Dr. Shamik Sural

Professor, Department of Computer Science & Engineering, Indian Institute of Technology Kharagpur, India

CONTACT DETAILS

Dept. of Computer Science & Engineering
Indian Institute of Technology Kharagpur, West Bengal 721302 INDIA
Tel: +91 3222 282330   Email: shamik@cse.iitkgp.ac.in / shamik.sural@gmail.com
Home Page: http://www.facweb.iitkgp.ac.in/~shamik/

AREAS OF SPECIALIZATION

Data and Application Security, Data Science and Multimedia Systems

EDUCATION

B.E.	Jadavpur University, Calcutta, India	1990	Electronics & Tele-Comm. Engg.
M.E.	Indian Inst. of Science, Bangalore, India	1992	Electrical Communication Engg.
Ph.D.	Jadavpur University, Calcutta, India	2000	Engineering (Dept. – CSE) (Advisor: Dr. Pradip K. Das)
Post-Doctoral Research	Michigan State University, USA	Nov 2000- Jul 2002	Computer Science and Engg. (Advisor: Dr. Sakti Pramanik)

EMPLOYMENT

Employer	Designation	Duration	Nature of Job
Indian Institute of Tech. Kharagpur	Professor (HAG*)	Aug 19 till date	Teaching and Research
Indian Institute of Tech. Kharagpur	Professor	Aug 11 – Aug 19	Teaching and Research
Indian Institute of Tech. Kharagpur	Associate Professor	April 07 – Aug 11	Teaching and Research
Indian Institute of Tech. Kharagpur	Assistant Professor	Aug 02 – Apr 07	Teaching and Research
Data-Core Systems, Philadelphia, USA	Consultant	June 00 – July 02	Data Modeling, System Analysis and Design
NIIT Limited, Calcutta, India	Group Consultant	June 98 – May 00	Software Project Management, Software Quality Management
CMC Limited, Calcutta, India	Specialist (System Integration)	April 93 – May 98	Software Development, System Analysis and Design
Texas Instruments, Bangalore, India	IC Design Engineer	Feb 92 – Mar 93	VLSI Memory Design

(Doctoral and Post-doctoral research was carried out along with industry job during the corresponding period)
* Higher Administrative Grade: A selected number of full professors are moved to this grade based on their excellence in research, teaching and funded projects as well as contribution to institute administrative activities.

AWARDS/HONORS

- **ACM Distinguished Speaker**, 2021-2024
- **Fulbright Fellowship** for teaching and research at Rutgers University, USA, 2019
- "Policy Reconciliation and Migration in Attribute Based Access Control" authored by Gunjan Batra, Vijayalakshmi Atluri, Jaideep Vaidya and Shamik Sural received the "Best Practice Paper Award" at the International Conference on Information Systems Security, 2019
- Humboldt Fellowship for Renewed Research stay by Alexander von Humboldt Foundation, Germany, 2018
- "Friends are Forever? Evolution of Active Friendship Clusters in Online Social Networks" authored by Haritabh Gupta, Shamik Sural, Niloy Ganguly and Jaideep Vaidya received Honorable Mention at the COMSNETS 2017 - Social Networking Workshop, Bangalore, India, 2017

- "Deciphering Text from Touchscreen Key Taps" authored by Haritabh Gupta, Shamik Sural, Vijayalakshmi Atluri and Jaideep Vaidya received the Best Student Paper award at the 30th IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSEC), Trento, Italy, 2016
- "Toward Mining of Temporal Roles", authored by Barsha Mitra, Shamik Sural, Vijayalakshmi Atluri and Jaideep Vaidya received the Best Student Paper Runner Up award at the 27th IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSEC), Newark, USA, 2013
- **Humboldt Fellowship for Experienced Researchers** by Alexander von Humboldt Foundation, Germany, 2009-2010, 2011
- "Credit Card Fraud Detection using Hidden Markov Model" authored by Abhinav Srivastava, Amlan Kundu, Shamik Sural and A.K.Majumdar selected as a featured article from the Jan-March issue of the IEEE Transactions on Dependable and Secure Computing, 2008
- Served as Chairman, IEEE Kharagpur Section, 2006
- Research grant under **Fast Track Proposal for Young Scientists** by the Department of Science and Technology, Govt. of India, 2004
- Special recognition awards by CMC Limited for publication of papers, 1995-1996
- First Class with Distinction in M.E. at IISc, Bangalore, 1992
- **University Gold Medal** for securing the First Class First position in B.E. (Electronics & Tele-Communication Engg.) from Jadavpur University, 1990
- Performance based scholarships by Jadavpur University during under-graduate study, 1986-1990
- Certificate of Honor awarded by Jagadish Bose National Science Talent Search, 1986

