

Report on Expert Talk

Control of Non-Linear Systems Using Nature Inspired Algorithms

Date: Thursday, February 02, 2023

Venue: Room number 610, EEE Block, MAIT

Expert Speaker: Dr. Vishal Srivastva

Introduction:

The Department of Electrical and Electronics Engineering (EEE) at Maharaja Agrasen Institute of Technology organized an Expert Talk on the topic "Control of Non-Linear Systems Using Nature Inspired Algorithms" on Thursday, February 02, 2023. The talk aimed to shed light on innovative methods in control systems, particularly focusing on the application of nature-inspired algorithms to tackle non-linearities.

Event Details:

The expert speaker for the event was Dr. Vishal Srivastva, a renowned figure in the field of control systems and optimization techniques. Dr. Srivastva brought a wealth of experience and expertise to the discussion, having worked extensively on the intersection of control theory and nature-inspired algorithms.

Key Highlights:

1. Introduction to Non-Linear Systems: Dr. Srivastva commenced the session by providing a comprehensive overview of non-linear systems, emphasizing their complexity and the challenges associated with their control.

2. Nature-Inspired Algorithms: The speaker delved into various nature-inspired algorithms such as genetic algorithms, particle swarm optimization, and simulated annealing. He elucidated how these algorithms draw inspiration from natural phenomena to optimize control strategies for non-linear systems.

3. Applications and Case Studies: Throughout the talk, Dr. Srivastva illustrated the practical applications of nature-inspired algorithms in controlling non-linear systems across diverse domains. He shared insightful case studies and real-world examples to demonstrate the efficacy of these approaches.

4. Advantages and Limitations: Attendees gained a deeper understanding of the advantages offered by nature-inspired algorithms, including robustness, adaptability, and scalability. Moreover, Dr. Srivastva addressed the limitations and potential pitfalls associated with their implementation, providing valuable insights for researchers and practitioners.

5. Interactive Session: The event featured an interactive Q&A session where participants engaged with Dr. Srivastva, posing questions and seeking clarifications on various aspects of the topic. This

interactive exchange fostered a dynamic learning environment and facilitated knowledge sharing among attendees.

Conclusion:

The Expert Talk on "Control of Non-Linear Systems Using Nature Inspired Algorithms" proved to be an enriching and enlightening experience for all participants. Dr. Vishal Srivastva's profound expertise and engaging presentation style captivated the audience, leaving them with valuable insights into the application of nature-inspired algorithms in control systems. The event not only expanded attendees' knowledge horizons but also inspired them to explore innovative approaches in tackling the complexities of non-linear systems. Overall, it was a resounding success and a testament to the department's commitment to fostering academic excellence and intellectual discourse in the field of electrical and electronics engineering.

