

Teaching in IIIT-D – Since August 2008

- o Introduction to Programming (BTech First Year Core)--2009, 2010
- o Data Structure and Algorithms (BTech First Year Core)--2010
- o Design and Analysis of Algorithms (BTech Second Year Core)-- 2009
- o System Management (Coordinated for Mr. Navpreet Singh, IIT Kanpur)--2009
- o Database System Implementation (BTech, MTech and PhD)--2011
- o Privacy in Location Based Services--(BTech, MTech and PhD)--2011

Education

PhD, Computer Science Engineering
Indian Institute of Technology, Delhi, India

August 2003 – April
2009

- o **Thesis Title:** Auditing SQL Queries for Privacy Violation Detection
- o **Description:** Privacy considerations for information systems are increasingly becoming more important. This has led to systematic work for regulations, languages and tools for their enforcement. However, privacy violations still take place in spite of robust implementations. Therefore, the need of auditing is evident. Thesis presents the audit solutions for different types of privacy violation sophistication, where privacy violation sophistication is defined using following dimensions: i) number of queries, (ii) number of users, and (iii) inference. The solutions include a) proposal of an expressible and flexible audit query language to specify audit queries, b) proposal of a log design to prune out the non-suspicious queries early in the stage of auditing, and c) a novel concept of malafide intention used in real life practice.
- o **Relevant Courses:** Data mining, Advanced Algorithms, Architecture of Large Systems, Data Structure and Algorithms

Projects

- o **Title:** User Controlled Information Dissemination for Security and Privacy in Location-based Services
Role: Project Investigator
Duration: Nov 2011-2013
Location: IIIT- Delhi, New Delhi
- o **Title:** Equations Discovery by using Machine Learning Techniques
Role: Research Associate
Duration: 25th June to 15th August 2005.
Location: Melbourne University
Other Members: Dr. Murali Vishwanathan, Prof. S.K. Gupta
- o **Title:** Design and Development of Malafide Intention based Privacy Violation Detection System
Role: Research Associate
Duration: 2004 to 2008
Location: IIT Delhi
Experts: Prof. S.K. Gupta, Prof. Saroj Kaushik

Publications

Communicated

- o Privacy of Location Obfuscation – submitted to IEEE TMC

Journal

- o S.K. Gupta, Vikram Goyal, Anand Gupta and Indira Meshram, *PRINDA: Architecture and Design of Non-Disclosure Agreements in Privacy Policy Framework*, in *Data & Knowledge Engineering*, December 2007, Volume 63, Issue 3, December 2007, Pages 684-698.
- o Anand Gupta, Shyam K. Gupta, Isha Manu Ganesh, Pankhuri Gupta, Vikram Goyal, Sangeeta Sabharwal: *Opacity Characteristic of a Context HoneyPot System*. *Information Security Journal: A Global Perspective* 19(3): 142-152 (2010)

