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Education:

- B.Tech., Computer Science and Engineering, IIT Bombay (1996)
- M.S., Computer Science, Rutgers University, USA (1998)
- Ph.D., Computer Science, Rutgers University, USA (2002)

Areas of Research interests:

- Cybersecurity
- Data Privacy
- Design and Analysis of Algorithms

Patent granted:

1. Arun Kumar Jindal, Srinivasa Rao Chalamala, Ajeet Kumar Singh, Vijayanand Mahadeo Banahatti, Sachin Premasukh Lodha, Sumit Johri, Mayur Jain, Nandita Babu, Nikhil Girish Patwardhan and Ashim Roy. **System and Method for Cheque Image Data Masking**. US Patent No. [10,691,884](#), 23 June 2020.
2. Kumar Vidhani, Vijayarangan Natarajan, Sachin Lodha and Kishore Padmanabhan. **Method and System for Contract Management and Enforcement in a Data Marketplace**. Japan Patent No. [6667653](#), 27 February 2020. Singapore Patent No. [11201807120V](#), 19 August 2020.
3. Kumar Vidhani, Vijayanand Banahatti, Sachin Lodha, Gangadhara Reddy Sirigireddy, Govind Waghmare, Nikhil Sambhus, Rekha Pathak, Payal Lathi, Kalyani Mashiwal, Shefali Soni, Vidyadhar Rao and Rosni Kottekulam Vasu. **Method and System for Analyzing Unstructured Data for Compliance Enforcement**. EP Patent No. [181869405](#), 12 February 2020.
4. Santosh Kumar Jami, Srinivasa Rao Chalamala, Krishna Rao Kakkirala, Balakrishna Gudla, Arun Kumar Jindal, Bala Mallikarjunarao Garlapati, Sachin Lodha, Ajeet Kumar Singh and Vijayanand Banahatti. **System and Method for Text Localization in Images**. US Patent No. [10496894](#), 3 December 2019.
5. Gangadhara Reddy, Kumar Vidhani, Akhil Dixit, Vijayanand Banahatti and Sachin Lodha. **Method and System for Enforcing User Policy on Database Records**. US Patent No. [10423618](#), 24 September 2019.

6. Manish Shukla, Sachin Lodha and Kishore Padmanabhan. **System and Method for Complaint and Reputation Management in a Multiparty Data Marketplace.** Japan Patent No. [6578450](#), 30 August 2019.
7. Rohit Saxena, Amit Jadhav, Manish Shukla, Vijayanand Banahatti and Sachin P Lodha. **Dynamic Data Masking for Mainframe Application.** EP Patent No. [3067817](#), 27 June 2019. US Patent No. [10462148](#), 29 October 2019.
8. Sumesh Manjunath, Manish Shukla, Sutapa Mondal, Rohit Saxena and Sachin Lodha. **Systems and Methods for Estimating Temporal Importance of Data.** US Patent No. [10296523](#), 21 May 2019.
9. Purushotam Gopaldas Radadia, Kanika Kalra, Rahul Kumar, Anand Sriraman, Gangadhara Reddy Sirigireddy, Shrikant Joshi, Shirish Subhash Karande & Sachin Preme Sukh Lodha. **A System and Method for Transcription of Spoken Words Using Multilingual Mismatched Crowd.** US Patent No. [10269353](#), 23 April 2019.
10. Sumesh R Manjunath, Manish Shukla, Sachin P Lodha, Rohit Saxena and Sutapa Mondal. **System and Method for Efficient Selective Backup Strategy in an Enterprise.** US Patent No. [10198322](#), 5 February 2019.
11. Sutapa Mondal, Sumesh R Manjunath, Rohit Saxena, Manish Shukla, Purushotam Gopaldas Radadia, Shirish Subhash Karande, and Sachin Lodha. **Systems and Methods for Sensitive Audio Zone Rearrangement.** EP Patent No. [3176779](#), 6 December 2018. US Patent No. [10599864](#), 24 March 2020
12. Vijayanand Banahatti and Sachin Lodha. **A System to Provide Enhanced Privacy for Accessing Contents of Web Based Applications.** India Patent No. [302423](#), 25 October 2018.
13. Mandar Kulkarni, Anand Sriraman, Rahul Kumar, Kanika Kalra, Shirish Karande, and Sachin Lodha. **Method and System for Unsupervised Word Image Clustering.** US Patent No. [10095957](#), 9 October 2018.
14. Manish Shukla, Kumar Vidhani, Joel Joseph, Vijayanand Banahatti and Sachin Lodha. **Analysis and Specification Creation for Web Documents.** US Patent No. [10055600](#), 21 August 2018.
15. Arijit Ukil, Joel Joseph, Vijayanand Banahatti and Sachin Lodha. **System and Method for Providing Sensitive Information Access Control.** US Patent No. [10019595](#), 10 July 2018. EP Patent No. [2946288](#), 5 August 2020.
16. Kumar Vidhani, Devangi Vyas, Mayur Jain, Vijayanand Banahatti and Sachin Lodha. **Masking of Different Content Types.** US Patent No. [9971903](#), 5 June 2018.
17. Kumar Mansukhlal Vidhani, Akhil Anand Dixit, Vijayanand Banahatti and Sachin P Lodha. **Data Privacy Management.** US Patent No. [9928381](#), 27 March 2018.
18. Shirish Karande, Sandhya Thaskani, Sachin P Lodha, Purushotam Radadia and Mandar Kulkarni. **System and Method for Image Inpainting.** US Patent No. [9886746](#), 6 February 2018.

