sacramento, CA.
- o Participated in "SLAC Research SLAM 2023" as one of the finalists.
- Served as reviewer of students' presentations at the APS April meeting 2022.

- Served as Editor for the ATLAS/CERN for <u>publication</u> and <u>Conference paper</u> on Search for New Physics in Multi-body invariant masses in 2022.
- Chaired 2 sessions of BSM Physics at DPF-2021 conference by American Physical Society's Department of Particles & Fields at Florida State University, FL, USA.
- Volunteered with ATLAS Experiment's outreach team, translated ATLAS Coloring book into Bangla language. Gave (Outreach presentation) at ICHEP-2022 in Bologna, Italy.
- Worked as Instructor of Python language to Visually challenged students at VisionAid (https://visionaid.org), Boston, USA during 2017-2018.
- o Served as the Chairman of 501(c)(3) non profit organization 'Sir Syed Education Society of North America' (www.ssgsa.us) which mentors undergraduate students and runs a scholarship program in India for higher studies in USA and around globe (2019-2021).
- Served as ATLAS Guide/volunteer during 'CERN Open days 2019' at CERN.
- Co-founded an Association for Encouragement in Basic Sciences for High School students in India and organized many outreach events in India.
- Attended United Nations Youth Assembly 2017, at UN, New York after being selected as a 'Delegate to UN Youth Assembly' for promoting Higher Education in India.
- Appeared in a Youtube interview on 'Experience with ATLAS Experiment', in 2020.
- Got interviewed by CERN as representative of Summer Students from Non-member countries in 2015. During CERN-summer-studentship, developed outreach contents for people of different age groups.
- Won more than 100 awards at State level/University level competitions in Quiz, Poetry-Recitation, Singing, Tabla (Indian Classical musical instrument), Essay writing, Debates.
- Lead as 'Creative manager' of a university team that was awarded the 'Guinness World Record' for making 'World's Largest Envelope' in 2012.
- Completed a 4-year degree on 'Tabla Badya', (a musical instrument) & 3-year degree on 'Recitation' (Performing Arts) from 'Kolikata Sangeet Bidya Bihar', Kolkata, India.

Selected news articles/features

- o "UW-Madison scientists part of team awarded Breakthrough Prize in Physics" News by Univ. of Wisconsin-Madison, 15th April 2025. News link on Breakthrough Prize.
- o "Wasikul Islam wins 2024 WISL award for communicating science" News by Univ. of Wisconsin-Madison, 21st March 2024.News link on my award.
- o "Wasikul Islam honored with UW Postdoc Association Excellence in Service Award"- News by Univ. of Wisconsin-Madison, May 26, 2023; News link on my award.
- o "Machine learning could help reveal undiscovered particles within data from the Large Hadron Collider" at https://phys.org News link on our research paper.
- "ATLAS searches for new phenomena using unsupervised machine learning for anomaly detection" – ATLAS-CERN Physics Briefing/News, 24 August 2023; News link on our research paper.
- o "OSU doctoral student wins research fellowship at Argonne National Lab", OkState News, December 20, 2017; News link on my fellowship.
- o "Wasikul Islam, NMSSS featured alumni" by CERN & Society Foundation February, 2023; News link on my internship .
- o "AMU center holds meet on higher education abroad" Hindusthan Times, Jan 15, 2023; News link on my outreach on Indian national newspaper.