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Proving Lower Bounds

Talk by Prof. Nutan Limaye, ITU Denmark

28th January 2022 7:00pm-8:00pm

(Online) Meeting Link:
https://zoom.us/i/97885637015?pwd=aWg5MVhMT2M0WDZTTWpESTFFaC9rUT09
Passcode: 912310

Registration Link for ACM Goa Event Updates:
https://forms.gle/hai1vbuXSUMHMKa96

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Abstract:

If I asked you to represent the square-root of two as a fraction or if I asked you to name the largest prime number, then possibly after a bit of thought, you will say "that is impossible!". In mathematics, it is not enough to claim that something is impossible, but you should also prove it.

I will take a computational view towards proofs of impossibilities and introduce you to some concepts from a fascinating area of Theoretical Computer Science called Complexity Theory.

About the Speaker

Dr. Nutan Limaye is an Associate Professor in the Computer Science Department at IT University of Copenhagen, Denmark. Before this, she was an Associate Professor in the Department of Computer Science and Engineering, IIT Bombay, India. She finished her Ph.D. at the Institute of Mathematical Sciences (IMSc) Chennai, India in 2009. She did a one-year postdoc at TIFR Mumbai, before joining IIT Bombay in 2010. Her research interests are in theoretical Computer Science. Specifically, she is interested in Algorithms and Complexity Theory. Her recent research has focused on Algebraic Complexity Theory and Lower Bounds.

She is an Associate Editor for ACM Transactions on Computation Theory (TOCT). She received the IRCC IIT Bombay Research Publication Award 2019 and the Best Paper award at FOCS 2022. She has been on program committees of reputed computer science conferences such as STOC, FOCS, ITCS, and ICALP.