

SUSHMITA RUJ

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Indian Statistical Institute
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EDUCATION

Ph.D., Indian Statistical Institute, Kolkata, India. Thesis submitted: February 2009. Degree Awarded: January 2010.

Title of thesis : *Application of Combinatorial Structures to Key Predistribution in Sensor Networks and Traitor Tracing.*

Thesis Supervisor: Prof. Bimal Roy.

M.Tech. (Computer Science), Indian Statistical Institute, Kolkata, India, 2006.

B.E. (Computer Science), Bengal Engineering College (D.U.), Shibpur, India, 2004.

C.B.S.E. (10 + 2), D.A.V. Model School, Durgapur, India, 2000.

I.C.S.E. (Class 10), Carmel School, Steel Township, Durgapur, India, 1998.

RESEARCH INTERESTS

- Security related aspects in Sensor Networks: Key management, access control
- Security and privacy in Vehicular Networks
- Cloud Security
- Security and reliability in Smart Grids
- Security and privacy in Social networks
- Combinatorics: Design theory
- Cryptology: Stream Ciphers, Applications of Attribute-Based Encryption

PROFESSIONAL EXPERIENCE

- Assistant Professor, Indian Statistical Institute, Kolkata, May 10, 2013- Present
- Assistant Professor. School of Computer Science and Engineering, Indian Institute of Technology, IIT Indore, July 30, 2012- May 9, 2013.
- Post Doctoral Fellow. SITE, University of Ottawa, May 17, 2010 - July 26, 2012.
- Post Doctoral Fellow. Department of Electrical and Information Technology, Lund University, August 14, 2009 - April 30, 2010.
- Intern. Microsoft Research Lab, India (MSRI), Bangalore, India. March 23, 2009 - May 29, 2009.
- Visiting Researcher. AIST, Research Center for Information Security (RCIS) and Kyushu University, Japan. June 27, 2009 - July 15, 2009.
- Visiting Researcher. Project Secret, INRIA-Rocquencourt, France. April 15, 2008 - June 14, 2008.
- Visiting Researcher. Department of Computer Science, University of Calgary, Canada. March 10, 2008 - March 15, 2008.
- Visiting Researcher. School of Information Technology and Engineering, University of Ottawa, Ottawa, Canada. August 20, 2007 - August 28, 2007.
- Visiting Researcher. School of Computer Science and Software Engineering, University of Wollongong, Wollongong, Australia. April 16, 2007 - June 10, 2007.

ACADEMIC ACHIEVEMENTS

- Samsung GRO award, 2014.
- Best Paper Award at 22nd IEEE PIMRC, 2011.
- Erasmus Mundus Post Doctoral Fellowship, 2009-2010.
- Best Paper Award at The Fifth International Symposium on Parallel and Distributed Processing and Applications, ISPA07, 2007.
- ISI Special Fellowship for Ph. D. (for securing first position in Ph. D. Admission test), Indian Statistical Institute, Kolkata, India, August 2006 - August 2009.
- Qualified for Joint Entrance Screening Test, in Theoretical Computer Science in 2006 (Rank: 4), and 2004 (among top 18).
- Selected for Visiting Students Research Program (VSRP 2005), at Tata Institute of Fundamental Research, Mumbai, India, 2005.
- 86th position in state wise Joint Entrance Test, 2000, held in the state of West Bengal, India.
- Awarded All India Talent Search Award Scholarship, 1997.

