

## Interdisciplinary Collaborations Among Amity Faculty Driving Research, Innovation, and Patents

### Publications

Sl. No.	Institution	Employee Code	Faculty	Inter-disciplinary Research Area(s)	Name of collaborating Institutions for Interdisciplinary Research	Research Title
1	AIHAS (DoPT)	14639	Dr Pragya	Breast Cancer	Department of Radiation Oncology, Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, IND	Physical Functional Impairment in Breast Cancer Patients: A Cross-Sectional Expert Survey. Cureus 16(3): e57364. DOI 10.7759/cureus.57364
2	AIHAS (DoPT)	303746	Dr. Meena Gupta	Biomedical	Department of Biomedical Engineering, North Eastern Hill University, Shillong, Meghalaya	Modern intervention tool for rehabilitation 2024 , 1st edition, ISBN: 9780323991247 , Elsevier
3	AITT	2545	Prof. A. Maheshwari	Information Technology, Global Warming & Ecological studies, Agriculture, Sustainability	AiIT, AIWGES, School of Community Resources and Development, Arizona State University, Phoenix, USA	VR tourism: A comprehensive solution with blockchain technology, AI-powered agents, and multi-user features, Inventorization of Existing Flora of Govind Wildlife Sanctuary in the Uttarakhand, India, Mountain Serenity and Yoga: Exploring Rishikesh's Tourism Dynamics, Sustainable Development and Resilience of Tourism
4	AITT	2009	Dr. Swati Sharma	Hospitality & Management	1) IPCA- Portugal, Taylor's University Malaysia, 2) Benha University Egypt 3) University of west of Scotlant UK 4) Universiti Teknologi MARAT Shah Alam, Malaysia, 5) Muğla Sıtkı Koçman Üniversitesi, Muğla, Turkey	1) Soaring Beyond Convention: Digital Disruption and Strategic Revolution in Contemporary Aviation 2) Legal Frameworks for Sustainable Global Tourism: A Comparative Study of Regulatory Instruments and Industry Compliance 3) THE FUTURE OF EVENTS: Trends, Technologies, and Stakeholder Engagement, 4) Solutions for Managing Overtourism in Popular Destinations 5) Exploring the Impact of Artificial Intelligence on the Tourism and Hospitality Industry: A Comprehensive Analysis
5	AITT	8016	Dr. Narendra Kumar	Events , Tourist Behavior, Festival Experience	1) Polytechnic Institute of Cávado and Ave, Portugal 2) Central Asian University, Tashkent, Uzbekistan	1) Edited Book titled The Future of Events, Edited Book titled Tourist Behavior, 2) Edited Book titled Transforming festival experiences with Artificial Intelligence: A stakeholders' Perspective

