Chandan Saha

Ph.D. Scholar
Department of Computer Science and
Engineering, IIT Kanpur,
Kanpur - 208016, India.
Phone: +91 9935438805
email: csaha@cse.iitk.ac.in
homepage: http://www.cse.iitk.ac.in/users/csaha/home.php

RESEARCH INTERESTS
- Computational Algebra, Complexity Theory, Randomized Algorithms.

BIODATA
- **Date of Birth:** 11th January, 1982.
- **Nationality:** Indian.
- **Sex:** Male. **Family status:** Single.
- **Correspondence Address:** as above.
- **Home Address:**
  55 H, Beleghata Main Road,
  Kolkata-700010, India.
  Phone: +91 033 2363-2792.

EDUCATION
- **Indian Institute of Technology Kanpur, India.**
  Ph.D. in Computer Science, 2006 - 2010 (expected).
  Advisor: Dr. Manindra Agrawal.
  CPI: 10/10.
- **Indian Institute of Technology, Kanpur, India.**
  M. Tech. in Computer Science, 2004-2006.
  CPI: 9.43/10.
- **Jadavpur University, Kolkata, India.**
  B.E. in Information Technology, 2000-2004.
  GPA: 4.85/5.0.

PUBLICATIONS
- **The Power of Depth 2 Circuits over Algebras.**
  with Ramprasad Saptharishi and Nitin Saxena.
  *In Proc. of 28th Annual Conference on Foundations of Software Technology and Theoretical Computer Science (**FSTTCS**), 2009.*
- **Fast Integer Multiplication Using Modular Arithmetic.**
  with Anindya De, Piyush Kurur and Ramprasad Saptharishi.
  *In Proc. of 40th ACM Symposium on Theory of Computing (**STOC**), 2008.*
- **Factoring Polynomials over Finite Fields using Balance Test**.
  *In Proc. of the 25th International Symposium on Theoretical Aspects of Computer Science (**STACS**), 2008.*

◇ **Simpler algorithm for estimating frequency moments of data streams.**
with Lakshminath B., Sumit Ganguly and Deepanjan Kesh.
*In Proc. of the 17th ACM-SIAM Symposium on Discrete Algorithms (**SODA**), 2006.*

◇ **Practical Algorithms for Tracking Database Join Sizes.**
with Sumit Ganguly and Deepanjan Kesh.
*In Proc. of the 25th Conference on Foundations of Software Technology and Theoretical Computer Science (**FSTTCS**), 2005.*

◇ **Covering a Set of Points in a Plane using Two Parallel Rectangles.**
with Sandip Das.
*Information Processing Letters (**IPL**), Volume 109, 2009.*

UNPUBLISHED WORK

◇ **A Survey of Techniques Used in Algebraic and Number Theoretic Algorithms**.
with Manindra Agrawal, 2009.

◇ **A Note on Irreducible Polynomials and Identity Testing**, 2008.

Abstract *We give a conceptually simpler approach to the Agrawal-Biswas (2003) polynomial identity testing algorithm based on construction of irreducible polynomials.*

◇ **A Note on Go With the Winners algorithm for Trees.**, 2007.

Abstract *We show that "Go With the Winners" algorithms for trees exhibit the surprising property that raising the number of random bits from polynomial in depth d of the tree to exponential in d decreases the success probability of the algorithm from a constant to an exponentially small probability.*

TALKS

◇ Indian Algorithms Seminar, Khandala, 2008.
◇ China Theory Week, Tsinghua University, 2008.
◇ Oberseminar Theoretische Informatik, University of Bonn, 2008.
◇ Invited talk at b-it (Bonn-Aachen International Center for Information Technology), 2008.
◇ Update Meeting on Algorithms and Complexity, IMSc Chennai, 2008.
◇ Inter Research Institute Student Seminar (IRISS), IIIT Hyderabad, 2007.

ACADEMIC VISIT

◇ Hausdorff Center for Mathematics, Bonn, May-July 2008. Thanks to Prof. Nitin Saxena for being my generous host.

REFEREEING

◇ Theoretical Computer Science, FSTTCS, COCOON.

REFERENCES

◇ Prof. Manindra Agrawal
Professor, Department of Computer Science and Engineering
Indian Institute of Technology
Kanpur-208016. INDIA
Email: `manindra@cse.iitk.ac.in`
Phone: +91 (512) 259-7338

◇ Prof. Nitin Saxena
Professor, Hausdorff Center for Mathematics
Endenicher Allee 62
53115 Bonn, Germany
Email: ns@hcm.uni-bonn.de
Phone: +49 228 73-62233

◇ Prof. Sumit Ganguly
Professor, Department of Computer Science and Engineering
Indian Institute of Technology
Kanpur-208016. INDIA
Email: sganguly@cse.iitk.ac.in
Phone: +91 (512) 259-7231

◇ Prof. Piyush P. Kurur
Assistant Professor, Department of Computer Science and Engineering
Indian Institute of Technology
Kanpur-208016. INDIA
Email: ppk@cse.iitk.ac.in
Phone: +91 (512) 259-7584