



# International Workshop on Scaling Blockchains: From Bitcoin to the Lightning Network

23<sup>rd</sup> - 25<sup>th</sup> August 2022, IIT Guwahati



(Under the SPARC Project 'Approximate Computing Techniques for Resource Constrained Edge Devices')

**Resource Person:**

**Dr. Davide Patti**

Assistant Professor

Electric, Electronics and Computer Engineering Department

University of Catania, Italy



Workshop will be conducted at New Seminar Hall, Dept. of CSE, IITG

**Dates:** 23<sup>rd</sup> – 25<sup>th</sup> August 2022

**Time:** 05:00 PM – 07:00 PM (IST)

[3 days, 2 hours per day]

**Workshop Contents:**

- Problem of a native purely digital Internet asset
- Hash Functions
- Proof-of-work and Mining
- Introduction to Asymmetric Cryptography
- What's inside Blocks and Transactions
- Tools and Demos: Exploring the blockchain, transacting with Electrum
- The Scaling problem: the different approaches to the trilemma
- Scaling on upper layers: The Lightning Network
- Open Research Topics and Challenges

**Resource Person Profile:** [\[Dr. Davide Patti\]](#)

Dr. Davide Patti is currently an Assistant Professor at the Electric, Electronics, and Computer Engineering Department, University of Catania. He has published several works on Design Space Exploration, Low-power techniques for Embedded Systems, and Network-on-Chip architectures. He has been teaching several courses in the Computer Science field, including Human-Computer Interaction at the Faculty of Psychology of Kore University, Enna, Italy, and lectures at the University of Southampton, UK. He is a Steering Committee member of the International Workshop on Network on Chip Architectures (NoCArc). He is also Associate Editor of IEEE Access and Guest Editor of many special issues. He is co-author of the Noxim project, currently used by a vast community of researchers working in the area of on-chip communication systems and employed as an experimental platform in more than 500 scientific papers published in refereed ACM and IEEE international conferences and journals.

For more details, visit the workshop website: <https://www.iitg.ac.in/johnjose/sparc6.html>

**Eligibility Criteria**

- (1) UG, PG, and Ph.D. students & faculty of any branch from IIT Guwahati.
- (2) Project Staffs working at IIT Guwahati.

**Registration Form:** <https://tinyurl.com/yn96n36e>

No of Seats

: 50

Last date for registration

: 18.08.2022 (3 PM)

(Shortlisted candidates will get an email)

Workshop certificates will be provided to participants who attend all sessions of the workshop.

**Programme Coordinators:**

Dr. John Jose & Dr. T. Venkatesh

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