19. Kumar Vidhani, Gangadhar Reddy, Arun Kumar Jindal, Manish Shukla, Vijayanand Banahatti and Sachin Lodha. **System and Method for Enablement of Data Masking for Web Documents**. US Patent No. [9767086](#), 19 September 2017. EP Patent No. [3173965](#), 24 Jan 2019.
20. Nikhil Patwardhan, Ashim Roy, Rupali Kulkarni, Sumit Johri, Amol Limaye, Sachin Lodha, Vijayanand Banahatti and Srinivasan Iyengar. **System and Method to Provide Management of Test Data at Various Lifecycle Stages**. US Patent No. [9356966](#), 31 May 2016.
21. Manish Shukla, Joel Joseph, Kumar Vidhani, Vijayanand Banahatti and Sachin Lodha. **Dynamic Data Masking**. US Patent No. [9171182](#), 27 October 2015. EP Patent No. [2728508](#), 14 February 2018. India Patent No. [320063](#), 9 September 2019.
22. Shirish Karande, M Girish Chandra and Sachin Lodha. **System and Method for Optimizing Luby Transform (LT) Codes to Facilitate Data Transmission over Communication Network**. US Patent No. [9116827](#), 25 August 2015.
23. Nikhil Patwardhan, Amol Limaye, Sumit Johri, Ashim Roy, Rupali Kulkarni and Sachin Lodha. **Database Sampling**. US Patent No. [9026548](#), 5 May 2015. India Patent No. [306540](#), 30 January 2019.
24. William Aiello, Sachin Lodha and Rafail Ostrovsky. **A Method for Efficiently Revoking Digital Identities**. US Patent No. [6397329](#), May 2002.