CURRENT RESEARCH INTERESTS

1. **Data and Application Security**: Access control models and their security analysis, Access control as a Service and Blockchain
2. **Data Science and Multimedia Systems**: Development of algorithmic techniques for processing different forms of data like image and video, online social networks and molecular structures.

COURSES TAUGHT

- Undergraduate Courses
  - Computer Organization and Architecture: Fall 2022-23
  - Database Management Systems: Spring 2021-22, 2020-21, 2019-20, 2018-19, 2017-18
  - Software Engineering: Spring 2002-03
  - Programming and Data Structures: Fall 2021-22, 2017-18
  - Image Processing: Fall 2016-17, 2005-06
- Graduate Courses
  - Theory and Applications of Blockchain: Fall 2022-23, 2021-22
  - Advanced Database Systems: Fall 2021-22, 2020-21, 2010-11, 2008-09, 2007-08
  - Data Privacy: Fall 2019 (Team-teaching at Rutgers University, USA)
  - Information and System Security: Spring 2016-17, 2015-16, 2014-15, 2013-14, 2012-13, 2011-12, 2010-11, 2006-07, 2005-06, 2004-05
  - Data Warehousing and Data Mining: Fall 2012-13, 2011-12, 2006-07, 2003-04
  - Enabling Technologies for Data Analytics: Spring 2015-16
  - Performance Modeling of Computer Networks: Fall 2018-19
  - Communication Systems and Networking: Fall 2015-16, 2014-15, 2013-14
  - Internet and Web-based Technologies: Spring 2013-14
  - Cloud Computing: Spring 2012-13
  - Electronic Commerce Technology: Spring 2010-11
  - Soft Computing Applications: Spring 2008-09, 2007-08, 2006-07
  - Applied Computer Vision: Fall 2008-09
  - Foundations of Computing Systems: Fall 2006-07, 2005-06
  - Information System Design: Spring 2003-04, 2002-03

THESIS SUPERVISION

Number of Ph.D. Thesis Supervised	19
Number of Ph.D. Thesis under Supervision	2
Number of Masters Thesis Supervised	79
Number of Masters Thesis under Supervision	4

PHD DISSERTATION COMMITTEE MEMBER

At IIT Kharagpur	>70 (18 as Chair)
At Rutgers University, USA	5

FUNDED RESEARCH PROJECTS
(Value in US$ is approximate equivalent)

