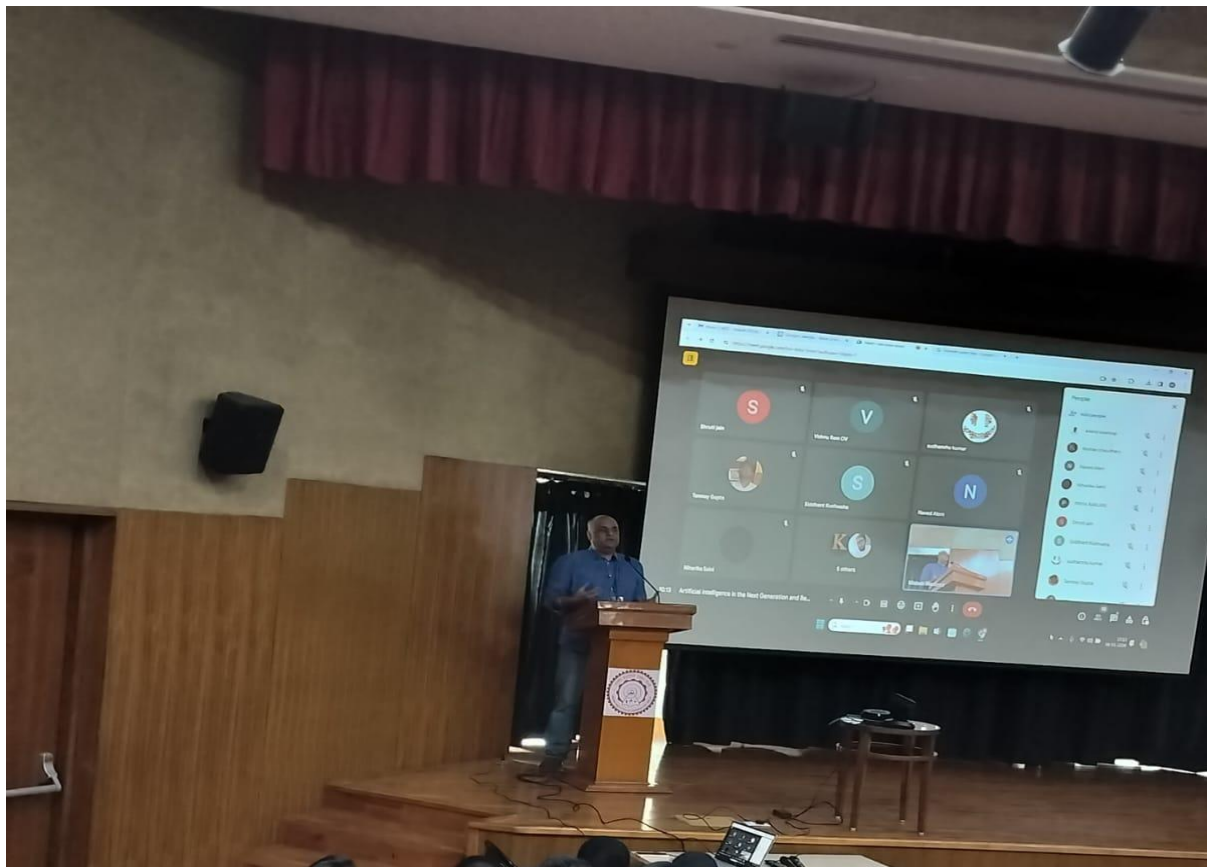# ARTIFICIAL INTELLIGENCE IN NEXT GENERATION COMMUNICATION

Day-2 (Session 1) – 09 March 2024

The 'Artificial intelligence in the Next Generation communication' workshop began with session I on Semantic Communication, on the 9th day of March 2024. The workshop's keynote address was by the PI Prof Brejesh Lall.

Prof. Brejesh Lall: He played a crucial role in commencing the workshop by delivering the opening speech, setting the objectives & tone for the day. Prof Lall provided substantial insights into Semantics Communications. Prof Lall's leadership proved vital role in setting the workshop's tone and offering valuable perspectives on relevant subjects.