Publications:

Conference Proceedings

1. Shlomi Dolev, Vladimir Kolesnikov, Sachin Lodha and Gera Weiss. **Cyber Security Cryptography and Machine Learning - Fourth International Conference, CSCML 2020**, Beer-Sheva, Israel, July 2-3, 2020, Proceedings. Lecture Notes in Computer Science 12161, Springer 2020, 978-3-030-49784-2.
2. Shlomi Dolev, Danny Hendler, Sachin Lodha and Moti Yung. **Cyber Security Cryptography and Machine Learning - Third International Conference, CSCML 2019**, Beer-Sheva, Israel, June 27-28, 2019, Proceedings. Lecture Notes in Computer Science 11527, Springer 2019, ISBN 978-3-030-20950-6.
3. Itai Dinur, Shlomi Dolev and Sachin Lodha. **Cyber Security Cryptography and Machine Learning - Second International Conference, CSCML 2018**, Beer-Sheva, Israel, June 21-22, 2018, Proceedings. Lecture Notes in Computer Science 10879, Springer 2018, ISBN 978-3-319-94146-2.
4. Shlomi Dolev and Sachin Lodha. **Cyber Security Cryptography and Machine Learning - First International Conference, CSCML 2017**, Beer-Sheva, Israel, June 29-30, 2017, Proceedings. Lecture Notes in Computer Science 10332, Springer 2017, ISBN 978-3-319-60079-6.

Book chapters

1. Manish Shukla, Harshal Tupsamudre and Sachin Lodha. **Enterprise Security: Modern Challenges and Emerging Measures**. In Vinay Kulkarni, Sreedhar Reddy, Tony Clark and Balbir S. Barn (Eds.), Advanced

Digital Architectures for Model-Driven Adaptive Enterprises, pp. 158-187. Hershey, Pennsylvania, USA: IGI Global.

2. Sachin Lodha. **Is Privacy Dead? Reclaiming Data Privacy in the Digital World**. In Reimagining Research 2018, pp 49-56, 2019.
3. Sachin Lodha. **Data Masking**. In Research by Design: Innovation and TCS, pp 100-106, 2007.

Refereed Journals

1. Mangesh Gharote, Nitin Phuke, Rahul Patil and Sachin Lodha. **Multi-objective Stable Matching with Ties and Distributional Constraints**. Journal of Soft Computing, 23 (9):2995-3011, May 2019.
2. Mangesh Gharote, Rahul Patil and Sachin Lodha. **GRASP based Scatter Search for Stable Trainees to Software Projects Allocation in the Presence of Preference Ties and Costs**. Journal of Heuristics, 23(4):257-283, August 2017.
3. Mangesh Gharote, Rahul Patil and Sachin Lodha. **Allocation of Trainees to Software Projects: A Stable Matching Based Approach**. Computers & Industrial Engineering, 87:228-237, 2015.
4. John Augustine, Qi Han, Philip Loden, Sachin Lodha and Sasanka Roy. **Tight Analysis of Shortest Path Convergecast in Wireless Sensor Networks**. International Journal of Foundations of Computer Science, 24(1):31-50, 2013.
5. Mustaq Ahmed, Sandip Das, Sachin Lodha, Anna Lubiw, Anil Maheshwari and Sasanka Roy. **Approximation Algorithms for Shortest Descending Paths in Terrains**. Journal of Discrete Algorithms, 8(2):214-230, 2010.
6. Sarang Aravamuthan and Sachin Lodha. **The Average Transmission Overhead for Broadcast Encryption**. Journal of Mathematical Cryptology, 1(4):373-384, 2007.
7. Béla Csaba and Sachin Lodha. **A Randomized Online Algorithm for the k-Server Problem on a Line**. Random Structures and Algorithms, 29(1):82-104, 2006.
8. Navin Goyal, Sachin Lodha and Muthu Muthukrishnan. **The Graham-Knowlton Problem Revisited**. Theory of Computing Systems, 39(3):399-412, 2006.
9. Sarang Aravamuthan and Sachin Lodha. **Coloring Codes for Hats-on-a-line**. The Electronic Journal of Combinatorics, 13(1), 2006.
10. Ayman Khalfalah, Sachin Lodha and Endre Szemerédi. **Tight Bound for the Density of Sequence of Integers the Sum of No Two of which is a Perfect Square**. Discrete Mathematics, 256(1-2):243-255, 2002.

