PRESS RELEASE

IIT Mandi to host a UKIERI-DST virtual workshop on Adversarial Cyber Security in collaboration with London Metropolitan University and Centre for Multidisciplinary Research, Innovation and Collaboration

The virtual workshop is a part of a UK-India Education and Research Initiative (UKIERI) and Department of Science and Technology (DST) grant that will help the participants to understand the influence of adversarial cognition on the decision-making of cyber adversaries as single individuals and teams

MANDI, 16th July 2020: Indian Institute of Technology Mandi is hosting a virtual workshop on Adversarial Cyber Security on 23rd and 24th September 2020. The workshop will have invited talks from a number of leading academicians and industry experts.

The workshop is a part of the UK-India Education and Research Initiative (UKIERI) to enhance educational linkages between the two countries and is jointly organised by Applied Cognitive Science Laboratory of IIT Mandi, India, Cyber Security Research Center, London Metropolitan University, UK, and Centre for Multidisciplinary Research, Innovation and Collaboration, UK.

The workshop will discuss the influence of adversarial cognition on the decision making of adversaries, the prevalence of several cyber defence strategies, and the use of game-theoretic and machine learning tools and techniques in cyber security research. The two-day virtual workshop will be particularly beneficial to engineering students, researchers, engineers and scientists working in various institutes, and those who are curious to learn new things alike.

Speaking about the need for this workshop, Dr. Varun Dutt, Coordinator of the workshop and Associate Professor, School of Computing and Electrical Engineering, IIT Mandi, said, “This UKIERI-DST workshop would be the first of its kind between IIT Mandi, India, and London Metropolitan University, UK, and it provides an excellent forum for top cybersecurity researchers and industry practitioners to share their views on defenses against cyber threats. I am hopeful that this event will be a stepping stone to more academic collaborations between IIT Mandi and London Metropolitan University in the
near future.”

Cyber security refers to the protection of internet-connected systems from an attack, damage or unauthorised access. It is important because, these days, most of the data is kept on the computers and other devices, which may include sensitive information for which unauthorised access or exposure could have negative consequences.

Speaking about the workshop, Prof. Karim Ouazzane, Professor, London Metropolitan University, UK said, “The exponential growth of the internet interconnections has led to significant growth of cyber attack incidents often with disastrous and grievous consequences. Our society, economy, and critical infrastructures have become largely dependent on computer networks and information technology solutions. Cyber attacks become more attractive and potentially more disastrous as our dependence on information technology increases. Therefore, this international workshop is timely and it will enable businesses, academics and experts to share knowledge and exchange best practices in the field of cyber security and raise awareness about cyber threats and risks.”

Along with the organising institutes, eminent researchers and scientists from the Institute of Nuclear Medicine and Allied Sciences, Defence Research and Development Organisation, India, University of Kent, UK, Cardiff University, UK, University in Dublin, Ireland, and Carnegie Mellon University, USA, will also be taking part in this workshop to showcase their work in the area of cyber security.

Speaking about the collaboration, Dr. Cyril Onwubiko, Founder, Centre for Multidisciplinary Research, Innovation and Collaboration, UK, said, “This great opportunity demonstrates the long-standing bilateral relationship between the United Kingdom and India. By partnering with world-class institutes in IIT Mandi, India and London Metropolitan University, UK, we aim to provide to our audience outstanding experience and high quality keynotes and talks in a fast paced, digitally-enabled modern society from notable industry experts and academics. And I am looking forward to the workshop!”

The primary objectives of this workshop are:

- Discussion on the influence of adversarial cognition on the decision-
making of adversaries as single individuals and teams
The workshop will cover research related to adversarial mental models, the influence of recent and frequent experiences on adversarial decisions and adversarial strategies for waging cyber attacks

➢ Discussion on the prevalence of several cyber defence strategies
The workshop will cover research that discusses the use of honeypots (deception), intrusion detection systems and other approaches for monitoring suspicious network-related activities

➢ Discussion on the use of game-theoretic and machine learning tools and techniques in cyber security research
In this workshop, discussion on different cyber security games that allow researchers to compute optimal nash actions and deviations from adversary actions from nash actions is proposed

➢ To impart knowledge and experience sharing about the cognitive and social aspects involved in the cyber attacks and cyber defence

Interested participants can make their submissions through the workshop’s website (http://acslab.org/ukieri/). Deadline for paper submissions is 31st August 2020. Registration for the workshop is free. The organising institutes are hopeful that this UKIERI-DST sponsored workshop will also help pave the way for research collaboration in the near future. As a part of its agenda, the workshop will host a number of talks as well as student presentations.

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**About IIT Mandi**
Since the first batch of 97 students joined in July 2009, IIT Mandi has grown to currently host 125 faculty and 1,655 students who are enrolled in various programmes of studies in undergraduate, postgraduate and research programmes, and 1,141 alumni. IIT Mandi is a fully residential campus with 1.4 lakh sq. m. buildings completed. It has a guest house with 88 rooms, an 750-seater Auditorium, campus school, sports complex and hospital.

IIT Mandi has four Academic Schools and three major Research Centers. The Schools are: School of Computing and Electrical Engineering, School of Basic Sciences, School of Engineering, and School of Humanities and Social Sciences. The Centers are: Advanced Materials Research Centre (AMRC; set up with an investment of Rs. 60 crore), Centre for Design and Fabrication of
Electrical Devices (C4DFED; has Rs. 50 crore worth of fabrication tools), and BioX Centre (has acquired research equipment worth Rs. 15 crore). In 2017, the Department of Biotechnology, Government of India, selected IIT Mandi to lead the prestigious Rs. 10 crore FarmerZone® Project. In 2020, the Department of Science and Technology, Government of India, selected IIT Mandi to lead a prestigious Rs. 7.25 crore project for setting-up of a technology innovation hub in HCI area on the Institute campus.

To cater to the growing and changing needs of Indian industry and the aspirations of students, IIT Mandi has introduced 7 B.Tech., 7 M.Tech., 5 M.Sc., 4 Ph.D., 1 I-Ph.D and 1 M.A programmes in the past 10 years. The unique, project-oriented B.Tech. curriculum is centered around its 4-year long Design and Innovation stream. From August 2019, IIT Mandi started 3 new and unique B. Tech. programmes in Data Science and Engineering, Engineering Physics, and Dual Degree in Bioengineering.

Since the inception of the Institute, IIT Mandi faculty have been involved in over 275 Research and Development (R&D) projects worth more than Rs. 120 crore. In the past 10 years, the Institute has signed Memorandum of Understanding (MoU) with as many as 11 international and 12 national universities.

IIT Mandi Catalyst, first Technology Business Incubator in Himachal Pradesh, has helped over 75 startups since 2017 and is changing both the industry profile and entrepreneurial mindset in the state. So far, Catalyst has secured external funding of Rs. 24 crore from various funding agencies. Enabling Women of Kamand Valley (EWOK) is another innovative programme run by IIT Mandi, which focuses on imparting skills training to rural women to enable them to start village-scale businesses.

IIT Mandi has been ranked no. 31 in the Engineering Institutions Category in the India Rankings 2020 released by National Institutional Ranking Framework, Ministry of Human Resources Development, Govt. of India.

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