- *Customizing Compatibility and Introducing Diversity during Complete Outfit Generation*
  Sponsored by: Flipkart, India
  Duration: Unrestricted (Jan 2021 –), Value: INR 1,000,000 (US$ 13.88K) Role: Co Investigator
- *Attribute-based Access Control for Emergency Healthcare Management*
  Sponsored by: CISCO University Research Program Fund, USA
  Duration: 1 Year (Oct 2020 –), Value: INR 3,073,324 (US$ 42.00K) Role: Principal Investigator
- *Unrestricted Grant by Flipkart*
  Sponsored by: Flipkart, India
  Duration: Unrestricted (Jul 2019 –), Value: INR 200,000 (US$ 2.78K) Role: Principal Investigator
- *Implementation of ERP System in TEQIP Institutions*
  Sponsored by: National Project Implementation Unit, Govt. of India
  Duration: 1.5 Years (May 2019 – September 2020), Value: INR 236,026,971 (US$ 3.28M), Role: Joint Investigator
- *Where the Mind is Without Fear - Developing Enablers for Safe Communication in Online Social Network* (Collaborative Project with Purdue University, USA)
  Sponsored by: SPARC (Scheme for Promotion of Academic and Research Collaboration), Govt. of India
  Duration: 3 Years (March 2019 – March 2023), Value: INR 4,936,958 (US$ 68.57K), Role: Principal Investigator
- *Scheme for Promotion of Academic and Research Collaboration*
  Sponsored by: MHRD, Govt. of India
  Duration: 4.5 Years (Sep 2018 – Mar 2023), Value: INR 2,510,921,000 (US$ 34.87M), Role: Co-Investigator
- *Understanding and Predicting Opinion Dynamics in Collective Environment using Deep Network Representation*
  Sponsored by: CISCO University Research Program Fund
  Duration: 5 Years (Dec 2017 – Dec 2022), Value: US$ 70.00K, Role: Co-Investigator
- *Development of a Remote Healthcare Delivery System: Early Diagnosis, Therapy, Follow-Up and Preventive Care for Non-Communicable Diseases (Cardio-Pulmonary)*
  Sponsored by: Ministry of Human Resource Development, Govt. of India
  Duration: 3 Years (Feb 2017 – Feb 2020), Value: INR 24,785,362 (US$ 0.34M), Role: Co-Investigator
- *Information Access from Document Images of Indian Languages*
  Sponsored by: Ministry of Human Resource Development, Govt. of India
  Duration: 3 Years (Feb 2017 – Feb 2020), Value: INR 40,000,000 (US$ 0.56M), Role: Co-Investigator
- *Development of Algorithms for Identifying Individuals using Gait in the Presence of Occlusion*
  Sponsored by: Council of Scientific and Industrial Research, Govt. of India

Duration: 3 Years (May 2011 – May 2015), Value: INR 1,289,400 (US$ 17.90K), Role: Principal Investigator

- *Efficient Index-supported Multimedia Search on the Internet* (Collaborative Project with Michigan State University, USA)
Sponsored by the Dept. of Science & Technology, Govt. of India
Duration: 3 Years (March 2007 – March 2010), Value: INR 638,250 (US$ 8.86K), Role: Principal Investigator

- *Modeling and Management of Dynamic Multimedia Objects*
Sponsored by the Dept. of Science and Technology, Govt. of India
Duration: 3.5 Years (Sep 2004 – Feb 2008), Value: INR 1,800,000 (US$ 25.00K), Role: Co-Investigator

- *Development of Spatio-temporal Access Control Models*
Sponsored by the Dept. of Science & Technology, Govt. of India
Duration: 3 Years (January 2008 – July 2011), Value: INR 1,618,080 (US$ 22.47K), Role: Principal Investigator

- *Properties of High Dimensional Euclidean Space and their Applications in Approximate Nearest Neighbor Search on Multimedia Databases* (Fast Track Proposal for Young Scientists)
Sponsored by the Dept. of Science and Technology, Govt. of India
Duration: 3 Years (Mar 2004 - Mar 2007), Value: INR 330,000 (US$ 4.58K) Role: Principal Investigator

- *Content-Based Information Retrieval from Multimedia Databases*
Sponsored by ISIRD, IIT Kharagpur
Duration: 3 Years (Mar 2003 – Mar 2006), Value: INR 288,000 (US$ 4.00K), Role: Principal Investigator

- *Survivable Information System Architecture with Intrusion tolerance, Containment and Recovery in Distributed Environment*
Sponsored by the Dept. of Information Technology, Govt. of India
Duration: 3.5 Years (Jan 2005 – Jun 2008), Value: INR 5,500,000 (US$ 76.39K), Role: Principal Investigator

- *Placement and Routing of Test Structures*
Sponsored by National Semiconductor Corporation, Santa Clara, USA
Duration: 2 Years (June 2007 –), Value: US$ 0.10M, Role: Principal Consultant

- *Development of Parameterized Templates and R-extraction Tools*
Sponsored by National Semiconductor Corporation, Santa Clara, USA
Duration: 4 Years (June 2003 – May 2007), Value: US$ 0.34M, Role: Co-Consultant

INDUSTRY PROJECTS

Land Ownership Tracking System for DNR, State of Michigan, USA　　　　　*July '00 – July '02*