Refereed Conferences

1. Manish Shukla and Sachin Lodha. **rProfiler: Assessing Insider Influence on Enterprise Assets**. Accepted in ACM CCS 2020.
2. Sukanya Vaddepalli, Shree Nivas, Gokul CJ, Gangadhara Sirigireddy, Vijayanand Banahatti and Sachin Lodha. **PassO – New Circular Pattern Lock Scheme Evaluation**. Accepted in MobileHCI 2020.
3. Nitin Phuke, Saket Kumar Saurabh, Mangesh Gharote and Sachin Lodha. **PETA: Privacy Enabled Task Allocation**. Accepted in IEEE SCC 2020.

4. Arun Ramamurthy, Saket Kumar Saurabh, Santosh Palaskar, Mangesh Gharote and Sachin Lodha. **Selection of Cloud Service Providers in Multi-Cloud: A Comprehensive Methodology**. Accepted in IEEE SCC 2020.
5. Harshal Tupsamudre, Kumar Vidhani, Monika Sahu and Sachin Lodha. **Fixing the Fixes: Assessing the Solutions of SAST Tools for Securing Password Storage**. In Proceedings of the 1st Asian Workshop on Usable Security (AsiaUSEC) 2020, Sabah, Malaysia, pp. 192-206.
6. Gokul CJ, Gangadhara Sirigireddy, Sukanya Vaddepalli, Vijayanand Banahatti, Sachin Lodha and Sankalp Pandit. **Passworld: A Serious Game for Enterprise Password Awareness**. In the Proceedings of 16th Symposium on Usable Privacy and Security (SOUPS) 2020, Boston, USA, pp. 1-19.
7. Harshal Tupsamudre, Sukanya Vaddepalli, Vijayanand Banahatti and Sachin Lodha. **Force vs. Nudge: Comparing Users' Pattern Choices on SysPal and TinPal**. In Proceedings of the 26th ACM SIGSAC Conference on Computer and Communications Security (CCS) 2019, London, UK, pp. 2537-2539.
8. Manish Shukla, Kumar Vidhani, Gangadhara Sirigireddy, Vijayanand Banahatti and Sachin Lodha. **pFilter: Retrofitting Legacy Applications for Data Privacy**. In Proceedings of the 26th ACM SIGSAC Conference on Computer and Communications Security (CCS) 2019, London, UK, pp. 2573-2575
9. Harshal Tupsamudre, Ajeet Singh and Sachin Lodha. **Everything is in the Name - A URL based Approach for Phishing Detection**. In the Proceedings of the 3rd International Symposium on Cyber Security Cryptography and Machine Learning (CSCML) 2019, Beer-Sheva, Israel, pp. 231-248.
10. Rosni KV, Manish Shukla, Vijayanand Banahatti and Sachin Lodha. **Consent Recommender System: A Case Study on LinkedIn Settings**. In the Proceedings of the Privacy-Enhancing Artificial Intelligence and Language Technologies (PAL) 2019, Palo Alto, USA, pp. 53-60.
11. Harshal Tupsamudre, Rahul Wasnik, Shubhankar Biswas, Sankalp Pandit, Sukanya Vaddepalli, Aishwarya Shinde, Gokul CJ, Vijayanand Banahatti, and Sachin Lodha. **GAP: A Game for Improving Awareness about Passwords**. In Proceedings of the 4th Joint International Conference on Serious Games (JCSG) 2018, Darmstadt, Germany, pp. 66-78.
12. Harshal Tupsamudre, Sukanya Vaddepalli, Vijayanand Banahatti and Sachin Lodha. **TinPal: An Enhanced Interface for Pattern Locks**. Presented in the Workshop on Usable Security (USEC) and also as a poster in Network and Distributed System Security Symposium (NDSS) 2018, San Diego, USA.
13. Gokul CJ, Sankalp Pandit, Sukanya Vaddepalli, Harshal Tupsamudre, Vijayanand Banahatti and Sachin Lodha. **PHISHY – A Serious Game to Train Enterprise Users on Phishing Awareness**. In Proceedings of the Annual Symposium on Computer-Human Interaction in Play (CHI PLAY) 2018, Melbourne, Australia, pp. 169-181.
14. Harshal Tupsamudre, Akhil Dixit, Vijayanand Banahatti and Sachin Lodha. **Pass-Roll and Pass-Scroll: New Graphical User Interfaces for Improving Text Passwords**. In Proceedings of the 2nd IEEE European Symposium on Security and Privacy (EuroS&P) 2017, Paris, France.
15. Harshal Tupsamudre, Vijayanand Banahatti, Sachin Lodha and Ketan Vyas. **Pass-O: A Proposal to Improve the Security of Pattern Unlock Scheme**. In Proceedings of the ACM Asia Conference on Computer and Communications Security (AsiaCCS) 2017, Abu Dhabi, United Arab Emirates, pp. 400-407.

