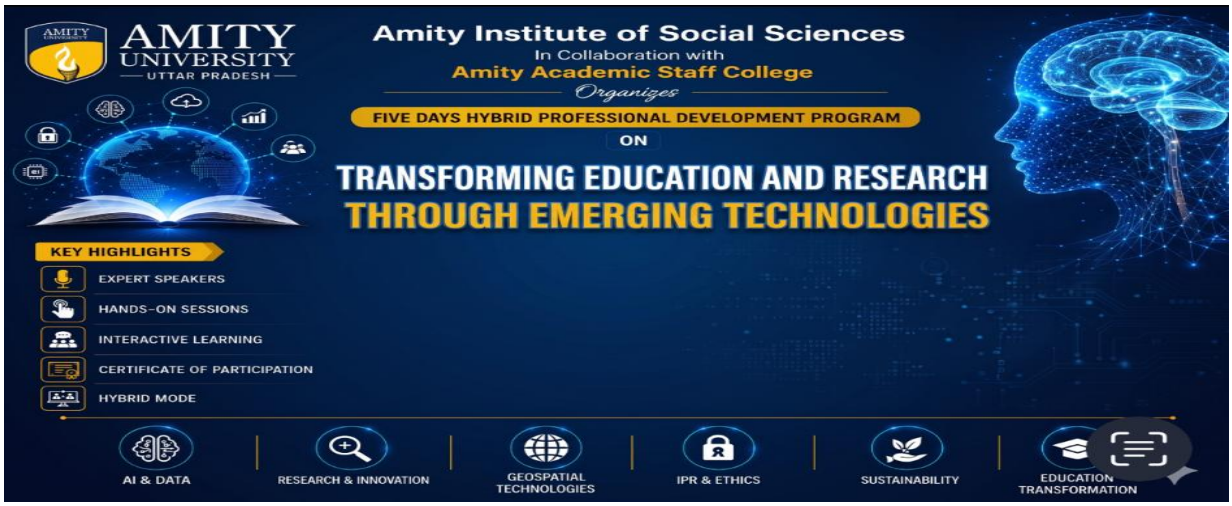
Amity Institute of Social Sciences In Collaboration With Amity Academic Staff College Organized Five Days Hybrid Professional Development Program On "Transforming Education and Research through Emerging Technologies"

From 1st - 5th June 2026

Venue: Amity University Campus Sector-125, Noida



In an era of rapid technological advancement and evolving academic practices, the integration of emerging technologies into education and research has become essential for fostering innovation, enhancing learning outcomes, and addressing contemporary challenges. Designed for academicians, researchers, scholars, and professionals, the programme provided a dynamic platform for exploring the role of emerging technologies in transforming educational practices, research methodologies, and knowledge dissemination. Over the five days, participants engaged in a series of enriching sessions covering diverse themes such as artificial intelligence, digital transformation, geospatial technologies, research ethics, intellectual property rights, mixed-methods research, sustainability, public health research, and innovative pedagogical approaches. The programme emphasized interdisciplinary learning and encouraged participants to critically examine the opportunities and challenges presented by technological advancements in academia and society. A key highlight of the programme was the active interaction between participants and experts through engaging discussions, question-and-answer sessions, and collaborative exchanges of ideas. These interactions fostered meaningful dialogue, enhanced understanding of contemporary issues, and promoted the sharing of diverse perspectives.

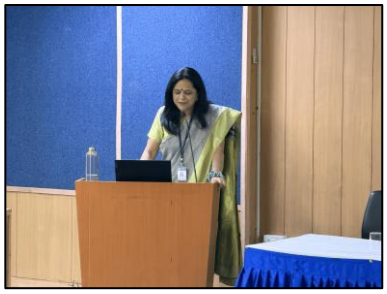
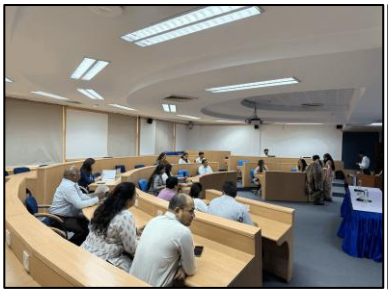
OBJECTIVES:

1. To familiarize participants with emerging technologies and their applications in contemporary education, research, and knowledge dissemination.
2. To enhance the professional competencies of academicians, researchers, and scholars by introducing innovative tools, methodologies, and technology-driven approaches.
3. To promote interdisciplinary learning and collaboration through discussions on diverse themes such as AI, geospatial technologies, sustainability, public health research, and digital transformation.
4. To strengthen participants' understanding of contemporary research practices, including research ethics, intellectual property rights, data visualization, and mixed-methods research.
5. To encourage the effective integration of technology into teaching-learning processes, thereby fostering innovative and learner-centric pedagogical practices.
6. To provide a platform for meaningful interaction, knowledge exchange, and networking among participants and experts from diverse academic and professional backgrounds.
7. To inspire participants to adopt future-oriented, sustainable, and technology-enabled approaches for academic excellence, research innovation, and societal development.