6	AITT	304693	Dr. Suman Lata	Management	Management	AI's influence on young consumer behavior: fostering sustainable consumption Sustainability in the Digital Age: Redefining Technology Ecosystems Leading with Innovation: Proactive Environmental Strategies for Sustainable Development What Determines Tourist Adoption of Hotel Websites for Online Hotel Bookings? An Empirical Analysis by Taking E-Trust as a Mediator
7	AITT	306195	Dr. Aruditya Jasrotia	Management, Hospitality	1) Central University of Jammu; 2) Universiti Teknologi MARA Cawangan, Pulau Pinang, Malaysia; 3)Prince of Songkla University, Songkhla, Thailand	1) Smartly Sustainable: Community Support for the Smart City Concept in the Himalayas India; 2) Divine realms in digital space: Exploring augmented reality as a catalyst for religious heritage management; 3)Unveiling the influence of natural environment in urban tourism destinations on local community's quality of life
8	AIMT	303739	Dr Naveen Chandra Joshi	Plant biology	Prof. Thomas Leustek , Rutgers University, Newhersey	Edited Book entitled " Soil health management and plant nutrition"
9	AIAE	307869	Dr. Rajesh Kumar Saluja	CI engine using Taguchi technique	Department of Computer Science and Engineering, Amity University Haryana	Analysis and optimisation of emissions and fuel economy of biodiesel fuelled CI engine using Taguchi technique
10	ASH	308890	Dr Rajnish Shukla	Sustainable Design Innovation, Energy Saving and Heat Retention	AITT -Dr. Narender Kumar	UK Design Patent, Design No. 6473097, Sep 2025. Internation Design Classification class - 07
11	ASH	301654	Dr Malini Singh	Department of patent, Tourism	1. Amity IPR cell, 2.Dr. Vishwanath Karad MIT World Peace University, Pune	1. Learning Lessons from the Scenario Changes of Air Quality with Reference to the Pandemic in Delhi NCR: An MCDM Approach for Fighting Air Pollution 2. Design Thinking as a Service Mindset Iterative Approaches to Transform Hospitality Education
12	AIIT	300966	Dr Ajay Vikram Singh	Neutrosophic Soft Set (Mathematics)	Broumi, Said, Laboratory of Information Processing, Faculty of Science Ben M'Sik, University Hassan II Casablanca, Morocco	"Decision making with parametric reduction and graphical representation of neutrosophic soft set," Math. Stat., vol. 12, no. 2, pp. 157–166, March 2024, Q3
13	AIIT	2384	Dr Sarika Jain	Medical	--	Leveraging Machine Learning for Early Detection of Asthmatic Children in Healthcare (2025) International Journal of Online and Biomedical Engineering, 21 (9), pp. 110 - 124, July 2025

14	AIIT	306767 & 307878	Dr. Rekha Agarwal & Dr. Nidhi	Medical	--	Data-driven biomarker discovery and risk profiling for polycystic ovary syndrome in Indian women using ensemble learning, Vol. 38, Issue 2, Jan 2026, Q2
15	ACNM	304984	Dr. Chansi	AI enabled Biosensor Development	Amity Innovation and Design Centre (AIDC)	Gupta, A., Chansi, Singh, I., Nagar, S., Mani, A., Roy, S. S., Rao, A. V. S. S. N., Kapoor, S., & Basu, T. (2025). Unlock unprecedented accuracy in viral detection with Virusure: A Smartphone integrated sensor empowered by Trailing Moving Average algorithm. Chinese Journal of Physics, 98, 299–313. <a href="https://doi.org/https://doi.org/10.1016/j.cjph.2025.09.016">https://doi.org/https://doi.org/10.1016/j.cjph.2025.09.016</a> □
16	ASPES	5063	Prof.(Dr.)Ajit Kumar	Special Education /Disabilty Sports	Amity Institute of Rehabilitation Sciences (AIRS)	Exploring student volunteer experiences through the lens of procedural and relational switching costs
17	ASPES	304930	Dr. Rahul Kumar	Special Education /Disabilty Sports	Amity Institute of Rehabilitation Sciences (AIRS)	Exploring student volunteer experiences through the lens of procedural and relational switching costs
18	AISST	307888	Dr Shivani Verma	Image Analysis, Space Data Analysis, AI	SpaceTS, LETI University Russia, DRDO, IIT	I. Dhruvi Shah, Dr. Shivani Verma, Prof. M.S. Prasad, "Intelligent Hyperspectral Image Analysis Using Modified R-CNN, 12th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO)", 18th - 19th sept 2025, Amity University
19	ACAI	312187	Dr. Rakesh Chandra Joshi	Computer Vision, Infrastructure AI	University of Memphis, Memphis, Tennessee, United States; Brno University of Technology, Brno, Czech Republic	PACE-Net: progressive attention and convolutional embedding network with dynamic patch merging for real-time fine-grained infrastructure surface defect detection

### Projects

Sl. No.	Institution	Employee Code	Faculty	Inter-disciplinary Research Area(s)	Name of collaborating Institutions for Interdisciplinary Research	Research Title
1	ASH	308890	Dr Rajnish Shukla	Sustainable Design Innovation, Energy Saving and Heat Retention	AITT -Dr. Narender Kumar	Cooking Stove with Adjustable Metal shroud and high edge ring for heat retention