Conferences

- o Anuj S. Saxena, Mayank Pundir, Vikram Goyal, Debajyoti Bera: *Preserving Location Privacy for Continuous Queries on Known Route*. *ICISS 2011*: 265-279
- o Nilesh Padhariya, Anirban Mondal, Vikram Goyal, Roshan Shankar, Sanjay Kumar Madria: *EcoTop: An Economic Model for Dynamic Processing of Top-k Queries in Mobile-P2P Networks*. *DASFAA (2)* 2011: 251-265
- o Vikram Goyal, Ashish Sureka, Sangeeta Lal: *AccKW: An Efficient Access Control Scheme for Keyword-Based Search over RDBMS*. *DNIS 2010*: 107-121
- o Ashish Sureka, Vikram Goyal, Denzil Correa, Anirban Mondal: *Polarity Classification of Subjective Words Using Common-Sense Knowledge-Base*. *RSFDGrC 2009*: 486-493
- o Vikram Goyal, S.K. Gupta, Manish Singh, Anand Gupta: *Auditing Inference based Disclosures in Dynamic Databases*, in *5th VLDB Workshop on Secure Data Management-SDM'08*, 67-81, LNCS Volume 5159, Auckland, New Zealand, August 2008.
- o Vikram Goyal, S.K. Gupta, Anand Gupta: *A Unified Audit Expression Model for Auditing SQL Queries*, in *22nd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DB-Sec 08)*, 33-47, LNCS Volume 5094, London, UK 2008.
- o S.K. Gupta, Anand Gupta, Renu Damor, Vikram Goyal, Sangeeta Sabharwal: *"Context HoneyPot: A Framework for Anticipatory Privacy Violation"*, *ICETET*, pp 813-818, First IEEE International Conference on Emerging Trends in Engineering and Technology, 2008.
- o S. K. Gupta, Vikram Goyal, Anand Gupta: *Precomputation of Privacy Policy Parameters for Auditing SQL Queries*, in *Second ACM International Conference on Ubiquitous Information Management and Communication (ICUIMC 08)*, 87-93, SKKU, Suwon, South Korea, Jan 31 - Feb 1 2008, Supported by ACM SIGMOD and ACM SIGKDD.
- o Vikram Goyal, S. K. Gupta, Anand Gupta: *Malafide Intension and its Mapping to Privacy Policy Purposes for Masquerading*, in *Proceedings of the 10th International Database Engineering & Application Symposium (IDEAS'06)*, 311-312, December 2006
- o S.K. Gupta, Vikram Goyal, Anand Gupta: *Malafide Intension based Privacy Violation Detection*, in the *International Conference on Information Systems Security (ICISS 2006)*, 365-368, LNCS 4332, Kolkata, India, Dec. 2006.
- o S.K. Gupta, Vikram Goyal, Bholi Patra, Sankalp Dubey, Anand Gupta: *Design and Development of Malafide Intension based Privacy Violation Detection System*, in the *International Conference on Information Systems Security (ICISS 2006)*, 369-372, LNCS 4332, Kolkata, India, Dec. 2006.
- o Vikram Goyal, S. K. Gupta, Shobhit Saxena, Sanjay Chawla, Anand Gupta: *Query Rewriting for Detection of Violation through Inferencing*, in *Fourth International Conference on Privacy, Security and Trust 2006 (PST 06)*, 233-244 Markham, Ontario, Canada. Supported by ACM Special Interest Group on Security, Audit, and Control (SIGSAC).

- o Vikram Goyal, S.K.Gupta, Indira Meshram, Anand Gupta: *PRINDA: Design and Implementation of Non-Disclosure Agreement in Privacy Policy*, International Conference of Data Engineering Workshop on Privacy Data Management (ICDE, PDM), 90-101, Atlanta, GA, USA April 3-7, 2006.
- o S.K.Gupta, Anand Gupta, Renu Damor, Vikram Goyal, Sangeeta Sabharwal: *Preserving Obliviousness Characteristics of HoneyPot Database*, in 13th International Conference on Management of Data (sponsored by ACM Sigmod), December 14-16 , 2006, New Delhi.
- o S.K.Gupta, Anand Gupta, Renu Damor, Vikram Goyal, Sangeeta Sabharwal: *Preserving Obliviousness Characteristics of HoneyPot Database*, in 13th International Conference on Management of Data (sponsored by ACM Sigmod), December 14-16 , 2006, New Delhi.
- o S.K. Gupta, Sankalp Dubey, Vikram Goyal, Anand Gupta: *A system to test malafide intension based privacy violation detection system*, in IEEE International Conference on Digital Information Management (ICDIM), 47-54, Bangalore India, December 06-08, 2006.

Professional Experience

- o **Designation:** Teaching Assistant **August 2003 – 2008**
Organization: Indian Institute of Technology, Delhi, India
Courses Assisted: Database Implementation, Introduction to Computers, Data Structure
- o **Designation:** Lecturer **Aug 2001 - July 2003**
Organization: Amity School of Engineering and Technology, Delhi
Courses Taught: Theory of Automata, Data Structure and Algorithms, C/C++, Operating System

Other Activities

- o Volunteer Student Chair of Conferences: IDEAS 06, COMAD 06, ICISS 08, DASFAA 08
- o PC Member: DTA 2011, ICCCT 2011, MDM Workshop 2011, IC3, WWW2011 Warm up reviews, ICARE India 2009, COMAD Demo 2009, ICARE India 2010
- o Vice-Chair of ACM Student Chapter IIT Delhi (2006-2007)
- o Member, ACM Student Chapter IIT Delhi (2007- 2008)

References

- o Prof. S.K. Gupta, Dept. of Computer Science and Engineering, IIT Delhi, New Delhi, (skg@cse.iitd.ernet.in)
- o Dr. Mukesh Mohania, Senior Manager, Information and Interaction, IBM – IRL, New Delhi, (mkmukesh@in.ibm.com)