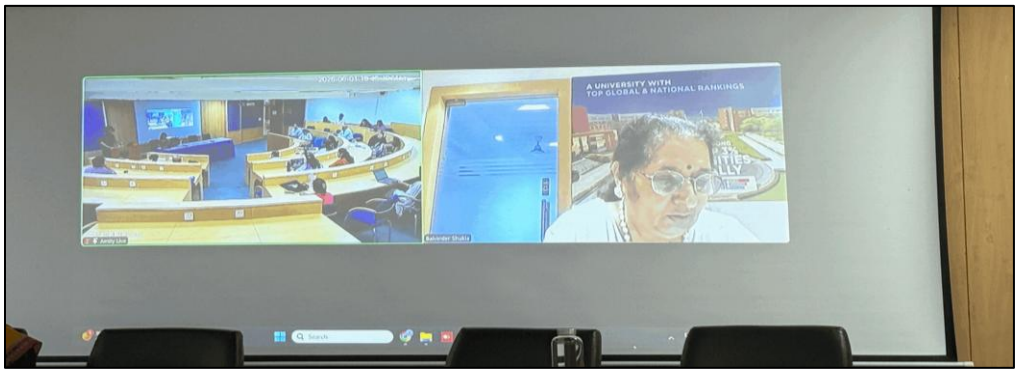
HIGHLIGHTS OF THE PROFESSIONAL DEVELOPMENT PROGRAM:

DAY- 1- 01 June 2026

The inaugural session of the Five-Day Hybrid Professional Development Program commenced with a warm welcome address and opening remarks by **Prof. (Dr.) Roumi Deb, Head, Department of Anthropology, Amity Institute of Social Sciences, Amity University, Uttar Pradesh**. In her address, she welcomed the participants and highlighted the significance of emerging technologies in shaping the future of education and research. This was followed by an insightful introduction to the Professional Development Program by **Prof. (Dr.) Nirupama Prakash, Director, Amity Institute of Social Sciences, Amity University Uttar Pradesh**. She elaborated on the objectives, relevance, and expected outcomes of the programme, emphasizing the importance of interdisciplinary learning and technological innovation in contemporary academia.


The occasion was further graced by the esteemed presence of **Prof. (Dr.) Balvinder Shukla, Hon'ble Vice Chancellor, Amity University Uttar Pradesh**, who virtually joined the inaugural session. Her inspiring address encouraged participants to embrace innovation, continuous learning, and research excellence in an increasingly technology-driven world. Her motivating words set a positive and aspirational tone for the five-day programme and served as a source of inspiration for all participants.



The day featured three enriching expert sessions:

SESSION-1

***Hands-on Geospatial Mapping and Spatial Data Visualization*- Dr. Anindita Shukla Chaudhuri, Assistant Professor and Coordinator, Department of Geography, Amity Institute of Social Sciences, AUUP**

Dr. Anindita, conducted an engaging session on Geospatial Mapping and Spatial Data Visualization. The session introduced participants to the foundational concepts of GIS, including spatial and attribute data, vector and raster models, coordinate reference systems, and geospatial workflows. She explained how GIS supports the collection, management, analysis, and visualization of location-based information for evidence-based decision-making. The session highlighted the growing relevance of GIS in social science research, urban planning, environmental management, disaster risk reduction, public health, and policy formulation. Participants were also familiarized with open-source GIS platforms and freely available spatial datasets.

SESSION-2

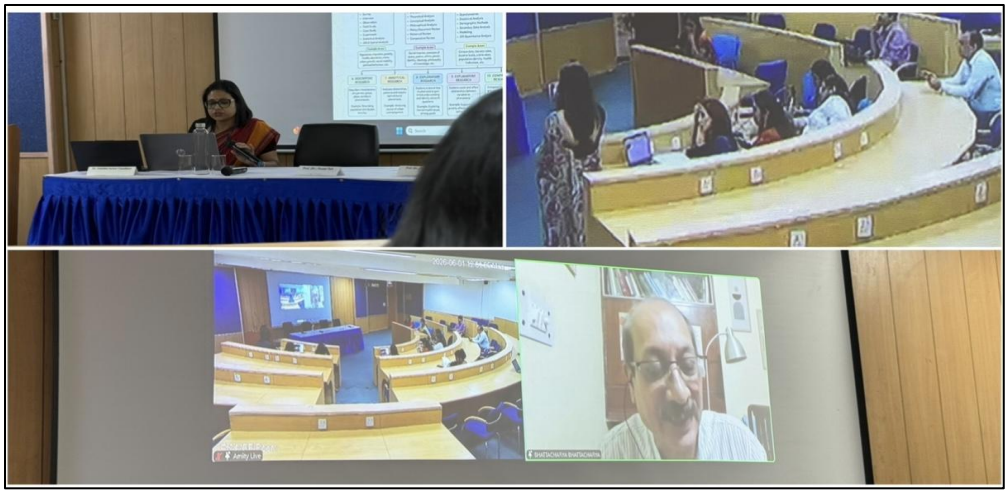
***The Research Conundrum: Design, Ethics, Misconduct & Rectification*- Dr. Sujit Bhattacharya, Adjunct Professor, Amrita School for Sustainable Futures, Amrita University, Former Chief Scientist, CSIR-NIScPR & Professor (AcSIR)**

