

Title: Report on Expert Talk Event Organized by the Department of Computer Application under Industry Institute Collaboration Cell

Date: February 09, 2026

Venue: S-14 and Data Science Lab for participants, National Institute of Technology Raipur

The Department of Computer Applications has organised an expert talk under the IICC on the topic "*Metaheuristic Optimisation for Industry 4.0*" which took place on February 9, 2026. The event featured the distinguished academician, Professor T.V. Vijay Kumar, who shared valuable insights and experiences. He highlighted the rapid evolution and applications of metaheuristic optimisation, including areas such as artificial intelligence and machine learning, as well as robotics, and discussed their impact across various sectors. Attendees were encouraged to engage in discussions and pose questions, fostering a collaborative environment for learning and networking. The guest speaker was **Dr T.V. Vijay Kumar**, Professor at the School of Computer & Systems Sciences, Jawaharlal Nehru University, Delhi.

Details of the Event: Dr Tripti Swarnakar, Professor and Head of the Computer Application Department, delivered an introductory speech at 10:00 AM to commence the event. She outlined the objectives of the IICC and its benefits for students, highlighting the department's achievements in relation to the rapid adoption of optimisation within the industry and extending a warm welcome to the expert.

Dr. T.V. Vijay Kumar began his talk by exploring the role of metaheuristic optimisation in Industry 4.0, detailing how these advanced techniques are enhancing precision and improving the quality of solutions. Dr T.V. Vijay Kumar emphasised the importance and potential of metaheuristic optimisation, especially in machine learning, and demonstrated its application in diverse sectors. He also elaborated on how optimisation and hyperparameter tuning in AI/ML contribute to enhanced operational efficiency.

The event concluded with a vote of thanks extended to Honourable Director Dr. N. V. Ramana Rao, IICC Chairman Dr. Shubhashis Sanyal, Dr. Tripti Swarnakar, Professor and Head, and IICC Co-ordinator Dr. Naeem Ahmad for their visionary leadership and ongoing support. Present to contribute to the success of the event were Prof. Priyanka Tripathi, Dr Dibakar Saha, Dr Nitesh Bhardwaj, Dr Shelendra Tripathi, Dr Swandu Roop, Dr Shyam Sundar, and Dr Mou Das Gupta, along with staff members, research scholars, and approximately 105 students from the Department of Computer Application.