PROFESSIONAL ACTIVITIES

- **Editorial board member**, Ad Hoc & Sensor Wireless Networks, since March 2011.
- **Program Co-Chair**, IEEE ICDCS Workshop, The Second International Workshop on Networks Forensics, Security and Privacy, NFSP, 2013, USA.
- **Program Co-Chair**, IEEE ICC, The IEEE/CIC International Conference on Communications in China, Privacy and Security Track, 2015, Shenzhen, China.
- **Program Co-Chair**, IEEE ICC Workshop, Workshop on Secure Networking and Forensic Computing (SNFC) 2014, Australia.
- **Publicity Co-Chair**, IEEE Cloudnet, 2014, Luxembourg.
- Indian Delegate for Myanmar-India Cooperative workshop on Information Communication Technology Research & Development (ICTRD-2012), Yangon, Myanmar.
- Program Committee Member, IEEE Globecom, 2015, USA.
- Program Committee Member, IEEE ICC, 2015, UK.
- Session Chair, IEEE ICC, 2015, UK.
- Program Committee Member, IEEE Cloudnet, 2015, Canada.
- Program Committee Member, Indocrypt, 2015, India.
- Program Committee Member, IEEE ANTS, 2015, India.
- Program Committee Member, IEEE Wimob, 2015, Abu Dhabi.
- Program Committee Member, IEEE Bodynets, 2015, Australia.
- Program Committee Member, SecurityIoT, 2015, Italy.
- Program Committee Member, IEEE Globecom, 2014, USA.
- Program Committee Member, IEEE ICC, 2014, Australia.
- Program Committee Member, IFIP WMNC, 2014, Portugal.
- Program Committee Member, Mobiquitous, 2014, Japan.
- Program Committee Member, PECCS, 2014, Spain.
- Program Committee Member, ANT, 2014, Belgium.
- Program Committee Member, ICDCN, 2013, India.
- Program Committee Member, IEEE Globecom, 2013, USA.
- Session Chair, IEEE Globecom, 2013, USA.
- Program Committee Member, IEEE Globecom workshop, Big Security, 2013, USA.
- Program Committee Member, BodyNets, 2013, USA.

- Program Committee Member, International Conference on Pervasive and Embedded Computing and Communication Systems, PECCS 2013, Italy.
- Program Committee Member, International Conference on Ambient Systems, Networks and Technologies (ANT), 2013, Canada.
- Program Committee Member, IFIP Wireless and Mobile Networking Conference 2013, UAE.
- Program Committee Member, Ad-Hoc Now, 2013, Poland.
- Program Committee Member, AsiaARES, 2013, Indonesia.
- Session Chair, IEEE Globecom, 2012, USA.
- Program Committee Member, IEEE Globecom, 2012, USA.
- Program Committee Member, IEEE International Conference on Mobile and Ad-Hoc and Sensor Systems (IEEE MASS), 2012, USA.
- Program Committee Member, Student Research Symposium at HiPC, 2012, India.
- Program Committee Member, SECRIPT, 2012, Italy.
- Program Committee Member, Ad-Hoc Now, 2012, Serbia.
- Program Committee Member, IEEE International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN), 2012, China.
- Program Committee Member, 15th IEEE International Conference on Computational Science and Engineering (CSE 2012), 2012, Cyprus.
- Program Committee Member, International Conference on Pervasive and Embedded Computing and Communication Systems, PECCS 2012, Italy.
- Program Committee Member, Internet of Things - Emerging Technology, IEEE IoT-ET 2012, France.
- Program Committee Member, International Conference on Ambient Systems, Networks and Technologies (ANT), 2012, Canada.
- Program Committee Member, IEEE INFOCOM Workshop on Security in Computers, Networking and Communications, SCNC 2011, China.
- Program Committee Member, IEEE International Conference on Mobile and Ad-Hoc and Sensor Systems (IEEE MASS), 2011, Spain.
- Program Committee Member, IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC 2011), 2011, Canada.
- Program Committee Member, Ad-Hoc Now, 2011, Germany.
- Program Committee Member, FutureTech 2011, Greece.
- Program Committee Member, International Conference on Pervasive and Embedded Computing and Communication Systems, PECCS 2011, Portugal.
- Program Committee Member, Fifth International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing IMIS-2011, Korea.
- Program Committee Member, IFIP Wireless and Mobile Networking Conference 2011, Tunisia.
- Program Committee Member, International Conference on Ambient Systems, Networks and Technologies (ANT), 2011, Canada.
- Session Chair, VTC-Fall, 2011, San Francisco.
- Submission Chair, IEEE International Conference on Distributed Computing in Sensor Systems (IEEE DCOSS), 2011, Spain.
- Program Committee Member, Indocrypt 2010, India.