Project Description	A Land ownership tracking system is being developed for the Department of Natural Resources, State of Michigan, USA. The project uses Three-tier component-based client server architecture with Powerbuilder as front-end, Sybase Jaguar transaction server as the middle-tier and DB2 as the database.
Personal Role and Responsibility	Worked as a Consultant responsible for requirement analysis, relational database design, component-based system modeling and configuration management. I took a leading role in logical and physical data modeling including indexing strategy, normalization, as well as in developing the class diagrams and the interaction diagrams. The project has been cited as one of the most successful projects using the state-of-the-art iterative development methodology in software engineering by Rational Software. We used the Rational Unified Process and Unified Modeling

Language (Rational Rose) in this project.

Point of Sales System for Apollo Tyres, India   *June '98 – May '00*

Project Description	The software was developed for Apollo Tyres to handle their product distribution operation throughout India. It used object-oriented event driven programming and the replication technology of Sybase to transfer data across different locations. This project used Client Server Architecture with SYBASE Adaptive Server Enterprise 11.5 in the back end, Powerbuilder as the front end and Powerdesigner as the CASE tool. MS Project was used as the project management tool.
Personal Role and Responsibility	Worked as the Project Software Manager responsible for setting up and maintaining the software engineering and methodology standards in the project using an SEI CMM Level 5 and ISO 9001 compliant quality management process. Also, worked with the internal and external auditors to evaluate conformance to quality standards in the project.

General Insurance Software, India   Mar '97– May '98

Project Description	A software package (codenamed Genisys) for the general insurance industry was developed and implemented at a number of locations throughout India. S-Designer CASE tool was used for data modeling in this project. The software was developed on Oracle.
Personal Role and Responsibility	Worked as a System Analyst in the project responsible for requirement analysis and relational database design of the software using data flow diagram and entity relationship diagram. The software is currently being installed across hundreds of locations throughout India.

Strategic Study for Industrial Development Corporation of Orissa, India   Oct '96 – Feb '97

Project Description	A strategic study was carried out for the Industrial Development Corporation at their corporate office as well as in five production units in the state of Orissa. The different areas covered in the study included sales & marketing, materials management, finance & accounts, equipment maintenance, costing, project monitoring, MIS and network volume estimation.
Personal Role and Responsibility	Worked as the Project Team Leader responsible for detailed study and requirements analysis. The result was a set of recommendations after doing software cost estimation. Proprietary Software Estimation tool and MS Office was used in the project.

Strategic Information System for the Uniworth Group, India   Jul '94 – Sep '96

Project Description	The project aimed at providing Uniworth group with a strategic information system covering all the group companies, which would streamline a number of activities and improve customer service. Special emphasis was laid on extensive analysis of captured data to facilitate future planning of operations. The project used Client Server architecture with SYBASE 10 on SCO-UNIX in the back end. Object-oriented event driven programming was done using Powerbuilder 4.0 as the front end and Turbo Analyst as the CASE tool.
Personal Role	Worked as a System Analyst doing system study, requirement analysis and relational

and Responsibility	database design of all the modules in the system as well as coding of four of them using the structured system analysis and design methodology. Extensively used data flow diagram, event list, entity relationship diagram, normalization procedures and index design techniques. Involvement in the project had been from the pre-proposal stage till the implementation phase going through the full life cycle of the project.

Retail Management System for BATA India   Nov '93 - Dec '93

Project Description	A Point of Sales system was developed for BATA retail shops all over India. The retail shops were connected to the nearest BATA district head quarters which in turn were hooked to the respective regional offices. The overall stock, despatch and marketing activities were to be monitored by the BATA head office at Calcutta. The system was developed on Foxpro 2.5
Personal Role and Responsibility	Worked as a Programmer. Designed and developed a database rollback and roll forward recovery method on DOS FOXPRO 2.5 to be used in the event of a system crash / data corruption.