Mr. Rahul Pandya: He presented an engaging and enlightening session that centered on semantic communication, diving deep into the complexities of this vital component of communication systems. His expertise likely ignited discussions and enhanced participants' understanding of semantic principles. He covered various semantic topics, such as applications, challenges, and future possibilities. His active participation not only enriched the workshop's content but also underscored his expertise, improving the overall learning experience for attendees.

Prof. Vimal Bhatia: He delivered an engaging and informative presentation on Semantic Communication during the workshop, joining virtually. Shedding light on providing detailed insights into its concepts, applications, etc. By sharing his expertise remotely, he enriched the workshop with valuable knowledge and sparked thoughtful discussions.

Mr. Thushan Shivalingam: He delivered a captivating and enlightening presentation on semantic communication during the workshop, joining virtually. He gives insightful exploration of semantics. He enriched the workshop with valuable knowledge and sparked thoughtful discussions on the evolving landscape of Semantics Communications.

Prof. Sridhar Iyer: He delivered a captivating and enlightening presentation on Semantics, captivating the audience with his insights and expertise in this field. Throughout his session, he conducted a thorough and detailed analysis of various aspects of Semantic communication. His insights provided valuable contributions to the workshop, offering attendees a deeper understanding of the topic.

Panel discussion

Moderator **Ms. Nargis Fayaz**, who is pursuing her PhD, wrapped up the session with a panel discussion on "Semantic Communication: The Next Frontier in Communication". The esteemed panelists included **Prof. Ranjan Malik**, **Prof. Sridhar Iyer**, and virtually connected Professors **Rahul Pandya** and **Thushan Sivalingam**. Together, they delved into a comprehensive discussion on various facts of Semantic Communication, exploring its implications and potential advancements in the field. The panelists likely covered a wide range of topics, such as the application of semantic technologies in improving communication systems, the integration of natural language processing with communication networks, and the impact of semantic understanding on enhancing user experiences. The panel discussion served informative conclusion to the session, leaving attendees with a deeper understanding of Semantic Communication and its significance in the realm of communication technologies.

SESSION -2

The Artificial intelligence in the next generation and beyond workshop session-II (Next Generation Communication) on 9th March 2024 was hosted by Ms. Sanhita Pathak. She began the session by delivering introductory remarks.

Dr. Rajesh Kumar: During his session, he led an engaging exploration into the field of haptics, captivating the audience with his insights and expertise. His comprehensive analysis and nuanced perspectives were pivotal in driving the success of the session, actively involving participants, and fostering a deeper understanding of the subject. By delving into the complexities of haptics, he not only expanded the audience's knowledge but also encouraged further exploration and discussion in this evolving field.

Dr. Siddharth Srivastava: During the session, the speaker conducted an engaging and informative discussion centered on 3D vision. By delving into the complexities of the subject matter, he actively engaged the audience, sparking meaningful discussions and encouraging further exploration of the topic. his session significantly enhanced participants' knowledge and appreciation for 3D vision, leaving a lasting impact on their understanding of this emerging technology.

Dr. Neeraj Kumar: He conducted a captivating session focused on LLM based autonomous agents. His comprehensive analysis and nuanced perspectives played a crucial role in the session's success, actively engaging participants and promoting a deeper understanding of LLM based Autonomous Agents.

Dr. Manoj Sharma:

He conducted a captivating session focused on recent trends in hyperspectral imaging. His thorough analysis and nuanced viewpoints were instrumental in driving the session's success, actively involving participants, and fostering a deeper understanding of the subject matter. His session was both informative and engaging, leaving a lasting impact on participants' understanding of hyperspectral imaging in metrology.

Panel discussion:

Moderator **Dr. Vinay Kaushik** effectively wrapped up the session with a panel discussion that centered on Next Generation Communication. The panelists, comprising esteemed experts **Dr. Neeraj Kumar**, **Dr. Manoj Sharma**, and **Dr. Siddharth Srivastava**, contributed their insights and expertise to a comprehensive exploration of next generation Communication. Throughout the discussion, they meticulously examined various dimensions of this topic, including its practical implications and potential advancements, shedding light on its significance in shaping the future of communication technologies. Their collective expertise and thoughtful discourse not only deepened participants' understanding but also inspired further exploration and innovation in the field. The panel discussion gives valuable insights and ideas for future research and development.