Reviewer for:

1. IEEE Transactions on Computers
2. IEEE Transactions on Parallel and Distributed Systems
3. IEEE Transactions on Dependable and Secure Computing
4. IEEE Transactions on Information Theory

5. IEEE Transactions on Information Forensics & Security
6. ACM Transactions on Sensor Networks
7. IEEE Transactions on Cloud Computing
8. IEEE Transactions on Smart Grids
9. Design, Codes and Cryptography
10. Ad Hoc Networks, Elsevier
11. Journal of Network and Computer Applications, Elsevier
12. Journal of Parallel and Distributed Computing, Elsevier
13. EURASIP Journal on Wireless Communications and Networking
14. IEICE Transaction on Information and Systems
15. International Journal of Parallel, Emergent and Distributed Systems
16. Ad Hoc & Sensor Wireless Networks
17. Several high ranking conferences like IEEE INFOCOM, IEEE ICDCS etc

COURSES DESIGNED/TAUGHT

Courses Designed

- Cryptography and Network Security
- Systems and usable security

Courses Taught

- Discrete Mathematics, M.Stat, ISI, Jan 2014-April 2015.
- Discrete Mathematics, M.Tech (CS), ISI, July 2014-December 2014.
- Course co-ordinator of 4 months Short term course on Cryptology and Data Security, ISI Kolkata, February 2014-June 2014.
- Information Security, Short term course on Cryptology and Data Security, ISI Kolkata, February 2014-June 2014.
- Course co-ordinator of 4 months Short term course on Cryptology and Data Security, ISI Kolkata, August 2013-December 2013.
- Information Security, Short term course on Cryptology and Data Security, ISI Kolkata, August 2013-December 2013.
- Discrete Mathematics, M.Stat, ISI, Jan 2014-April 2014.
- Information and Coding Theory, M.Tech. (CS), Elective, ISI, July 2013-November 2013.
- Systems and usable security, Ph. D. and B.Tech. Elective, IIT Indore, January 2013-April 2013.
- Cryptography and Network Security: Ph. D. and B.Tech. Elective, IIT Indore, July 2012-December 2012.
- Operating Systems: B.Tech., IIT Indore, July 2012- December 2012.
- Operating Systems Lab: B.Tech., IIT Indore, July 2012- December 2012.
- Software Engineering: M.Tech (Computer Science), Indian Statistical Institute, Kolkata, January, 2007 - May, 2007.
- Assisted (delivered lectures on selected topics) for the following courses:
 - Operating Systems, Undergrad course, Computer Science, University of Ottawa, Summer, 2010, 2012.

- Computer Networks and Protocols, Undergrad course, Computer Science, University of Ottawa, Fall, 2010.
- Wireless and Mobile Computing, Graduate course, Computer Science, University of Ottawa, Winter, 2011.

STUDENTS SUPERVISED/MENTORED

Current Students

- Kaushik Majumder, Post Doc.
- Binanda Sengupta, Ph. D. Student.
- Abhishek Singh, M.Tech. Student
- Ayan Das, M.Tech. Student
- Laltu Sardar, M.Tech. Student

Previous Students

- Sourya Joyee De, Post Doc.
- Dheerendra Mishra, Post Doc.
- Sumit Ghosh, M.Tech, 2014-2015. Thesis title “Fast Real Time Secure Communication in Smart Grids”.
- Samiran Bag, Ph. D. Student, ISI Kolkata, Visitor at University of Ottawa.
- Antonio Prado, Masters student, University of Ottawa, 2011-. Thesis Topic: Security in Vehicular Networks.
- Sasi Kiran, Masters student, University of Ottawa, 2011-. Thesis Topic: Security in Wireless Sensor Networks.
- Zhen Huang, Masters student, University of Ottawa, 2010-2011. Thesis title: “On Reputation and Data-centric Misbehavior Detection Mechanisms for VANET”.
- BTech theses of 11 students at IIT Indore. Abhishek, Satyam, Nihal Balani, Siddarth Gupta, Anjor Hemant, Vaibhav Ingole, Shailendra Jayaswal, Deepti Kocher, Rahul Nanda, Kiran Nagar, Rajat Pawar, Fahad Hussain Syed.