Depot Management System for NBSTC   Apr '93-Oct '93 and Jan'94 - Jun '94

Project Description	A bus depot management system keeps track of the earnings and expenses in a typical state transport corporation bus depot. The sub-systems of the bus depot management system for the North Bengal State Transport Corporation were advance reservation and cancellation of seats, cash transactions, traffic operations and oil accounting. INGRES 6.4 RDBMS on SCO Unix was used as the database and Yourdon Toolkit as the CASE tool.
Personal Role and Responsibility	Worked as a Programmer/Analyst. Was involved in the study, analysis and design of all the sub-systems using structured system analysis and design methodology. Developed the reservation and cancellation system as well as the oil accounting system. Involvement in the project had been from the system study stage till the implementation phase.

Design of a 4 MB DRAM using 0.5μ Technology   Feb '92 - Mar '93

Project Description	A 4 MB wide word dynamic RAM (codenamed SRISHTI) was designed at the VLSI design centre of Texas Instruments in Bangalore. The chip was later fabricated at the fabrication unit of Texas Instruments Inc. in Avezzano, Italy. SRISHTI was one of the first of its kind to be developed in India using sub-micron technology. Extensive simulation using SPICE simulator and other Mentor Graphics CAD tools was followed by layout drawing and pattern generation. We used HP-Apollo Workstations on a 120-node token ring and VLSI CAD tools of Mentor Graphics and Texas Instruments.
Personal Role and Responsibility	Worked as an IC Design Engineer. Was involved in the design, logic simulation, layout drawing and post layout simulation of the Design for Testability (DFT) functionality of the chip.

INTERNATIONAL COLLABORATORS
- Jaideep Vaidya, MSIS Department, Rutgers University, USA
- Vijay Atluri, MSIS Department, Rutgers University, USA
- Peng Liu, College of Information Sciences and Technology, Pennsylvania State University, USA
- Sakti Pramanik, Department of Computer Science and Engineering, Michigan State University, USA

- Balaji Palanisamy, School of Computing and Information, University of Pittsburgh, USA
- Saurabh Bagchi, Department of Electrical and Computer Engineering, Purdue University, USA
- Gerhard Rigoll, Chair of Human-Machine Communication, Technical University of Munich, Germany.
- Günther Pernul, Chair of Information Systems, University of Regensburg, Germany

INSTITUTE SERVICE (SELECTED LIST)
- Head, Computer and Informatics Center
- Vice-Chairman – Enterprise Resource Planning
- Chairman, Computer Purchase and Network Maintenance Committee
- Member, Faculty Recruitment Committee
- Core Committee Member, Center for Computational and Data Sciences
- Member, Exam Malpractice Committee
- Graduate Program (MS and Ph.D.) Coordinator

EDITORIAL BOARD MEMBERSHIP
- IEEE Transactions on Dependable and Secure Computing (2018-)
- IEEE Transactions on Services Computing (2017-)

CONFERENCE PROGRAM COMMITTEE MEMBER (2018-23)
(Updated Complete List available at: http://www.facweb.iitkgp.ac.in/~shamik/pc_ec.html)

- The Web Conference, Austin, USA, 2023
- IEEE International Conference on Distributed Computing Systems, Hong Kong, 2023
- International Conference on the Applications of Evolutionary Computation, Brno, Czech Republic, 2023
- ACM Conference on Data and Application Security and Privacy, Charlotte, USA, 2023
- AAAI Conference on Artificial Intelligence (AAAI-23), Washington DC, USA, 2023
- International Conference on Network and System Security (NSS), Fiji, 2022
- ACM Workshop on Privacy in the Electronic Society (WPES) - Co-located with ACM CCS, Los Angeles, USA, 2022
- IEEE Symposium Series on Computational Intelligence (SSCI), Singapore, 2022
- IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy (DBSEC), Chicago, USA 2022 (PC Co-Chair)
- European Symposium on Research in Computer Security (ESORICS), Copenhagen, Denmark, 2022
- IFIP International Information Security and Privacy Conference, Copenhagen, Denmark, 2022
- ACM Conference on Data and Application Security and Privacy, Baltimore, USA, 2022
- International Conference on the Applications of Evolutionary Computation, Online 2022
- IEEE Conference on Trust Privacy and Security (Vision Track), Online 2021
- IEEE Symposium on Computational Intelligence in Cyber Security, Orlando, USA, 2021
- ACM Conference on Data and Application Security and Privacy, Online, 2021
- IFIP International Information Security and Privacy Conference, Online, 2021
- ACM International Conference on Intelligent User Interfaces, Online, 2021
- International Conference on Information Systems Security, Jammu, India, 2020 (PC Chair)
- International Conference on Network and System Security, Online, 2020
- Australasian Conference on Information Security and Privacy, Online, 2020
- International Conference on Image Analysis and Recognition, Montreal, Canada, 2020
- IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy (DBSEC), Regensburg, Germany, Online, 2020
- IFIP International Conference on ICT Systems Security and Privacy Protection, online, 2020
- IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications, Los Angeles, USA, 2019
- IEEE International Conference on Collaboration and Internet Computing, Los Angeles, USA, 2019
- International Conference on Image Analysis and Recognition, Waterloo, Canada, 2019
- ACM International Conference on Intelligent User Interfaces, Los Angeles, USA, 2019
- International Conference on Network and System Security, Sapporo, Japan, 2019

