

Report on 28th Thomas Alva Edison Memorial Lecture

1. Distinguished lecturer:

Name: Dr. Rajesh Kumar

Title: IEEE IAS Distinguished Lecturer, Professor, University of Johannesburg, Professor - Department of Electrical Engineering, Malaviya National Institute of Technology

2. Lecture information:

Organized By:

- Prof. Purna Gaur, Chair - PES-IAS Joint Delhi Chapter, Chair Elect- IEEE India Council
- Dr. Anuradha Tomar, IEEE PES NSUT SBC Faculty Advisor

Venue: Netaji Subhas University of Technology, Delhi, India (**ONLINE**)

Date: 12 November 2024, 7:00PM IST

Title of lecture: Nature to Engineering Optimization: Exploring the Power of Algorithms

Duration: 1hr 30 mins

3. Number of participants

IEEE members: 61

Non-IEEE members: 50

4. Brief Report:

The IEEE PES IAS Joint Delhi Chapter and IEEE PES NSUT Student Branch Chapter organized the **Thomas Alva Edison Memorial Lecture** on November 12, 2024, featuring **Dr. Rajesh Kumar**, an IEEE IAS Distinguished Lecturer. Held online, the lecture titled "*Nature to Engineering Optimization: Exploring the Power of Algorithms*" highlighted the role of optimization and nature-inspired algorithms like genetic algorithms and particle swarm optimization in solving engineering challenges. The event was graced by the presence of **Prof. Purna Gaur**, Chair - PES-IAS Joint Delhi Chapter, Chair Elect- IEEE India Council and **Dr. Anuradha Tomar**, IEEE PES NSUT SBC Faculty Advisor, who provided their valuable guidance and support. Dr. Kumar also discussed the design of metaheuristic algorithms, covering aspects like parameter tuning and convergence. Dr. Kumar delved into the process of creating algorithms tailored to specific engineering problems, discussing essential considerations like parameter tuning, convergence criteria, and balancing exploration and exploitation in the search space. The lecture concluded with an engaging Q&A session, during which Dr. Kumar addressed questions from the audience on topics ranging from the practical limitations of metaheuristic methods to their future prospects in advancing engineering and technology.