TALKS

1. Key Management in Resource Constrained Devices, Indo-UK Joint Workshop, Edinburgh, May 2015. (Invited Talk).
2. Security Challenges for IoT. University of Derby, June, 2015. (Invited Talk).
3. Security for IoT, challenges and some solutions. University of Loughborough, June, 2015.(Invited Talk).
4. CITE X: A new citation index to measure the relative importance of authors and papers in scientific publications. IEEE ICC, London, UK.
5. Security for IoT, Samsung, Korea, March 2015. (Invited Talk).
6. Security of Internet of Things requires Security of Everything. Incheon National University, Korea, March 2015. (Invited Talk).
7. Cloud Security Challenges, ParCompTech, Bangalore, February, 2015. (Invited Talk).
8. Security Challenges for IoT, India Research Network (IRN) meeting on IoT organized by Samsung, Bangalore, December 2014. (Invited Talk).
9. Key Predistribution in Wireless Sensor Networks, Winter School on Interplay Between Statistics and Cryptology, Indian Statistical Institute, Kolkata, December, 2014. (Invited Talk).

10. Combinatorial Key Management in Wireless Sensor Networks. Indo-Russia Workshop on Discrete Mathematics and Cryptology, Moscow, Russia, October 2014. (Invited Talk).
11. Temporal Access Control in Clouds. IEEE TrustCom, Beijing, China, September 2014.
12. Cryptographic Access Control In Clouds, Shanghai, Jiao Tong University, China, September 2014. (Invited Talk).
13. Cascading failures in smart grids, ISIT, Fukuoka, Japan, September 2014. (Invited Talk).
14. Cryptographic Access Control In Clouds, Institute of Industrial Mathematics, Kyushu University, Japan, September 2014. (Invited Talk).
15. Security and Privacy in Clouds: Challenges and Solutions. Department of Informatics, Kyushu University, Japan, September 2014. (Invited Talk).
16. You Get What You Deserve: Access Control in Clouds. Samsung Research, Bangalore, July, 2014. (Invited Talk).
17. Attribute Based Access Control. SPCOM conference, July, 2014. (Invited Talk).
18. Key Management. Short term course on Cryptology and Network Security, IIT Kharagpur, May, 2014. (Invited Talk).
19. Random graphs and Social Networks. Central University, Rajasthan, India, April, 2013.
20. Secure and Privacy Preserving Hierarchical Wireless Sensor Networks using Hybrid Key Management Technique. IEEE Globecom'13, USA.
21. Key Management in Wireless Sensor Networks. Central University, Rajasthan, India, December, 2013.
22. Partially Balanced Incomplete Block Designs and Application to Key Predistribution. JSPS-DST Asian Academic Seminar on Discrete Mathematics and its Applications, Tokyo, Japan, November, 2013. (Invited Talk).
23. Cloud Security: Challenges and Solutions. National Cryptology Workshop, New Delhi, India, October 2013. (Invited Talk).
24. Pairwise and Triple Key Distribution in WSN. RWTH, Germany, June 2013. (Invited Talk)
25. Enhanced Privacy and Reliability for Secure Geocasting in VANET. IEEE ICC'13, Budapest, Hungary, June 2013.
26. Access Control in Clouds, TCS Innovation Labs, Kolkata, March 2013. (Invited Talk)
27. Cloud Security, Kyushu University, Japan, March 2013. (Invited Talk)
28. You Get What You Deserve: Access Control in Clouds, University of Southern California, USA, December 2012. (Invited Talk)
29. Security and Privacy in Cloud Computing, First Workshop on Myanmar-India Information Communication Technology Research & Development (ICTRD-2012), Yangon, Myanmar. (Invited Talk)
30. You Get What You Deserve: Access Control in Clouds, Queen's University, Kingston, Canada, June 2012. (Invited Talk)
31. Security in Communication Systems. Indian Statistical Institute, Kolkata, India, February 2011. (Invited Talk)
32. Privacy Preserving Access Control with Authentication for Securing Data in Clouds, ACM/IEEE CCGrid, Ottawa, Canada, May 2012.
33. On Data-centric Misbehavior Detection in VANETs, 72nd IEEE VTC, San Francisco, USA, September 2011.
34. Distributed Fine-grained Access Control in Wireless Sensor Networks, 25th IEEE IPDPS, Anchorage, USA, May 2011.
35. Pairwise and Triple Key Distribution in Wireless Sensor Networks. Security seminar, Ottawa, Canada, March 2011.
36. Alice's Adventures with Bob: Story of Secure Communications. SOI Study group, Ottawa, Canada, December 2010. (Invited Talk)

