

# UTokyo - IIT Madras Workshop on Theoretical Computer Science



## Confirmed Schedule:

### March 13th

#### Session 1: Lattice-Based Cryptography

13:15 - 13:30 Opening Speech

13:30 - 14:30 Prof. Phong Nguyen (U. Tokyo)

15:00 - 16:00 Dr. Shweta Agrawal (IIT Madras)

*Trends in Lattice-Based Cryptography*

16:00 - 16:20 Mr. Suvradip Chakraborty (IIT Madras)

*Leakage-Resilient Cryptography*

16:20 - 16:40 Mr. Monosij Maitra (IIT Madras)

*Lattice-Based Homomorphic Signature*

### March 14th

#### Session 2: Graph Theory and Algorithms

9:30 - 10:00 Prof. N. S. Narayanaswamy (IIT Madras)

*On Erdős's Property B*

10:00 - 10:30 Mr. Dhannya S. M. (IIT Madras)

*New Characterization for Conflict-Free Coloring*

10:30 - 11:00 Prof. Pandu Rangan Chandrasekaran (IIT Madras)

*Algorithmic Aspects of Social Network and Security - an Overview*

11:00 - 12:00 Dr. Vorapong Suppakitpaisarn (U. Tokyo)

*Algorithms and Complexity for Network Problems with Attacks*

### Session 3: Efficient and Secure Implementation for Cryptosystem

13:30 - 14:30 Prof. Noboru Kunihiro (U. Tokyo)

*Recovering RSA Secret Keys from Noisy Keys*

14:30 - 15:30 Dr. Chester Rebeiro, Dr. Aritra Hazra (IIT Madras)

*Formal Methods for Security Analysis*

16:00 - 16:30 Introduction to Department of Computer Science & Engineering, IIT Madras

16:30 - 17:00 Introduction to Graduate School of Information Science and Technology, U. Tokyo

17:00 - Free Discussion

### March 15th

#### Session 4: Algorithms for Biology & Health Care

9:30 - 10:00 Prof. Kamakoti Veezhinathan (IIT Madras)

*Secure System Engineering*

10:00 - 10:30 Dr. S. Sree Vivek (Pfizer Device R&D)

*Cryptography in Health Care Industry*

11:00 - 12:00 Prof. Tetsuo Shibuya (U. Tokyo)

*Algorithmic Challenges for Bio Big Data*

12:00 - 12:15 Closing Remarks

### Organizers:

- Pandu Rangan Chandrasekaran (IIT Madras)
- Reiji Suda (U. Tokyo)
- Vorapong Suppakitpaisarn (U. Tokyo)

### Sponsors:

- [Department of Computer Science & Engineering, Indian Institute of Technology Madras](#)
- [Graduate School of Information Science and Technology, The University of Tokyo](#)
- [India-Japan Industry-Academia-Government Collaborative Education Program \(IJEP\)](#)