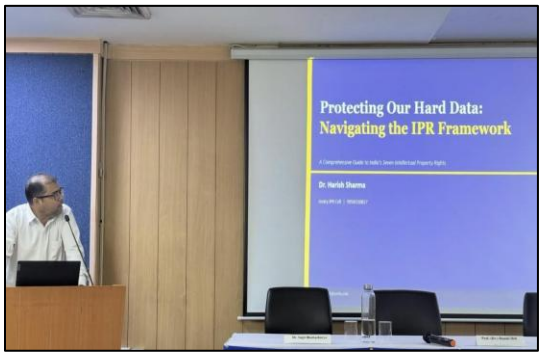
Dr. Bhattacharya delivered a thought-provoking session wherein he discussed the essential elements of high-quality research, including problem formulation, literature review, conceptual frameworks, and methodological rigor. Emphasis was placed on mixed methods research, triangulation, and evidence-based inquiry. The session also addressed challenges associated with research misconduct such as fabrication, falsification, plagiarism, data manipulation, and inappropriate use of AI-generated content. Dr. Bhattacharya highlighted the importance of transparency, accountability, and ethical responsibility throughout the research process. Through practical examples, participants gained insights into maintaining credibility and trustworthiness in scholarly work. The lecture concluded with a discussion on responsible research assessment and the need for impactful, ethical, and socially relevant research practices.

SESSION-3

***Protecting Our Hard Data: Navigating the IPR Framework*- Dr. Harish Sharma, Amity IPR Cell**

Dr. Sharma provided a comprehensive overview of Intellectual Property Rights (IPR) and their importance in protecting innovation and knowledge creation. He explained various forms of intellectual property protection available in India, including patents, copyrights, trademarks, industrial designs, geographical indications, plant variety protection, and semiconductor layout designs. The session highlighted the legal provisions, eligibility criteria, duration of protection, and practical applications of each category. Dr. Sharma emphasized the role of IPR in promoting innovation, safeguarding traditional knowledge, and encouraging entrepreneurship. The discussion helped participants understand how researchers and innovators can effectively protect their intellectual assets and maximize their societal and economic value.





DAY- 2 - 2nd June 2026

SESSION-1

Extracting Insights from Health Data for Social Welfare **- Prof. (Dr.) Seema Bhatnagar, Director, Amity Centre for Nanomedicine (ACN), AUUP**

Prof. Seema Bhatnagar explored the transformative potential of health data, genomics, and advanced analytics in improving public health outcomes. She discussed social determinants of health, globalization, precision medicine, pharmacogenomics, and personalized healthcare. The session highlighted India's genetic diversity and its relevance for disease prevention and individualized treatment strategies. Examples from genomic research demonstrated how data-driven approaches can improve therapeutic effectiveness and patient safety. The lecture emphasized the integration of social, environmental, and clinical data to support equitable and patient-centered healthcare systems.

SESSION-2

***AI in Teaching, Learning and Academic Research* – Dr. Roshan Lal, Associate Professor, Computer Science and Engineering Department, ASET, Amity University Uttar Pradesh**

Dr. Roshan Lal introduced participants to AI, Generative AI, Large Language Models, and Prompt Engineering. He discussed the evolution of AI technologies and their growing applications in education and research. Through practical examples, participants learned how AI can support literature reviews, academic writing, content generation, data analysis, and knowledge discovery. The session emphasized the importance of critical thinking, human oversight, and ethical AI usage. Attention was given to prompt engineering frameworks that enhance the quality and reliability of AI-generated outputs. The lecture demonstrated how AI can function as a powerful assistive tool for educators and researchers.

SESSION-3

***Man–Machine Interface: Bridging Human Capability and Technology* – Dr. Shweta Rawat, Scientist F, Defence Institute of Physiology and Allied Sciences (DIPAS), DRDO**

Dr. Shweta Rawat discussed the evolving relationship between humans and machines and the importance of user-centered technology design. She explained concepts such as ergonomics, human factors engineering, and cognitive workload management. Examples from defence, healthcare, transportation, and industrial sectors illustrated the role of man–machine interfaces in improving safety, efficiency, and performance. The session also introduced emerging technologies such as brain–computer interfaces, exoskeletons, wearable systems, and human augmentation technologies. The lecture emphasized that future technological advancements should complement and enhance human capabilities rather than replace them.