37. Sensor networks and elementary combinatorics. Graduate students seminar, Kyushu University, Japan, July, 2009. (Invited Talk)
38. Key predistribution for grid-group deployment. Seminar series, Kyushu University, Japan, July 2009. (Invited Talk)
39. Key Predistribution Schemes Using Codes in Wireless Sensor Networks, INSCRYPT'08, Beijing, China, December 2008.
40. Key Establishment Algorithms for Some Deterministic Key Predistribution Schemes. WOSIS, Barcelona, Spain, June, 2008.
41. Key predistribution in Wireless Sensor Networks, INRIA Rocquencourt, France, April 2008. (Invited Talk)
42. Key predistribution in Traitor Tracing, INRIA Rocquencourt, France, May 2008. (Invited Talk)
43. Key distribution in Traitor Tracing, University of Calgary, Calgary, Canada, March 2008. (Invited Talk)
44. Key Predistribution Using Partially Balanced Designs in Wireless Sensor Networks. ISPA'07, Niagara Falls, Canada, August, 2007.

PUBLICATIONS

Journal Publications

1. Sushmita Ruj, Milos Stojmenovic and Amiya Nayak. Decentralized Access Control with Anonymous Authentication for Securing Data in Clouds. **IEEE Transactions of Parallel and Distributed Systems**, Vol 25, No 2, pp. 384-394, 2014.
2. Zhen Huang, Sushmita Ruj, Marcos A. Cavenaghi, Milos Stojmenovic, Amiya Nayak. A Social Network Approach to Trust Management in VANETs. **Peer-to-Peer Networking and Applications**, Vol 7, No 3, pp 229-242, Springer, 2014.
3. Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Pairwise and Triple Key Distribution in Wireless Sensor Networks with Applications. **IEEE Transactions on Computers**, Vol 62, No 11, pp. 2224-2237, 2013.
4. Sushmita Ruj and Amiya Nayak. A Decentralized Security Framework for Data Aggregation and Access Control in Smart Grids. **IEEE Transactions on Smart Grids**, Vol 4, Issue 1, 2013.
5. Paul Stankovski, Sushmita Ruj, Martin Hell and Thomas Johansson. Improved Distinguishers for HC-128. **Design, Codes and Cryptography (DCC)**, Springer, Volume 63, Number 2, pp 225-240, 2012.
6. Srimanta Bhattacharya, Sushmita Ruj and Bimal Roy. Combinatorial Batch Codes: Lower Bound and Optimal Constructions. **Advances in Mathematics of Communications (AMC)**, AIMS, Volume 6, Number 2, pp 165-174, 2012.
7. Sushmita Ruj and Bimal Roy. Key Predistribution using Partially Balanced Designs in Wireless Sensor Networks. **International Journal of High Performance Computing and Networking (IJHPCN)**, Volume 7, Number 1, 2011.
8. Sushmita Ruj and Bimal Roy. Key Predistribution Using Combinatorial Designs for Grid-group Deployment Scheme in Wireless Sensor Networks. **ACM Transaction on Sensor Networks**, Volume 6, Number 1, 2009.
9. Sushmita Ruj and Bimal Roy. Revisiting Key Predistribution using Transversal Designs for a Grid-based Deployment Scheme: **International Journal of Distributed Sensor Networks**. Volume 5, Number 6, pp 660-674, 2009.
10. Sushmita Ruj and Bimal Roy. Key Distribution Schemes Using Combinatorial Designs To Identify All Traitors. **Congressus Numerantium**, Volume 193, pp 195-214, 2008.

