SOUBHIK DEB

Information Theory Lab,
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Education

July 2011- June 2016	B.Tech in Electrical Engineering M.Tech with specialization in Communication and Signal Processing Indian Institute of Technology Bombay, Mumbai, India Grade: 8.72/10
Sep 2019- Ongoing	Ph.D. in Electrical & Computer Engineering University of Washington, Seattle Grade: 3.94/4

Industry

Oct 2016- Aug 2019	Assistant Researcher, System Platform Research Laboratories NEC Corporation, Tokyo, Japan

Publications

2021	**PoSAT: Proof-of-Work Dynamic Availability and Unpredictability, without the Work** Soubhik Deb, Sreeram Kannan, David Tse Financial Cryptography and Data Security 2021 (Paper)
2020	**Perigee: Efficient peer-to-peer network design for blockchains** Yifan Mao, Soubhik Deb, SB Venkatakrishnan, Sreeram Kannan, Kannan Srinivasan 39th ACM Symposium on Principles of Distributed Computing (Paper) (Video) (Code)
2018	**Band-limited digital predistortion with band-switching feedback architecture for 5G mmWave PA** Soubhik Deb, Masaaki Tanio, Shinichi Hori, Noriaki Tawa, Yasushi Wada, Kazuaki Kunihiro 48th European Microwave Conference (Paper)
2016	**Feasibility study of LTE middle-mile networks in TV white spaces for rural India** N. Chaitanya Prasad⋆, Soubhik Deb⋆, Abhay Karandikar (⋆ *equal contribution*) IEEE Symposium on Personal, Indoor, and Mobile Radio Communications (Paper)

Under Review

2020	**Order-fair consensus in the permissionless setting** with Mahimna Kelkar and Sreeram Kannan Submitted to ACM PODC 2021 (Paper)

Patents

2017	**Amplifier configuration method of amplifier, and communication apparatus** Soubhik Deb and Tanio Masaaki Patent number: WO/2019/111296 (Patent)
2018	**Communication apparatus and decoding method** Soubhik Deb International Application Number: PCT/JP2018/30852, Filed August 2018, Patent Pending

Scholastic Achievements

- Awarded 2018 Contribution Award by NEC Corporation for development of highly efficient analog wireless circuits and its contribution to communication and development business
- Awarded Undergraduate Research Award by IIT Bombay for excellent research work
- Secured All India Rank **1579** in IIT Joint Entrance Exam (IIT-JEE), 2011 among 500,000 candidates
- Secured All India Rank **2201** in All India Engineering Entrance Examination, 2011 out of 1,100,000 candidates
- Secured All India Rank **438** in Indian Institute of Space Science and Technology (IIST-SAT), 2011

Relevant Courses

UW Seattle:	Distributed Systems, Computer Networks, Design & Analysis of Algorithms, Computer Security & Privacy, Cryptography, Foundations of Blockchain Systems Cryptographic Protocols for Privacy-Preserving Computation
IIT Bombay:	Information Theory, Network Information Theory, Queuing Theory, Advanced Probability, Game Theory, Advanced Signal Processing Matrix Computations, Combinatorial Optimization, Stochastic Optimization,

Technical Skills

Programming Languages:	Rust, Matlab, C/C++, Python, VHDL, Assembly
Software:	Vivado, HFSS

Extra-curricular Activities

- Managing logistics and advertisement unit of the student advisory council (SAC) of ECE department at UW Seattle
- Taught Math and Science to underprivileged high school students at non-profit Abhyasika, IIT Bombay
- Volunteered every weekend for different sports activities with mentally challenged children at the non-profit Hands-on-Tokyo
- Won Gold medal in $70 - 74$ kgs category at 2017 All Japan NEC Powerlifting Competition