

Shamik Sural

DESIGNATION: Professor, IIT Kharagpur, India.

CONTACT DETAILS:

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AREAS OF SPECIALIZATION:

Image and Video Processing, Multimedia Databases, Database and Information Security

EDUCATION:

Ph.D.	Jadavpur University, Calcutta, India	2000	Engineering (Dept. – CSE)
M.E.	Indian Inst. of Science, Bangalore, India	1992	Electrical Communication Engg.
B.E.	Jadavpur University, Calcutta, India	1990	Electronics & Tele-Comm. Engg.

EMPLOYMENT:

Employer	Designation	Duration	Nature of Job
Indian Institute of Tech. Kharagpur	Professor	Aug 11 till date	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 – Mar 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

(Ph.D. work was carried out in parallel with the job at CMC Limited and NIIT Limited)

AWARDS/HONORS:

- Humboldt Fellowship for Experienced Researchers by Alexander von Humboldt Foundation, Germany, 2009-2010, 2011
- Paper titled "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
- Awarded 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
- Certificate for securing second position at a student paper contest organized by IEEE Calcutta Section, 1990
- University Gold Medal for securing the First Class First position in B.E. (Electronics & Tele-Communication Engg.) from Jadavpur University, 1990
- T.P. Saha Medal for securing the highest aggregate of marks in the theoretical papers in B.E., 1990
- Bronze Medal for securing second highest aggregate of marks in the Faculty of Engineering in B.E., 1990
- U.R. Ghosh Medal for securing the highest aggregate of marks in Industrial Electronics & Instrumentation and Servomechanism in B.E., 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
- Prizes and awards for securing 8th position in higher secondary public examination (XIIth Grade), 1986
- National Prize and Certificate of Merit under National Scholarship Scheme based on the results of secondary public examination (Xth Grade), 1984

CURRENT RESEARCH INTERESTS:

1. **Event Detection from Video:** Algorithms for detecting special events from video with practical applications like gait analysis, surveillance, soccer and echocardiogram video processing. This involves state based modeling of a video as well as detection of objects and state transitions.
2. **Information and System Security:** Building effective intrusion detection systems for handling unauthorized access to database applications; Access control models and their security analysis.

THESIS SUPERVISION:

Number of Ph.D. Thesis Supervised	5
Number of Ph.D. Thesis under Supervision	4
Number of Masters Thesis Supervised	39
Number of Masters Thesis under Supervision	3

PUBLICATIONS:

In Journals (including articles in press)	41
As Book Chapters	9
In Conference Proceedings	78

FUNDED RESEARCH PROJECTS:

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 11 – May 14), Value: Rs. 1,289,400 Role: Principal Investigator

Efficient Index-supported Multimedia Search on the Internet

Sponsored by the Dept. of Science & Technology, Govt. of India

Duration: 3 Years (since March 07), Value: Rs. 638,250 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 04 – Feb 08), Value: Rs. 1,800,000, Role: Co-Principal Investigator

Development of Spatio-temporal Access Control Models

Sponsored by the Dept. of Science & Technology, Govt. of India

Duration: 3 Years (January 08 – July 2011), Value: Rs. 1,618,080, Role: Principal Investigator

Properties of High Dimensional Euclidean Space and their Applications in Approximate Nearest Neighbor Search on Multimedia Databases

Sponsored by the Dept. of Science and Technology, Govt. of India

Duration: 3 Years (Mar 04 - Mar 07), Value: Rs. 330,000, Role: Principal Investigator

Content-Based Information Retrieval from Multimedia Databases

Sponsored by ISIRD, IIT Kharagpur

Duration: 3 Years (Mar 03 – Mar 06), Value: Rs. 288,000, 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 05 – Jun 08), Value: Rs. 5,500,000, Role: Principal Investigator

Placement and Routing of Test Structures

Sponsored by National Semiconductor Corporation, Santa Clara, USA

Duration: 2 Years (June 07 – May 09), Value: \$100,000, Role: Principal Consultant

Development of Parameterized Templates and R-extraction Tools

Sponsored by National Semiconductor Corporation, Santa Clara, USA

Duration: 4 Years (June 03 – May 07), Value: \$340,000, Role: Co-Consultant

MEMBER OF THE EDITORIAL BOARD OF JOURNAL:

- International Journal of Artificial Intelligence and Soft Computing
- International Journal of Computers and their Applications
- International Journal of Data Mining, Modelling and Management
- International Journal of Applied Metaheuristic Computing

CONFERENCE COMMITTEE MEMBER (2008-12):

- 6th International Conference on Computer Vision Theory and Applications, Italy, 2012
- International Conference on Information System Security, India, 2011
- International Conference on Image Analysis and Recognition, Canada, 2011
- IEEE Symposium on Computational Intelligence in Cyber Security, France, 2011
- 5th International Conference on Computer Vision Theory and Applications, Portugal, 2011
- International Workshop on Computational Intelligence for Multimedia Visual Information Processing, Egypt, 2010
- International Conference on Information System Security, India, 2010
- International Conference on Security and Cryptography, Greece, 2010
- International Conference on Image Analysis and Recognition, Portugal, 2010
- 4th International Conference on Computer Vision Theory and Applications, France, 2010
- PC Member, ACS/IEEE International Conference on Computer Systems and Applications, Rabat, Morocco, 2009
- PC Member, 4th International Conference on Computer Vision Theory and Applications, Lisboa, Portugal, 2009
- PC Member, International Conference on Image Analysis and Recognition, Halifax, Canada, 2009
- Publications Chair, Indian Conference on Computer Vision, Graphics and Image Processing, Bhubaneswar, India, 2008
- PC Member, International Conference on Image Analysis and Recognition, Póvoa de Varzim, Portugal, 2008
- PC Member, 3rd International Conference on Computer Vision Theory and Applications, Funchal, Madeira - Portugal, 2008

PROFESSIONAL SOCIETY MEMBERSHIP:

Senior Member, IEEE

LIST OF PUBLICATIONS:

See <http://www.facweb.iitkgp.ernet.in/~shamik/publications.html>