11. Sushmita Ruj, Subhamoy Maitra and Bimal Roy. Key Predistribution using Transversal Design on a Grid of Wireless Sensor Network: **Ad Hoc & Sensor Wireless Networks**. Volume 5, Number 3-4, pp 247-264, 2008.

Book Chapters

- Sushmita Ruj and Rajat Saxena. Security and Access Control of Cloud Data. *Cloud Computing with E-science Applications*, CRC Press/Taylor & Francis.
- Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Key Predistribution in Wireless Sensor Networks when Sensors are within Communication Range. **Theoretical Aspects of Distributed Computing in Sensor Networks**, Springer-Verlag, 2011.
- Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Security in Multihop Wireless Sensor Networks. *Distributed Sensor Networks*. Chapman & Hall, CRC Computer & Information Science Series. To appear.

Referred Conference Publications

1. Sourya Joyee De and Sushmita Ruj. Decentralized Access Control of Data in the Cloud with Fast Encryption and Outsourced Decryption IEEE Globecom, 2015, San Diego, USA. Accepted.
2. Arindam Pal and Sushmita Ruj. CITE X: A new citation index to measure the relative importance of authors and papers in scientific publications. IEEE ICC, 2015, London, UK.
3. Arpan Sen, Shrestha Ghosh, Arinjoy Basak, Harsh Parsuram Puria and Sushmita Ruj. Achieving Data Survivability and Confidentiality in Unattended Wireless Sensor Networks. The 29th IEEE AINA'15, Gwangju, Korea.
4. Sourya Joyee De, Sushmita Ruj and Asim K. Pal. Should Silence be Heard? Fair Rational Secret Sharing with Silent and Non-Silent Players. International Conference on Cryptology and Network Security (CANS'14), Crete, Greece. LNCS.
5. Nihal Balani and Sushmita Ruj. Temporal Access Control with User Revocation for Cloud Data. IEEE Trustcom'14, Beijing, China.
6. Sushmita Ruj and Arindam Pal. Analyzing Cascading Failures in Smart Grids under Random and Targeted Attacks. IEEE AINA'14, Victoria, Canada.
7. Rohit Verma and Sushmita Ruj. Security Services using Crowdsourcing. 5th International Conference on Ambient Systems, Networks and Technologies (ANT-2014), Hasselt, Belgium.
8. Sushmita Ruj and Kouichi Sakurai. Secure and Privacy Preserving Hierarchical Wireless Sensor Networks using Hybrid Key Management Technique. IEEE Globecom'13.
9. Antonio Prado, Sushmita Ruj, Milos Stojmenovic and Amiya Nayak. Applying Transmission-Coverage Algorithms for Secure Geocasting in VANETs. The 5th International Symposium on Cyberspace Safety and Security. China, 2013.
10. Antonio Prado, Sushmita Ruj and Amiya Nayak. Enhanced Privacy and Reliability for Secure Geocasting in VANET. IEEE ICC'13, Budapest, Hungary.
11. Sasi Kiran V.L.Reddy, Sushmita Ruj and Amiya Nayak. Data Authentication Scheme for Unattended Wireless Sensor Networks against a Mobile Adversary. IEEE WCNC'13, Shanghai, China.
12. Zhen Huang, Cheng Wang, Sushmita Ruj, Amiya Nayak, Ivan Stojmenovic. Modeling Cascading Failures in Smart Power Grid using Interdependent Complex Networks and Percolation Theory. The 8th IEEE Conference on Industrial Electronics and Applications, ICIEA'13, Melbourne, Australia.
13. Samiran Bag, Sushmita Ruj and Bimal Roy. Jamming Resistant Schemes for Wireless Communication : A Combinatorial Approach 9th International Conference on Information Systems Security (ICISS 13), Kolkata, India, LNCS pp 43-62, 2013.