SESSION-4

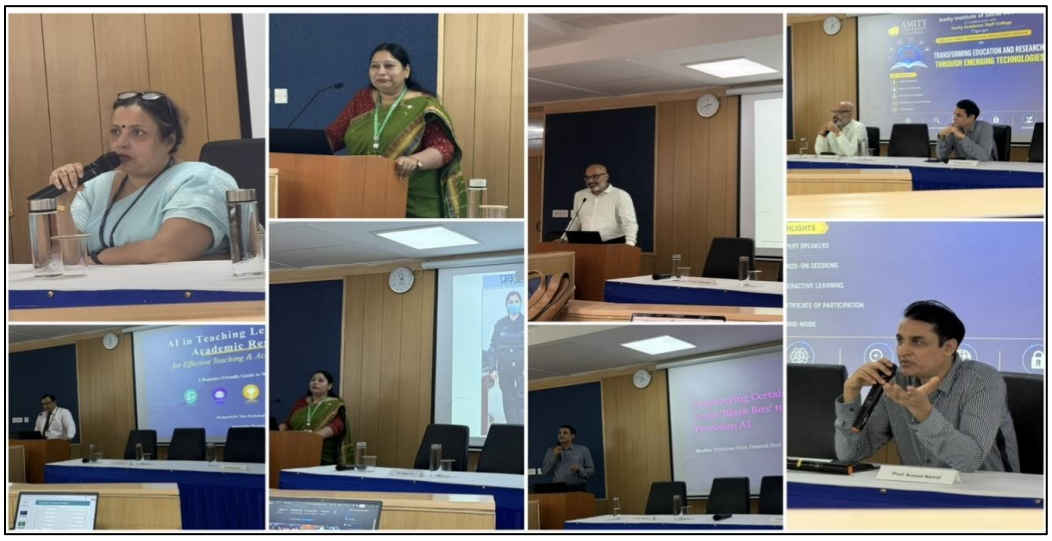
***Contemporary Trends in Mixed Methods Research and Analysis*- Dr. Rupak Mukhopadhyay, Director Research, Community Empowerment Lab (CEL), UP**

Dr. Rupak Mukhopadhyay highlighted the increasing importance of mixed methods of research in addressing complex social, health, and policy challenges that require both quantitative evidence and qualitative understanding. Dr. Mukhopadhyay explained the core principles of mixed methods research, emphasizing the integration of qualitative and quantitative data to generate comprehensive and meaningful insights. He discussed major mixed methods designs, including Convergent Parallel, Explanatory Sequential, Exploratory Sequential, and Embedded Designs, and demonstrated how design selection should align with specific research objectives. Concluding the session, Dr. Mukhopadhyay emphasized the value of rigorous integration, thoughtful research design, and methodological flexibility in producing actionable and contextually relevant research outcomes.

SESSION-5

***Social Transformation through Emerging Technologies*- Prof. Kamal Rawal, Professor, Amity Institute of Biotechnology, AUUP**

Prof. Kamal Rawal highlighted the transformative role of AI, Deep Learning, and Bioinformatics in addressing complex challenges across healthcare, biomedical research, drug discovery, precision oncology, and other sectors. Prof. Rawal showcased several innovative AI-powered platforms developed by his research group, including VaxiDL, VaxELAN, DrugX, and AI-Based Predictive Systems (AIPS), demonstrating their applications in vaccine discovery, cancer diagnosis, personalized medicine, and drug repurposing. He emphasized how emerging technologies can significantly enhance the speed, accuracy, and efficiency of scientific research while improving accessibility to advanced healthcare solutions. Concluding the lecture, Prof. Rawal underscored the potential of emerging technologies to drive social transformation, foster evidence-based decision-making, and contribute to sustainable scientific and societal development.



DAY- 3- 3rd June, 2026

SESSION-1

***Entrepreneurship in Indian Higher Education* – Dr. Garima Aggarwal, Head and Associate Professor, Amity Centre for Entrepreneurship Development**

The session highlighted the growing importance of entrepreneurship as a key component of modern education, emphasizing the role of higher education institutions in transforming students from job seekers into innovators and job creators. Dr. Aggarwal discussed the development of entrepreneurial ecosystems within universities through curriculum integration, innovation-driven learning, incubation support,

mentorship, funding opportunities, and industry collaboration. She emphasized the significance of pre-incubation centers, tinkering laboratories, and startups support mechanisms in nurturing student innovation and converting ideas into viable enterprises. Concluding the session, Dr. Aggarwal underscored the importance of fostering an entrepreneurial mindset among students and creating supportive environments that encourage innovation, economic growth, and social impact.

SESSION-2

Visualizing Cultural Narratives with Modern Technologies **– Dr. Avitoli G. Zhimo, Associate Professor, University of Delhi**

The session explored the growing role of digital technologies, AI, and visual storytelling in documenting, preserving, and representing cultural narratives, particularly those of indigenous and tribal communities. Dr. Zhimo highlighted the importance of visual anthropology in capturing human experiences, safeguarding intangible cultural heritage, and communicating cultural identities through innovative digital platforms. She discussed the use of AI-assisted tools for creating educational visual content while emphasizing the need for transparency, ethical responsibility, informed consent, and community participation. Concluding the session, Dr. Zhimo emphasized that technology should complement rather than replace anthropological fieldwork, and that cultural sensitivity and ethical engagement remain central to the responsible use of modern technologies in cultural documentation and preservation.

