

# List of Publications

SHANTANU DAS

## Peer-reviewed Scientific Journals:

- [1] Jérémie Chalopin, Shantanu Das, Arnaud Labourel and Euripides Markou, “Optimal Black Hole Search with Scattered Finite Automata in a Synchronous Ring”, *Theoretical Computer Science*, 2012 (to appear).
- [2] Jérémie Chalopin, Shantanu Das, Yann Disser, Matus Mihalak, and Peter Widmayer, “Mapping Simple Polygons: How Robots Benefit from Looking Back”, *Algorithmica* (DOI: 10.1007/s00453-011-9572-8), 2011.
- [3] Shantanu Das, Beat Gfeller, and Peter Widmayer, “Computing All Best Swaps for Minimum-Stretch Tree Spanners”, *Journal of Graph Algorithms and Applications*, 14(2), pages 287-306, 2010.
- [4] Shantanu Das, Hai Liu, Amiya Nayak, and Ivan Stojmenovic, “A Localized Algorithm for Bi-Connectivity of Connected Mobile Robots”, *Telecommunication Systems*, 40(3-4), pages 129-140, 2009.
- [5] Yao Chen, Shantanu Das, Pulak Dhar, Abdulmotaleb El-Saddik, and Amiya Nayak, “Detecting and Preventing IP-spoofed Distributed DoS Attacks”, *International Journal of Network Security*, 7(1), pages 69-80, 2008.
- [6] Shantanu Das, Paola Flocchini, Shay Kutten, Amiya Nayak, and Nicola Santoro, “Map Construction of Unknown Graphs by Multiple Agents”, *Theoretical Computer Science*, 385(1-3), pages 34-48, 2007.
- [7] Mourad Elhadef, Shantanu Das and Amiya Nayak, “System-Level Fault Diagnosis Using Comparison Models: An Artificial-Immune-Systems-Based Approach”, *Journal of Networks*, Vol. 1, No. 5, pages 43-53, 2006.
- [8] Mourad Elhadef, Kaouther Abrougui, Shantanu Das, and Amiya Nayak, “A Parallel Probabilistic System-Level Fault Diagnosis Approach for Large Multiprocessor Systems”, *Parallel Processing Letters*, Vol. 16, No. 1 pages 63-79, 2006.
- [9] Mourad Elhadef, Shantanu Das and Amiya Nayak, “A Parallel Genetic Algorithm for Identifying Faults in Large Diagnosable Systems”, *The International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, Vol. 20, No. 2, pages 113 - 125, June 2005.

## International Conference Proceedings:

- [10] Shantanu Das, Paola Flocchini, Giuseppe Prencipe, Nicola Santoro and Masafumi Yamashita, “The Power of Lights: Synchronizing Asynchronous Robots using Visible Bits”, In Proc. 32nd International Conference on Distributed Computing Systems (ICDCS), 2012 (to appear).
- [11] Jérémie Chalopin, Shantanu Das, Arnaud Labourel and Euripides Markou, “Black Hole Search with Finite Automata Scattered in a Synchronous Torus”, In Proc. 25th International Symposium on Distributed Computing (DISC), LNCS 6950, pages 432–446, 2011.

- [12] Jérémie Chalopin, Shantanu Das, Arnaud Labourel and Euripides Markou, “Tight Bounds for Scattered Black Hole Search in a Ring”, In Proc. 18th International Colloquium on Structural Information and Communication Complexity (SIROCCO), LNCS 6796, pages 186–197, 2011.
- [13] Andreas Emil Feldmann, Shantanu Das, and Peter Widmayer, “Restricted Cuts for Bisections in Solid Grids”, In Proc. 37th International Workshop on Graph Theoretic Concepts in Computer Science (WG), 2011.
- [14] Jérémie Chalopin, Shantanu Das, Yann Disser, Matus Mihalak, and Peter Widmayer, “Telling convex from reflex allows to map a polygon”, In Proc. 28th International Symposium on Theoretical Aspects of Computer Science (STACS), LIPIcs Volume 9, pages 153-164, 2011.
- [15] Jérémie Chalopin, Shantanu Das, and Adrian Kosowski, “Constructing a Map of an Anonymous Graph: Applications of Universal Sequences”, In Proc. 14th International Conference on Principles of Distributed Systems (OPODIS), LNCS 6490, pages 119-134, 2010.
- [16] Andreas Emil Feldmann, Shantanu Das, and Peter Widmayer, “Simple Cuts are Fast and Good: Optimum Right-Angled Cuts in Solid Grids”, In Proc. 4th International Conference on Combinatorial Optimization and Applications (COCOA), LNCS 6508, pages 11-20, 2010.
- [17] Jérémie Chalopin, Shantanu Das, and Peter Widmayer, “Rendezvous of Mobile Agents in Directed Graphs”, In Proc. 24th International Symposium on Distributed Computing (DISC), LNCS 6343, pages 282-296, 2010
- [18] Jérémie Chalopin and Shantanu Das, “Rendezvous of Mobile Agents without Agreement on Local Orientation”, In 37th International Colloquium on Automata, Languages and Programming (ICALP), LNCS 6199, pages 515-526, 2010.
- [19] Shantanu Das, Paola Flocchini, Nicola Santoro, and Masafumi Yamashita, “On the Computational Power of Oblivious Robots: Forming a Series of Geometric Patterns”, In 29th Annual ACM Symposium on Principles of Distributed Computing (PODC), pages 267-276, 2010.
- [20] Jérémie Chalopin, Shantanu Das, Yann Disser, Matus Mihalak, and Peter Widmayer, “How simple robots benefit from looking back”, In Proc. 7th International Conference on Algorithms and Complexity (CIAC), LNCS 6078, pages 229-239, 2010.
- [21] Shantanu Das, Matus Mihalak, Rastislav Sramek, Elias Vicari and Peter Widmayer, “Rendezvous of Mobile Agents when Tokens Fail Anytime”, In Proc. 12th International Conference on Principles of Distributed Systems (OPODIS), Luxor, Egypt, LNCS 5401, pages 463-480, 2008.
- [22] Shantanu Das, Beat Gfeller, and Peter Widmayer, “Computing Best Swaps in Optimal Tree Spanners”, In Proc. 19th International Symposium on Algorithms and Computation (ISAAC), Australia, LNCS 5369, pages 717-728, 2008.
- [23] Eduardo Mesa Barrameda, Shantanu Das, and Nicola Santoro, “Deployment of Asynchronous Robotic Sensors in Unknown Orthogonal Environments”, In Proc. International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS), LNCS 5389, pages 125-140, 2008.
- [24] Shantanu Das, “Mobile Agent Rendezvous in a Ring using Faulty Tokens”, In Proc. International Conference on Distributed Computing and Networking (ICDCN), LNCS 4904, pages 292-297, 2008.
- [25] Jérémie Chalopin, Shantanu Das, and Nicola Santoro, “Rendezvous of Mobile Agents in Unknown Graphs with Faulty Links”, In Proc. 21st International Symposium on Distributed Computing (DISC), Lemesos, LNCS 4731, pages 108-122, 2007.