14. Sushmita Ruj, Milos Stojmenovic and Amiya Nayak. Privacy Preserving Access Control with Authentication for Securing Data in Clouds. The 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, CCGrid, Canada, 2012.
15. Sasi Kiran V.L.Reddy, Sushmita Ruj and Amiya Nayak. Distributed Data Survivability Schemes in Mobile Unattended Wireless Sensor Networks. IEEE Globecom'12, Anaheim, USA.
16. Sushmita Ruj, Amiya Nayak and Sagar Naik. Securing Home Networks Using Physically Unclonable Functions. The Fourth International Conference on Ubiquitous and Future Networks ICUFN, IEEE Communications Society, Phuket, Thailand, 2012. Accepted.
17. Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. DACC: Distributed Access Control in Clouds. 10th IEEE TrustCom, China, 2011.
18. Sushmita Ruj, Marcos A. Cavenaghi, Zhen Huang, Amiya Nayak and Ivan Stojmenovic. On Data-centric Misbehavior Detection in VANETs. IEEE 74th Vehicular Technology Conference, VTC-Fall, San Francisco, USA, 2011. Accepted.
19. Zhen Huang, Sushmita Ruj, Marcos A. Cavenaghi, Amiya Nayak and Ivan Stojmenovic. Limitations of Trust Management Schemes in VANETs and Countermeasures. 22nd IEEE PIMRC, Toronto, Canada, 2011. **Best paper award.**
20. Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Enhanced Access Control Scheme for Vehicular Networks. 10th ADHOC-NOW, Germany, LNCS 6811, pp 191-205, 2011.
21. Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Distributed Fine-grained Access Control in Wireless Sensor Networks. 25th IEEE IPDPS, Anchorage, USA, 2011.
22. Sushmita Ruj, Amiya Nayak and Ivan Stojmenovic. Fully Secure Pairwise and Triple Key Distribution in Wireless Sensor Networks using Combinatorial Designs. 30th IEEE INFOCOM Mini-Conference, Shanghai, China, 2011.
23. Samiran Bag and Sushmita Ruj. Key Distribution in Wireless Sensor Networks using Finite Affine Plane. IEEE AINA Workshop FINA, Singapore, 2011.
24. Sushmita Ruj, Jennifer Seberry and Bimal Roy. Key Predistribution using Block Designs. IEEE International Conference on Computational Science and Engineering, CSE '09, Volume 2, pp 873-878, 2009.
25. Sushmita Ruj and Bimal Roy. Key Predistribution Schemes Using Codes in Wireless Sensor Networks. In *Proceedings of the 4th International Conference on Security and Cryptology, INSCRYPT 2008*, Beijing, China, LNCS 5487, pp 275-288, 2008.
26. Sushmita Ruj and Bimal Roy. Key Establishment Algorithms for some Deterministic Key Predistribution Schemes. In *Proceedings of The Sixth Workshop on Security In Information Systems, WOSIS08*, Barcelona, Spain, INSTICC Press, pp 68-77, 2008.
27. S. B. Rao and Sushmita Ruj. Almost Ramsey Type Theorems for Directed Graphs In the proceedings of the *International Conference on Discrete Mathematics, 2006*, Discrete Mathematics Series, Ramanujan Mathematical Society, Mysore, Volume 7, pp 43-53, 2008.
28. Sushmita Ruj and Bimal Roy. Key Predistribution using Partially Balanced Designs in Wireless Sensor Networks. **Lecture Notes in Computer Science**, Springer, Volume 4742, ISPA 2007, 431-445. **Best Paper Award.**