SESSION-3

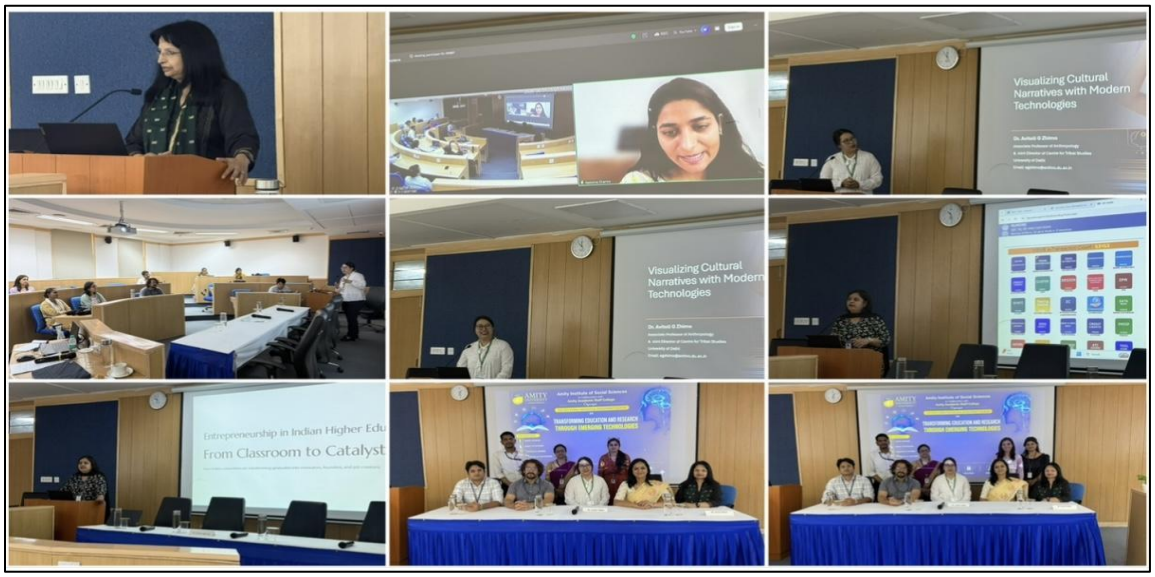
Hands-on Geospatial Mapping and Spatial Data Visualization**- Ms. Saroj Chelluri, Certified Independent Director, IEEE PES Asia Pacific Lead, Ex Business Unit Head. NTPC Ltd**.

Ms. Chelluri highlighted how the integration of drones, AI, GIS, IoT, and digital platforms is enabling organizations to transition from traditional, reactive operations to intelligent, data-driven decision-making systems. Ms. Chelluri discussed the applications of drone-based technologies across sectors including power utilities, infrastructure management, construction, agriculture, mining, security, and defence. She demonstrated how advanced sensors, computer vision, predictive analytics, and digital twin technologies support real-time monitoring, predictive maintenance, operational efficiency, and risk reduction. Concluding the lecture, Ms. Chelluri emphasized that the convergence of drones and AI is reshaping industries by enhancing productivity, improving safety, supporting sustainability, and enabling informed decision-making through actionable intelligence.

SESSION- 4

***Advancing Public Health Research through Mixed Methods & Emerging Technologies*- Dr. Apoorva Sharma, Project Research Scientist- II, Alliance India, New Delhi on behalf of Dr. Sumit Aggarwal, Scientist E, Program officer, ICMR Headquarter, DHR, MHFW, Govt. of India, New Delhi.**

The session emphasized the importance of mixed methods of research in addressing complex public health challenges and evaluating innovative healthcare technologies. Dr. Apoorva highlighted how the integration of quantitative and qualitative evidence enables researchers to generate comprehensive, context-sensitive, and actionable insights for public health decision-making. Through the example of the i-DRONE initiative, participants gained insights into the evaluation of emerging technologies in public health, including aspects of effectiveness, acceptability, operational feasibility, and health system readiness. The session concluded by emphasizing that successful implementation of health innovations requires not only technical efficiency but also community acceptance, workforce preparedness, supportive governance, and alignment with public health priorities, making mixed methods research an essential approach for evidence-based policy and programme development.



DAY- 4- 4th June 2026

SESSION-1

***Reconsidering How We Teach: Experiential and Reflective Learning*- Dr. Rasna Sehrawat, Assistant Professor, Amity Institute of Education, AUUP**

The session encouraged participants to critically examine contemporary teaching practices and reflect on whether higher education institutions are truly promoting meaningful learning or merely completing prescribed syllabi. Dr. Sehrawat emphasized that students may forget classroom content over time, but

impactful learning experiences and inspiring teachers leave a lasting influence on their personal and professional lives. She discussed the growing problem of "PowerPoint Fatigue," where excessive dependence on lecture slides often results in passive learning and reduced student engagement. The session further explored authentic assessment practices that encourage students to apply knowledge through projects, presentations, reflections, and problem-solving activities rather than relying solely on memorization. The discussion also highlighted the importance of reflective practices, including reflection-in-action, reflection-on-action, and reflection-for-action, as tools for continuous learning and professional development.