16. Nithin Phuke, Mangesh Gharote, Rahul Patil and Sachin Lodha. **Multi-Objective Stable Matching with Ties**. In Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) 2017, Singapore.
17. Sutapa Mondal, Manish Shukla and Sachin Lodha. **Privacy Aware Temporal Profiling of Emails in a Distributed Setup**. In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM) 2017, Singapore, pp. 1229-1238.
18. Mangesh Gharote, Nitin Phuke, Rahul Patil and Sachin Lodha. **Stable Matching with Multi-Objectives: A Goal Programming Approach**. Presented in International Conference on Optimization and Decision Science (ODS) 2017, Sorrento, Italy.
19. Harshal Tupsamudre, Vijayanand Banahatti and Sachin Lodha. **POSTER: Improved Markov Strength Meters for Passwords**. In Proceedings of the ACM Conference on Computer and Communications Security 2016, Vienna, Austria, pp.1775-1777.
20. Manish Shukla, Sutapa Mondal and Sachin Lodha. **POSTER: Locally Virtualized Environment for Mitigating Ransomware Threat**. In Proceedings of the ACM Conference on Computer and Communications Security 2016, Vienna, Austria, pp.1784-1786.
21. Harshal Tupsamudre, Akhil Dixit, Vijayanand Banahatti, Sachin Lodha and Manish Shukla. **Rotate to Protect**. Poster Presented at the 12th Symposium on Usable Security and Privacy (SOUPS) 2016, Denver, USA.
22. Purushotam Radadia, Rahul Kumar, Kanika Kalra, Shirish Karande and Sachin Lodha. **On Employing a Highly Mismatched Crowd for Speech Transcription**. In Proceedings of Interspeech 2016, San Francisco, USA, pp. 3017-3021.
23. Mandar Kulkarni, Shirish Karande and Sachin Lodha. **Unsupervised Word Clustering using Deep Features**. In Proceedings of the 12th IAPR Workshop on Document Analysis Systems (DAS) 2016, Santorini, Greece, pp. 263-268.
24. Yash Bhalgat, Mandar Kulkarni, Shirish Karande and Sachin Lodha. **Stamp Processing with Exemplar Features**. Poster presented at the 12th IAPR Workshop on Document Analysis Systems (DAS) 2016, Santorini, Greece.
25. Mangesh Gharote, Rahul Patil and Sachin Lodha. **Minimal Cost Stable Workforce Allocation in Presence of Preference Ties**. In Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) 2016, Bali, Indonesia, pp. 1146-1150.
26. Sandhya Thaskani, Shirish Karande and Sachin Lodha. **Multi-view Image inpainting with Sparse Representations**. In Proceedings of the IEEE International Conference on Image Processing (ICIP) 2015, Quebec City, Canada, pp. 1414-1418.
27. Manish Shukla, Sumesh Manjunath, Rohit Saxena, Sutapa Mondal and Sachin Lodha. **POSTER: WinOver Enterprise Dark Data**. In Proceedings of the ACM Conference on Computer and Communications Security 2015, Denver, USA, pp.1674-1676.
28. Purushotam Radadia, Shirish Karande and Sachin Lodha. **On Transcribing Russian with a Highly Mismatched Indian Crowd**. Presented in In Work in Progress track of the Human Computation and Crowdsourcing (HCOMP) 2015, San Diego, USA.