- IEEE Symposium Series on Computational Intelligence, Bangalore, India, 2018 (Track Chair – CICS)
- International Conference on Information Reuse and Integration for Data Science, Salt Lake City, USA, 2018
- IEEE International Conference on Collaboration and Internet Computing, Philadelphia, USA, 2018
- ACM Symposium on Access Control Models and Technologies, Indianapolis, USA, 2018
- International Conference on Network and System Security, Hong Kong, 2018
- IFIP International Conference on Information Security and Privacy Protection, Poznan, Poland, 2018
- International Conference on Image Analysis and Recognition, Póvoa de Varzim, Portugal, 2018
- ACM Workshop on Genetic and Evolutionary Computation in Defense, Security and Risk Management, Kyoto, Japan, 2018

PATENT

- **"Surveillance using Partial Gait Sequences"**, Pratik Chattopadhyay, Shamik Sural and Jayanta Mukhopadhyay, Patent No. IN201400615I2, Filed 2014-06-05 Published 2016-08-26

SUMMARY OF PUBLICATIONS

In Journals (including articles in press)	91
As Book Chapters	10
In Conference Proceedings	154

LIST OF PUBLICATIONS (2018-2022)

(Updated Complete List available at: http://www.facweb.iitkgp.ac.in/~shamik/publications_year.html)

1. "Adversarially Robust Deepfake Video Detection", Aditya Devasthale and Shamik Sural, IEEE Symposium on Computational Intelligence in Cyber Security, Singapore, 2022 (to appear)
2. "Enabling Attribute-based Access Control in NoSQL Databases", Eeshan Gupta, Shamik Sural, Jaideep Vaidya and Vijay Atluri, IEEE Transactions on Emerging Topics in Computing, 2022 (to appear)
3. "Identifying Channel Related Vulnerabilities in Zephyr Firmware", Devansh Rajgarhia, Peng Liu and Shamik Sural, IEEE International Conference on Internet of Things (IEEE iThings), 2022 (to appear)
4. "Decentralized Authorization Using Hyperledger Fabric", Muthukur Venkata Akhil Vasishta, Balaji Palanisamy and Shamik Sural, IEEE International Conference on Blockchain (IEEE BLOCKCHAIN), 2022 (to appear)
5. "Data Leakage Free ABAC Policy Construction in Multi-Cloud Collaboration", John C. John, Arobinda Gupta and Shamik Sural, IEEE International Conference on Cloud Computing (IEEE CLOUD), Barcelona, Spain, pp. 315-320, 2022
6. "Towards Supporting Attribute-Based Access Control in Hyperledger Fabric Blockchain", Amshumaan Varma Pericherla, Proteet Paul, Shamik Sural, Jaideep Vaidya and Vijay Atluri, 37th IFIP International Conference on ICT Systems Security and Privacy Protection – IFIP SEC 2022, Copenhagen, Denmark, pp. 360-276, 2022
7. "ASQL - Attribute Based Access Control Extension for SQL", Proteet Paul, Tushar Gupta and Shamik Sural, ACM Symposium on Access Control Models and Technolgies (Poster Paper), Online, pp. 259-261, 2022
8. "Enabling Attribute-Based Access Control in Linux Kernel", H.O Sai Varshith, Shamik Sural, Jaideep Vaidya and Vijay Atluri, ACM ASIA Conference on Computer and Communications Security (Poster Paper), Nagasaki, Japan, pp. 1237-1239, 2022
9. "Contemporaneous Update and Enforcement of ABAC Policies", Samir Talegaon, Gunjan Batra, Vijay Atluri, Shamik Sural and Jaideep Vaidya, ACM Symposium on Access Control Models and Technolgies, Online, pp. 31-42, 2022
10. "Securing Smart Home IoT Systems with Attribute-Based Access Control", Gaurav Goyal, Peng Liu and Shamik Sural, ACM Workshop on Secure and Trustworthy Cyber-Physical Systems, Baltimore-Washington DC Area, USA, pp. 37-46, 2022
11. "BELDaaS: Blockchain Enabled Lucky Draw as a Service", Sagnik Roy and Shamik Sural, IEEE International Conference on Services Computing (IEEE SCC), Barcelona, Spain, pp. 158-163, 2022
12. "Credit-based Peer-to-Peer Ride Sharing using Smart Contracts", Somay Chopra, Balaji Palanisamy and Shamik Sural, IEEE International Conference on Blockchain and Cryptocurrency (Poster Paper), Shanghai, China, 2022 (to appear)