SESSION-2

***Social Transformation through emerging technologies*-Dr. Gautam Dutta, Director- Marketing, Siemens Digital Industries Software, Delhi**

The session explored how rapidly evolving technologies such as AI, GIS, IoT, Cloud Computing, Robotics, Big Data Analytics, and Digital Twins are transforming societies across the world. The discussion focused on how these technologies can address contemporary challenges related to urbanization, environmental sustainability, healthcare accessibility, agriculture, disaster management, and governance. He illustrated how Digital Twins are being used in smart cities, energy management, transportation systems, healthcare, and precision agriculture. The session generated considerable discussion on India's vision of becoming a developed nation by 2047, the role of technology in managing rural-to-urban migration, and the future implications of Human Digital Twins in healthcare and personalized medicine. Participants also raised concerns regarding farmer welfare, questioning why numerous government schemes and technological interventions have not always translated into improved outcomes. He emphasized that while technology offers immense potential, its success depends on effective implementation, ethical governance, social inclusion, and human-centered decision-making.

SESSION-3

***Contemporary Trends in Mixed Methods Research and Analysis*- Prof. R.P. Mitra, Professor, University of Delhi**

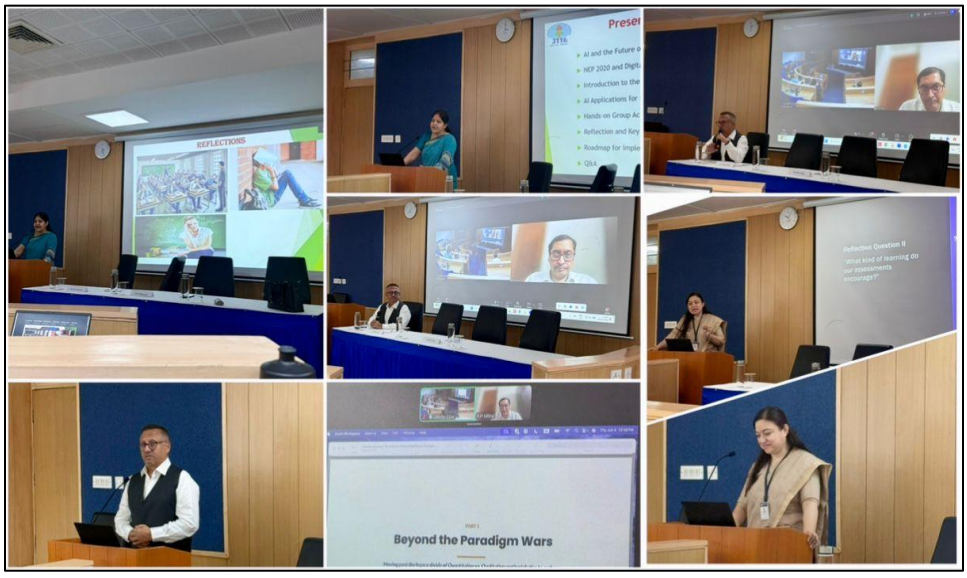
Prof. R.P. Mitra began by discussing the historical divide between quantitative and qualitative research traditions, often referred to as the "Paradigm Wars," and explained how modern researchers increasingly adopt mixed methods approaches to address complex research problems. A unique aspect of the session was the connection drawn between methodological developments and broader scientific shifts, particularly the influence of Quantum Mechanics and the Heisenberg Uncertainty Principle on contemporary understandings of knowledge and reality. Prof. Mitra introduced concepts such as VUCA (Volatility,

Uncertainty, Complexity, and Ambiguity), BANI (Brittle, Anxious, Non-linear, and Incomprehensible), Liquid Modernity, and Hyper-complexity to explain why traditional single-method approaches may be insufficient for understanding contemporary social phenomena. The session reinforced the importance of methodological flexibility, triangulation, and integration for producing robust and contextually rich research findings.

SESSION-4

***AI in Higher Education*- Prof. Monika Suri, Dean & HOD, Department of Humanities and Social Sciences, JIIT, Noida.**

The final session of the day was delivered by Prof. Monika Suri which combined philosophical reflections on learning with contemporary discussions on AI in teaching and research. Drawing inspiration from Sri Aurobindo's educational philosophy, particularly the principle that "Nothing can be taught," Prof. Suri emphasized that education should facilitate the learner's self-discovery rather than merely transmit information. The session encouraged participants to rethink traditional educational practices and reflect on whether current systems genuinely nurture creativity, innovation, and independent thinking. A key theme was the importance of experiential learning and learning by doing, which the speaker identified as essential foundations for innovation and problem-solving. The session concluded with a strong message that technology should be used thoughtfully to enrich learning while preserving the human dimensions of education.



DAY- 5 - 5th June 2026

SESSION-1

Building Spatial Cognition: Basics of GIS **- Dr. Rajarshi Das Gupta, Associate Professor, School of Public Policy, IIT, Delhi**

The session introduced participants to the fundamental concepts of GIS and explored their evolution from traditional spatial analysis tools to advanced Cognitive GIS frameworks. Dr. Gupta discussed the core components and applications of GIS in mapping, spatial analysis, planning, and policy evaluation, while highlighting the limitations of conventional GIS in addressing uncertainty, human reasoning, and contextual understanding. He introduced Cognitive GIS as an emerging human-centered approach that integrates cognitive science, AI, natural language processing, and participatory decision-making into geospatial systems. Concluding the session, Dr. Das Gupta emphasized the potential of Cognitive GIS to transform spatial decision-making by making geospatial tools more intelligent, participatory, and responsive to real-world needs.