29. Rahul Kumar, Anand Sriraman, Kanika Kalra, Shrikant Joshi, Akhil Dixit, Vijayanand Banahatti, Shirish Karande and Sachin Lodha. **Platform for Crowd Editing of Indic Language Translations**. Presented in the 15th Machine Translation Summit Tech Showcase by AMTA 2015, Florida, USA.
30. Mangesh Gharote, Girish Palshikar and Sachin Lodha. **A Mathematical Approach for Campus Interview Panel Selection**. Presented at the 21st European Operations Management Association Conference (EurOMA) 2014, Palermo, Italy.
31. Mangesh Gharote, Rahul Patil and Sachin Lodha. **Workforce Allocation for IT services Using Stable Matching**. Presented at the 11th International Conference on Applied Mathematical Optimization and Modelling (APMOD) 2014, Warwick, UK.
32. Manish Shukla, Purushotam Radadia, Shirish Karande and Sachin Lodha. **On the Real-time Masking of the Sound of Credit Cards using Hot Patching**. In Proceedings of the ACM Conference on Computer and Communications Security (ACM-CCS) 2013, Munich, Germany, pp.1351-1354.
33. Srinivasan Iyengar, Shirish Karande and Sachin Lodha. **English to Hindi Translation Protocols for an Enterprise Crowd**. In Work in Progress track of the Human Computation and Crowdsourcing (HCOMP) 2013, Palm Springs, USA, pp. 34-35.
34. Dilys Thomas, Sachin Lodha and Mangesh Gharote. **Excel Solvers for the Travelling Salesman Problem**. In Proceedings of the 18th International Conference on Management of Data (COMAD) 2012, Pune, India, pp. 103-107.
35. Sachin Lodha, Nikhil Patwardhan, Ashim Roy, Sharada Sundaram and Dilys Thomas. **Data Privacy using Masketeer**. In Proceedings of the 9th International Colloquium on Theoretical Aspects of Computing (ICTAC) 2012, Bangalore, India, LNCS 7521, pp 151-158.
36. Arijit Ukil, Soma Bandyopadhyay, Joel Joseph, Vijayanand Banahatti and Sachin Lodha. **Negotiation Based Privacy Preservation Scheme in Internet of Things Platform**. In Proceedings of the 1st International Conference on Security of Internet of Things (SecurIT) 2012, Amritapuri, India, ACM Digital Library, pp 75-84.
37. Mangesh Gharote, Rahul Patil and Sachin Lodha. **Trainees Assignment Problem in Information Technology (IT) Service Organizations**. In Proceedings of the 4th International Conference on Applied Operations Research (ICAOR) 2012, Bangkok, Thailand, pp 46-53.
38. John Augustine, Qi Han, Philip Loden, Sachin Lodha and Sasanka Roy. **Tight Analysis of Shortest Path Convergecast in Wireless Sensor Networks**. In Proceedings of the 17th Computing: the Australasian Theory Symposium (CATS) 2011, Perth, Australia, pp 31-40.
39. Mangesh Gharote and Sachin Lodha. **A Novel Approach to Team Formation for Software Projects**. Presented in the International Conference on Operations Research "Mastering Complexity", Munich, Germany 2010.
40. Sangameshwar Patil, Sasanka Roy, John Augustine, Amanda Redlich, Sachin Lodha, Harrick Vin, Anand Deshpande, Mangesh Gharote and Ankit Meherotra. **Minimizing Testing Overheads in Database Migration Lifecycle**. In Proceedings of the 16th International Conference on Management of Data (COMAD) 2010, Nagpur, India, pp 191-201.
41. Mangesh Gharote, Anand Deshpande, Sachin Lodha, Nimisha Kantharia, Yogesh Wadadekar, Santaji Katore and Pramesh Rao. **Automated Telescope Scheduling**. In Proceedings of the Low Frequency Radio Universe (LFRU) 2008, Pune, India, Astronomical Society of the Pacific Conference Series, Volume 407, pp 420-423.