13. "Mitigating Frontrunning Attacks in Ethereum", Maddipati Varun, Balaji Palanisamy and Shamik Sural, 4th ACM International Symposium on Blockchain and Secure Critical Infrastructure, Nagasaki, Japan, pp. 115-124, 2022

14. "A Graph Theoretic Approach for Multi-Objective Budget Constrained Capsule Wardrobe Recommendation", Subham Patil, Debopriyo Banerjee and Shamik Sural, ACM Trans. Inf. Syst. 40(1): 1:1-1:33 (2022)

15. "Towards Efficient Evaluation of ABAC Policies using High-Dimensional Indexing Techniques", Proteet Paul and Shamik Sural, IEEE Conference on Trust, Privacy and Security (Vision Track), Online, pp. 243-251, 2021

16. "A Role-Based Administrative Model for Administration of Heterogeneous Access Control Policies and its Security Analysis", Mahendra Pratap Singh, Shamik Sural, Vijay Atluri and Jaideep Vaidya, Information Systems Frontiers, 2021 (to appear)

17. "Incremental Maintenance of ABAC Policies", Gunjan Batra, Vijay Atluri, Jaideep Vaidya and Shamik Sural, ACM Conference on Data and Application Security and Privacy, pp. 185-196, 2021

18. "Attribute-Based Access Control for NoSQL Databases", Eeshan Gupta, Shamik Sural, Jaideep Vaidya and Vijay Atluri, ACM Conference on Data and Application Security and Privacy (Poster), pp. 317-319, 2021

19. "Enabling Workforce Optimization in Constrained Attribute Based Access Control Systems", Arindam Roy, A. K. Majumdar, Shamik Sural, Jaideep Vaidya and Vijay Atluri, IEEE Transactions on Emerging Topics in Computing, 9(4), pp. 1901-1913, 2021

20. "BEAAS: Blockchain Enabled Attribute-Based Access Control as a Service", Ritik Kumar, Balaji Palanisamy and Shamik Sural, IEEE International Conference on Blockchain and Cryptocurrency (Poster), 2021 (to appear)

21. "Decentralized Authorization in Web Services using Public Blockchain", Maddipati Varun, Muthukur Venkata Akhil Vasishta, Balaji Palanisamy and Shamik Sural, International Conference on Blockchain, 2021 (to appear)

22. "Optimal Employee Recruitment in Organizations under Attribute Based Access Control", Arindam Roy, A. K. Majumdar, Shamik Sural, Jaideep Vaidya and Vijay Atluri, ACM Transactions on Management Information Systems, Vol. 12(1), 1-24, 2021