2	AINST	14516	Dr. Arpita Datta	Radio-chemistry	Bhabha Atomic Research Centre, Mumbai and Department of Atomic Energy	Efficacy Evaluation of Antidiabetic and Cardio-protective Herbal Medical Formulations using Nuclear Analytical and Chromatography Techniques.
3	ACNM	304984	Dr. Chansi	AI enabled Biosensor Development	Amity Innovation and Design Centre (AIDC)	A smart phone assisted Point of Care(POC) electrochemical device for detection of SARS-COV-2(COVID-19) -ICMR
4	ASPESS	5063	Prof.(Dr.)Ajit Kumar	Special Education /Disabilty Sports	Amity Institute of Rehabilitation Sciences (A	1. "Impact of Covid19 on Special Olympics Early Childhood Programming CHIME-COVID 2. Evaluation of Special Olympic Maternal and Child Health Intervention Program (CHIME-1)
5	ASPESS	304930	Dr. Rahul Kumar	Special Education /Disabilty Sports	Amity Institute of Rehabilitation Sciences (AIRS)	1. "Impact of Covid19 on Special Olympics Early Childhood Programming CHIME-COVID 2. Evaluation of Special Olympic Maternal and Child Health Intervention Program (CHIME-1)
6	AISST	307888	Dr Shivani Verma	Image Analysis, Space Data Analysis, AI	SpaceTS, LETI University Russia, DRDO, I	□Technology Development Fund, DRDO Project on "AI Based detection of Weld Defects " for Indian Navy, awarded on July 14, 2025

### Patents

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1	AITT	2009	Dr. Swati Sharma	Hospitality & Management	1)IPCA- Portugal, Taylor's University Malaysia, 2)Benha University Egypt 3)University of west of Scotlant UK 4)Universiti Teknologi MARAT Shah Alam, Malaysia, 5)Muğla Sıtkı Koçman Üniversitesi, Muğla, Turkey	An Adaptive Portable Device for Multilingual Tourist Guidance with Multimodal Information Delivery and Conversational Translation
2	ASH	308890	Dr Rajnish Shukla	Sustainable Design Innovation, Energy Saving and Heat Retention	AITT -Dr. Narender Kumar	UK Design Patent

3	ASH	301654	Dr Malini Singh	Department of patent, Tourism	1. Amity IPR cell, 2.Dr. Vishwanath Karad MIT World Peace University, Pune	'MODULAR SYSTEM FOR REAL-TIME PEST DETECTION IN INDOOR ENVIRONMENTS AND WORKING METHOD THEREOF', 2. 'MODULAR SYSTEM FOR REAL-TIME PEST 1. DETECTION IN INDOOR ENVIRONMENTS AND WORKING METHOD THEREOF'
4	AIIT	304130	Dr. Alka Chaudhary	Environmental Science	--	E-Waste Processing Device for Recycling and Environmental Compliance (Patent filed dt. 4.08.2025)
5	ACNM	304984	Dr. Chansi	AI enabled Biosensor Development	Amity Innovation and Design Centre (AIDC)	A phone based interface electrochemical sensor for detection of low concentration SARS-COV2 antibody (Application number 202211002259) -Filed
6	AISST	307888	Dr Shivani Verma	Image Analysis, Space Data Analysis, AI	SpaceTS, LETI University Russia, DRDO, I	Patent on "Intelligent Gunshot Localization and Automatic Retaliation" filed in July 2025, Patent Application No. ACN1466 Patent on "Intelligent Gateway Device For Unified Communication And Data Processing" filed on 22 May, 2025, Patent Application No. 202411039924 Patent on "Innovative Intelligent System for Real-Time Runway Embedded Light Intensity Monitoring" filed in May 2025, Patent Application No. ACN1359.