SESSION-2

Social Spatial Empowerment: Research and Application**- Dr. Debapriya Dutta, Adjunct Professor, Amrita School for Sustainable Futures, Amrita University**

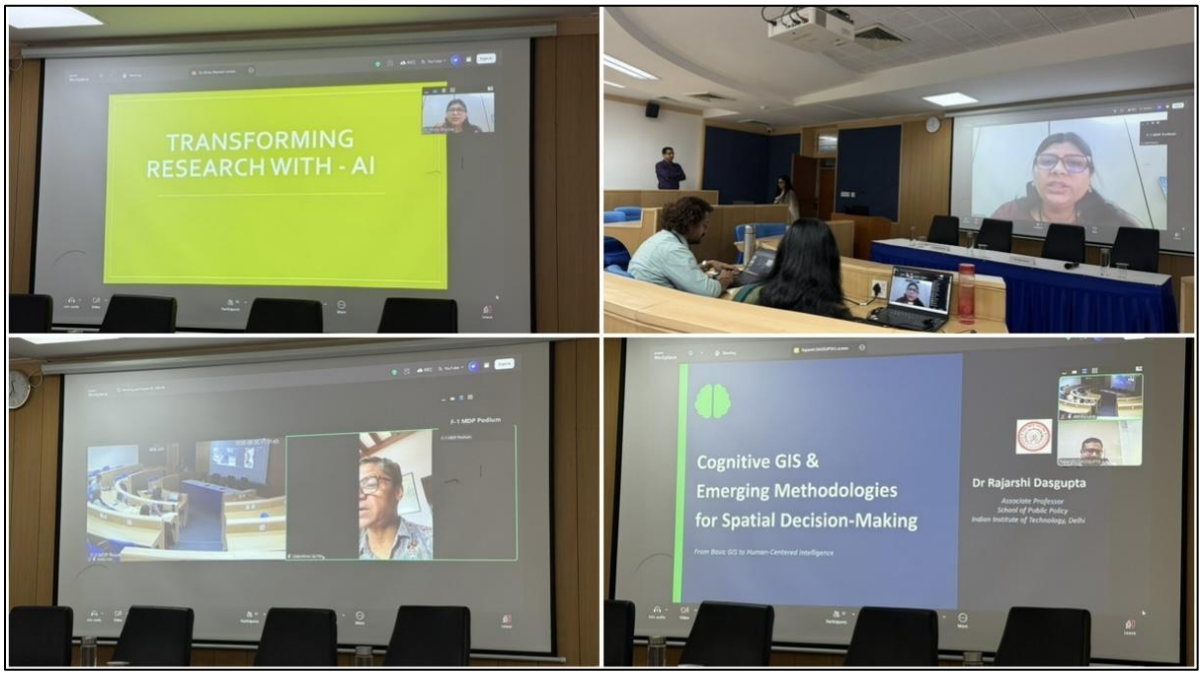
The session explored the role of geospatial technologies in promoting social empowerment and sustainable development. Prof. Debapriya Dutta highlighted India's long-standing tradition of collecting and managing spatial data and discussed its growing significance in addressing societal and developmental challenges. The speaker explained key concepts such as spatial thinking, social space, empowerment theory, and livelihood systems, emphasizing how geospatial information can support informed decision-making and community development. The discussion also covered the integration of geospatial data with the SDGs,

livelihood vulnerability assessment, and livelihood capital frameworks. The session concluded by emphasizing that geospatial technologies serve as powerful tools for understanding social realities, strengthening livelihoods, and enabling evidence-based interventions for community empowerment.

SESSION-3

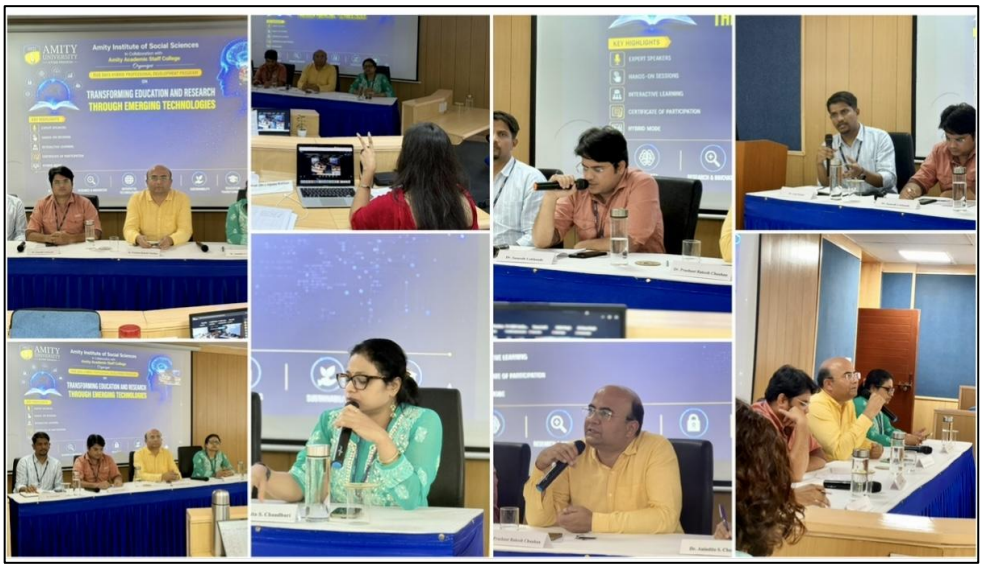
***Transforming Research with AI: Literature Synthesis*- Dr. Richa Sharma, Deputy Director (Research) (Deputation), Indian Council of Social Sciences Research, Ministry of Education, New Delhi**

