Dr Abhishek De

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Career

Feb'23 to present   Research Fellow. University of Birmingham, UK.

Education

Oct'18 to May'22 PhD in Computer Science. Université Paris Cité, France.

Aug'16 to April'18 M.Sc in Computer Science. Chennai Mathematical Institute, India.

Aug'13 to April'16 B.Sc(Hons.) in Mathematics and Computer Science. Chennai Mathematical Institute, India.

Past Experience

Internship

May'18-July'18 Guest Researcher. Department of Information Technology, Uppsala University, Sweden.

May'16-July'16 Summer Intern. Laboratoire Spécification et Vérification, ENS Cachan, France.

June'15-July'15 Summer Trainee. CARLBio Pvt. Ltd., Alumnus Software, India.

Teaching Assistant

Autumn Semester '16   Theory of Computation. Chennai Mathematical Institute, India.

Publications

Conference with published proceedings

- Phase semantics for linear logic with least and greatest fixed points. De A., Jafarrahmani F., & Saurin A. *Proceedings of FSTTCS 2022*.

  https://doi.org/10.4230/LIPIcs.FSTTCS.2022.35

- Decision problems for linear logic with least and greatest fixed points. Das A., De A., & Saurin A. *Proceedings of FSCD 2022*.

  https://doi.org/10.4230/LIPIcs.FSCD.2022.20

- Canonical proof-objects for coinductive programming: infinets with infinitely many cuts. De A., Pellissier L., & Saurin A. *Proceedings of PPDP 2021*.

  https://doi.org/10.1145/3479394.3479402

- Infinets: The parallel syntax for non-wellfounded proof-theory. De A. & Saurin A. *Proceedings of Tableaux 2019*.

  https://doi.org/10.1007/978-3-030-29026-9_17

Workshops without published proceedings

- Towards circular proof nets. *CiSS 2019, Gothenburg.*
- Proof nets for non-wellfounded proofs. *TLLA 2019, Dortmund.*
- Towards circular proof nets. *GaLoP 2019, Prague.*

Theses

PhD thesis. Linear logic with fixed points: truth semantics, complexity and a parallel syntax.

Master's thesis. Distributed controller synthesis.

Notable invited talks

March'22 The proof theory of substructural logics with fixpoints. CHoCoLa séminaire, ENS Lyon.

March'22 The proof theory of substructural logics with fixpoints. Logic seminar, University of Gothenburg.

Awards and Grants

Oct'18-Dec'21 Cofund: MathInParis Fellowship, Fondation Sciences Mathématiques de Paris.

2011 Regional Mathematics Olympiad, India.

Research Interests

Major Interest. Mathematical and computational logic (with a focus on proof theory)

Peripheral Interest. Automata theory | Complexity theory

Expertise (for teaching)

Programming | Design and Analysis of Algorithms | Circuit Design | Formal Methods and Automata Theory.

Programming Skills (in order of proficiency)

Java | Python | Haskell | Coq