23. "An Integrated Approach for Improving Brand Consistency of Web Content: Modeling, Analysis and Recommendation", Soumyadeep Roy, Shamik Sural, Niyati Chhaya, Anandhavelu Natarajan and Niloy Ganguly, ACM Transactions on The Web, Vol. 15(2), 1-25, 2021

24. "Knowledge-Aware Neural Networks for Medical Forum Question Classification", Soumyadeep Roy, Sudip Chakraborty, Aishik Mandal, Gunjan Balde, Prakhar Sharma, Anandhavelu Natarajan, Megha Khosla, Shamik Sural and Niloy Ganguly, ACM International Conference on Information and Knowledge Management, pp. 3398-3402, 2021

25. "Determination of Stable Structure of a Cluster using Convolutional Neural Network and Particle Swarm Optimization", Arka Mitra, Gourhari Jana, Ranita Pal, Pratiksha Gaikwad, Shamik Sural and Pratim Kumar Chattaraj, Theoretical Chemistry Accounts, Vol. 140(3), 1-12, 2021

26. "BOXREC: Recommending a Box of Preferred Outfits in Online Shopping", Debopriyo Banerjee, K. S. Rao, Shamik Sural and Niloy Ganguly, ACM Transactions on Intelligent Systems and Technology, Vol. 11(6), 1-28, 2020

27. "Influence Modeling of Opinion Switching by Twitter Users in Public Shaming Events", Rajesh Basak, Shamik Sural and Soumya K. Ghosh, Social Network Analysis and Mining, Vol. 10(1), 1-11, 2020

28. "Integrating Firefly Algorithm with Density Functional Theory for Global Optimization of Al42- Clusters", Arka Mitra, Gourhari Jana, Prachi Agrawal, Shamik Sural, Pratim K Chattaraj, Theoretical Chemistry Accounts, Vol. 139(2), pp. 32, 2020

29. "Quantitative Structure-toxicity Relationship: An "in silico study" using Electrophilicity and Hydrophobicity as Descriptors", Gourhari Jana, Ranita Pal, Shamik Sural and Pratim K. Chattaraj, International Journal of Quantum Chemistry, Vol. 120(6), pp. e26097, 2020

30. "Central Attribute Authority (CAA): A Vision for Seamless Sharing of Organizational Resources", Saptarshi Das, Shamik Sural, Jaideep Vaidya and Vijay Atluri, First IEEE International Conference on Trust, Privacy and Security in Intelligent Systems and Applications, Los Angeles, USA, pp. 209-217, 2019

31. "Security Analysis of Unified Access Control Policies", Mahendra Pratap Singh, Shamik Sural, Vijayalakshmi Atluri, Jaideep Vaidya, International Conference on Secure Knowledge Management in Artificial Intelligence Era, Goa, India, pp. 126-146, 2019

32. "Managing Attribute-Based Access Control Policies in a Unified Framework using Data Warehousing and In-Memory Database", Mahendra Pratap Singh, Shamik Sural, Jaideep Vaidya, Vijayalakshmi Atluri, Elsevier Computers & Security, Vol. 86, pp. 183-205, 2019

33. "Deploying ABAC policies using RBAC Systems", Gunjan Batra, Vijayalakshmi Atluri, Jaideep Vaidya and Shamik Sural, Journal of Computer Security, Vol. 27(4), pp. 483-506, 2019

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My Public profiles:
Google Scholar
DBLP

REFERENCES

Prof. Gerhard Rigoll
Chair of Human-Machine Communication
TUM Department of Electrical and Computer Engineering
Technical University of Munich
Theresienstraße 90
80333 München Germany
Phone: +49 89 289 28541
E-Mail: rigoll@tum.de

Prof. Peng Liu
Raymond G. Tronzo, M.D. Professor of Cybersecurity
College of IST, Pennsylvania State University, University Park
305A Steam Services Building, PA 16802 USA
Phone: +1 814-863-0641
E-mail: pxl20@psu.edu

Prof. Dipankar Dasgupta
Department of Computer Science
The University of Memphis
333 Dunn Hall
Memphis, TN 38152-3240 USA
Phone: +1 901-678-4147
E-mail: ddasgupt@memphis.edu