

Saptarshi Sarkar

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Research Interests

Formal Languages: formal models of concurrency, algebraic language theory

Logic: temporal logic, predicate logic

Constraint Programming: sat-smt solvers, decision procedures

Education

01/2015 - now PhD Computer Science Indian Institute of Technology Bombay

07/2011 - 07/2013 M.Tech Computer Science Indian Institute of Technology Bombay

05/2006 - 05/2010 B.Tech Computer Science Institute of Engr. and Mgmt., Kolkata

Experience

07/2013 - 04/2014 Software Engineer Nvidia Graphics Pvt. Ltd.

- *implementing and debugging GPU video support for Windows*

08/2014 - 12/2014 Project Staff Indian Institute of Technology Bombay

- *literature survey of transducers and two-way transducer composition*

PhD Thesis Topic

Decompositions of automata and its applications to formal methods

Awards

- All India Rank 93 in GATE 2011
- TCS Fellowship (cycle 11)
- Teaching Assistant of the month (Oct 2016, Discrete Structures)

Publications

- Block Products for Algebras over Countable Words and Applications to Logic ([pdf](#))
with *Bharat Adsul* and *A.V. Sreejith*
Logic in Computer Science (LICS) 2019
- Wreath products for the concurrent setting of Mazurkiewicz traces and applications
with *Bharat Adsul* and *Pascal Weil* (under preparation)

Technical Reports

- Semidirect Product for \oplus -Algebras ([pdf](#))
with *Bharat Adsul* and *A.V. Sreejith*
- Green's relations for \oplus -Algebras ([pdf](#))
with *Bharat Adsul* and *A.V. Sreejith*