42. MV Panduranga Rao, Amrit Ahuja, Srinivasan Iyengar, Kavita Iyer, Ranu Khade, Sachin Lodha, Dinesh Mehta and Balasz Nagy. **A Minimum Variance Method for Problems in Radio Antenna Placement**. In Proceedings of the Low Frequency Radio Universe (LFRU) 2008, Pune, India, Astronomical Society of the Pacific Conference Series, Volume 407, pp 393-397.
43. Sachin Lodha and Dilys Thomas. **Probabilistic Anonymity**. In Proceedings of Privacy, Security, and Trust in KDD (PinkDD) 2007, San Francisco, USA, pp 56-79.
44. Sasanka Roy, Sachin Lodha, Sandip Das and Anil Maheshwari. **Approximate Shortest Descent Path on a Terrain**. In Proceedings of 19th Annual Canadian Conference on Computational Geometry (CCCG) 2007, Ottawa, Canada, pp 189-192.
45. Sarang Aravamuthan and Sachin Lodha. **An Optimal Subset Cover for Broadcast Encryption**. In Proceedings of 6th International Conference on Cryptology in India (INDOCRYPT) 2005, Bangalore, India, pp 221-231.
46. Murali Ganapathy and Sachin Lodha. **Search Locally to Arrange Cyclically**. In Proceedings of 2nd Brazilian Symposium on Graphs, Algorithms and Combinatorics (GRACO) 2005, Rio de Janeiro, Brazil, pp 187-193.
47. Navin Goyal, Sachin Lodha and Muthu Muthukrishnan. **The Graham-Knowlton Problem Revisited**. In Proceedings of 3rd International Symposium on Fun with Algorithms (FUN) 2004, Tuscany, Italy, pp 247-261.
48. Murali Ganapathy and Sachin Lodha. **On Minimum Circular Arrangement**. In Proceedings of 21st Annual Symposium on Theoretical Aspects of Computer Science (STACS) 2004, Montpellier, France, pp 394-405.
49. József Beck and Sachin Lodha. **Efficient Proper 2-coloring of Almost Disjoint Hypergraphs**. In Proceedings of 13th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA) 2002, San Francisco, USA, pp 598-605.
50. Stefan Langerman, Sachin Lodha and Rahul Shah. **Algorithms for Efficient Filtering in Content-Based Multicast**. In Proceedings of 9th Annual European Symposium on Algorithms (ESA) 2001, Aarhus, Denmark, pp 428-439.
51. William Aiello, Sachin Lodha and Rafail Ostrovsky. **Fast Digital Identity Revocation**. In Proceedings of 18th Annual International Cryptology Conference (CRYPTO) 1998, Santa Barbara, USA, pp 137-152.

Non-refereed Articles

1. Rajan A, Manish Shukla and Sachin Lodha. **A Note on Cryptographic Algorithms for Private Data Analysis in Contact Tracing Applications**. On arXiv at <https://arxiv.org/abs/2005.10634> (2020).
2. Manish Shukla, Rajan A, Sachin Lodha, Gautam Shroff and Ramesh Raskar. **Privacy Guidelines for Contact Tracing Applications**. On arXiv at <https://arxiv.org/abs/2004.13328> (2020).

Invited Articles

1. Sachin Lodha. **pTransform: Making Enterprise Privacy Safe**. Gartner Newsletter, 2015.
2. Sachin Lodha. **Data Privacy**. In the CSI Communications, pp. 11-14, May 2013.