- [26] Shantanu Das, Paola Flocchini, Nicola Santoro, and Masafumi Yamashita, “Fault-Tolerant Simulation of Message-Passing Algorithms by Mobile Agents”, In Proc. 14th Colloquium on Structural Information and Communication Complexity (SIROCCO), Castiglioncello(LI), Italy, LNCS 4474, pages 289-303, 2007.
- [27] Shantanu Das, Hai Liu, Ajith Kamath, Amiya Nayak, and Ivan Stojmenovic, “Localized Movement Control for Fault Tolerance of Mobile Robot Networks”, In Proc. First IFIP Int. Conference on Wireless Sensor and Actor Networks (WSAN 2007), Albacete, 2007.
- [28] Shantanu Das, Amiya Nayak, Stefan Rührup, and Ivan Stojmenovic, “Semi-Beaconless Power and Cost Efficient Georouting with Guaranteed Delivery using Variable Transmission Radii for WSNs”, 3rd Int. Workshop on Localized Communication and Topology Protocols for Ad hoc Networks (LOCAN) Pisa, October 2007.
- [29] Shantanu Das, Paola Flocchini, Amiya Nayak, and Nicola Santoro, “Effective Elections for Anonymous Mobile Agents”, In Proc. 17th International Symposium on Algorithms and Computation (ISAAC) Kolkata, LNCS 4288, pages 732-743, 2006.
- [30] Shantanu Das, Shay Kutten, and Ayelet Yifrach, “Improved Distributed Exploration of Anonymous Networks”, In Proc. International Conference on Distributed Computing and Networking (ICDCN) Guwahati, LNCS 4308, pages 306-318, 2006.
- [31] Jérémie Chalopin, Shantanu Das, and Nicola Santoro, “Groupings and Pairings in Anonymous Networks”, In Proc. 20th International Symposium on Distributed Computing (DISC) Stockholm, LNCS 4167, pages 105-119, 2006.
- [32] Mourad Elhadef, Shantanu Das, and Amiya Nayak, “A Novel Artificial-Immune-Based Approach for System-Level Fault Diagnosis”, In Proc. of First International Conference on Availability, Reliability and Security (ARES) Vienna, IEEE Computer Society, pages 166-173, 2006.
- [33] Yao Chen, Shantanu Das, Pulak Dhar, Abdulmotaleb El Saddik and Amiya Nayak, “An Effective Defence Mechanism Against Massively Distributed DoS Attacks”, In Proc. 9th World Conference on Integrated Design and Process Technology (IDPT), San Diego, 2006.
- [34] Mourad Elhadef, Kaouther Abrougui, Shantanu Das, and Amiya Nayak, “Probabilistic Diagnosis of Large Systems Using a Parallel Genetic Approach”, International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA), pages 1010-1016 (Vol. 3), 2005.
- [35] Shantanu Das, Paola Flocchini, Amiya Nayak, and Nicola Santoro, “Distributed Exploration of an Unknown Graph”, In Proc. 12th Colloquium on Structural Information and Communication Complexity (SIROCCO), Le Mont Saint-Michel, LNCS 3499, pages 99-114, 2005.
- [36] Shantanu Das and Rana Barua, “Finite Field Arithmetic using Self-Assembly of DNA Tilings”, In Proc. IEEE Congress on Evolutionary Computation (CEC 2003), Canberra, Australia, pages 2529-2536 (Vol. 4), 2003.