The session focused on the growing role of AI in transforming research and knowledge generation. Dr. Richa Sharma highlighted how AI supports data analysis, decision-making, and innovation while emphasizing the need for ethical and responsible use. A major focus was on AI safety, addressing concerns such as cybercrime, misinformation, online fraud, harassment, and digital exploitation. The speaker stressed the importance of transparency, accountability, and safety mechanisms in AI development. The session also examined global AI governance models, particularly the European Union and Japan. Japan's concept of *Society 5.0* and its principle of *Security by Design* were discussed as examples of balancing innovation with public trust and safety. The session concluded by emphasizing that AI can significantly enhance research capabilities, but its successful adoption requires strong governance, ethical practices, methodological clarity, and responsible implementation.



OPEN FORUM: PANEL DISCUSSION

A panel discussion was also conducted as part of the programme, featuring **Dr. Prashant Rakesh Chauhan,** Associate Professor and HOD, Department of Social Work and Development Studies, AISS**; Dr. Sumedh Lokhande,** Assistant Professor, Department of Political Science, AISS**; Dr. Anindita S. Chaudhuri,** Assistant Professor and Coordinator, Department of Geography, AISS; and **Dr. Arun Kumar,** Assistant Professor, Department of Anthropology, AISS. Drawing upon their varied expertise and experiences, the panelists shared their perspectives on different aspects of AI and its applications in education, research, and related fields. The session included an interactive question-and-answer segment, during which participants raised questions and sought clarifications on the topics discussed. The speakers addressed these queries with insightful and informative responses, facilitating a meaningful exchange of ideas and knowledge. The discussion concluded with participants gaining valuable perspectives and a deeper understanding of the opportunities and challenges associated with emerging AI technologies.

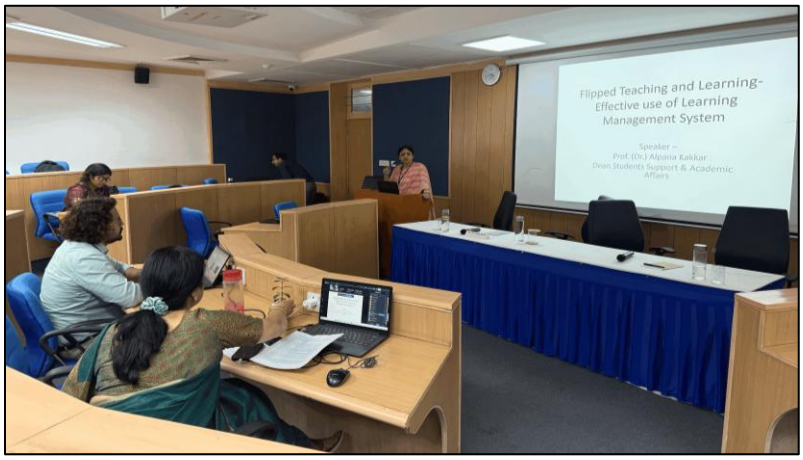


SESSION-4

***Flipped Teaching and Learning: Effective use of Learning Management Systems (LMS)*- Prof. (Dr.) Alpana Kakkar, Dean (Student Support and Academic Affairs), AUUP**

The session highlighted the need to transform traditional teaching practices to align with the expectations of the National Education Policy (NEP) 2020 and the evolving needs of modern learners. Prof. Kakkar emphasized the shift from teacher-centered instruction to learner-centered pedagogies that promote active participation, critical thinking, collaboration, and experiential learning. The concept of the flipped classroom was discussed in detail, wherein students engage with learning materials before class and utilize classroom time for discussions, activities, problem-solving, and application-based learning. Various active learning strategies, including think-pair-share, polling, group discussions, case analysis, problem-solving

exercises, and reflective learning activities, were presented as effective tools for enhancing student engagement. Concluding the session, Prof. Kakkar emphasized the effective use of LMS in supporting flipped learning environments and fostering interactive, skill-oriented, and future-ready education.



The Five-Day Hybrid Professional Development Program concluded on a highly successful and enriching note with a heartfelt **Vote of Thanks** delivered by **Prof. (Dr.) Roumi Deb, Head, Department of Anthropology, Amity Institute of Social Sciences, Amity University Uttar Pradesh**. In her concluding remarks, she expressed sincere gratitude to the university leadership, distinguished speakers, resource persons, faculty members, organizing team, research scholars, and participants for their valuable contributions, unwavering support, and enthusiastic participation throughout the programme. She acknowledged the collective efforts that contributed to the successful organization and execution of the event.