

Dr. Monalisa Sarma

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Summary

Date of Birth : 22 July, 1971

Qualification : Ph. D. (IIT Kharagpur) in Computer Science & Engineering
MS (IIT Kharagpur) in Computer Science & Engineering
B. Tech. (NERIST) in Computer Science & Engineering

Area of Research Interest

Cloud Computing, Big data analytics, Human reliability, Software reliability

Professional Experience

Organization	From	To	Designation	Nature of Experience
IIT Kharagpur	09.10.2013	till	Assistant Professor	Teaching and Research
IIT Indore	29.08.2011	08.10.2013	Assistant Professor	Teaching and Research
NIT Durgapur	29.08.2010	24.08.2011	Assistant Professor	Teaching and Research
Siemens, Bangalore	29.09.2008	28.08.2010	Member Technical Staff	Research & Development
IIT Kharagpur	21.3.2000	20.03.2002	Junior Project Assistant	System administration, Research with VLSI s
NERIST	30.06.1997	07.03.2000	Lecturer	Teaching and Administration
Oil India Limited (OIL)	29.05.1995	28.06.1997	Systems Executive	System installation, Software development

Awards

IBM SUR Award, IBM Research Corpn, USA, September, 2012

Women Scientist Award (WOS-A), Department of Science and Technology (DST), Govt. of India, August, 2005.

Patent Filed

Efficient Binary Trie for Application to Medical Electronic Dictionary in Health Care. Submitted for IPD on 01.12.2010, IPD File Number: SAP Munich (SE2), MED IKM, MED AX. Accepted for Patent 15 June, 2012.

Publications

Papers in journals

01. Manpreet S. Karri, Monalisa Sarma, D. Vijay Rao, *An Architecture Based Approach to Assess the Reliability and Performance of Naval Platforms*, International Journal of Battlefield Technology, Vol. 18, No. 3, November 2015.
02. Debasis Kundu, Monalisa Sarma, Debasis Samanta, *A UML Model-Based Approach to Detect Infeasible Paths*, Journal of Systems and Software (JSS), Elsevier, (Accepted May, 2015)
03. Monalisa Sarma, *Mutation Analysis for Testing Exception Handlings in Java*, Journal of Advances in Software Engineering (ASE), Hindawi, Volume 2014, Article ID 197983, 2014.
04. Dheeraj Rane and Monalisa Sarma *CSLAT: An SLA Template for Cloud Service Management*, International Journal of Communication Networks and Distributed Systems (IJCND), Inderscience, Vol. 14, No. 1, 2015.
05. Monalisa Sarma and Rajib Mall, *State-Based Approach to System Testing*, International Journal of Information and Computer Application (IJCA), Acta Press, Vol. 32, No. 2, pp181-187, 2010.
06. Debasish Kundu, Monalisa Sarma, Debasis Samanta, Rajib Mall, *System Testing for Object-Oriented System with Test Case Prioritization*, Journal of Software Testing, Verification and Reliability (STVR), Wiley, Vol. 43, No. 3, pp 1034-1068, March, 2009.
07. Monalisa Sarma and Rajib Mall, *Automatic Generation of Test Specifications for Coverage of System State Transitions*, International Journal of Information and Software Technology (IST), Elsevier, Vol. 51, Issue 2, pages 418-432, February 2009.
08. Monalisa Sarma and Rajib Mall, *System State Coverage through Automatic Test Case Generation*, International Journal of Information and Communication Technology (IJICT), Inderscience, Vol. 1, No. 4, pp. 347-372, August 2008.
09. Monalisa Sarma and Rajib Mall, *Synthesis of System Test Cases from UML Models*, International Journal of Information Processing (IJIP), Vol. 2, Number 1, January 2008.
10. Monalisa Sarma and Rajib Mall, *Synthesis of System State Models*, ACM SIGPLAN Software Engineering Notices, ACM, Vol. 42, Issue 11, pp. 5-14, November, 2007.

Papers in Conference Proceedings

01. Shabnam Samima, Monalisa Sarma, Debasis Samanta, *BCI augmented HCI for people with limited mobility using an affordable EEG device*, 7th International conference on Intelligent Human Computer Interaction, IHCI 2015, Poceedia, Springer.
02. Debasish Kundu, Monalisa Sarma and Debasis Samanta, *A Novel Approach to System Testing and Reliability Assessment Using Use Case Model*, ACM Proceeding of the 1st India Software Engineering Conference (ISEC 2008), ACM Press, pp. 242-249, 19-22, February 2008, Hyderabad, India.
03. Monalisa Sarma, Debasish Kundu and Rajib Mall, *Automatic Test Case Generation from UML Sequence Diagrams*, International Conference on Advanced Computing and Communications (ADCOM 2007), pp. 60-67, 18-21 December, 2007, IEEE Computer Science Press.
04. Monalisa Sarma and Rajib Mall, *Automatic Test Case Generation from UML Models*, IEEE Proceedings of the 10th International Conference on Information Technology, (ICIT 2007), 21-24 December, 2007, pp. 196-201, IEEE Computer Science Press.

05. Monalisa Sarma and Rajib Mall, *System Testing using UML Models*, IEEE Proceedings of 16th Asian Test Symposium, Beijing, China, 21-24 October, 2007, pp. 155-158, IEEE Computer Press.
06. R. Maity, M. Sarma and D. Samanta, *Low Power VLSI Architecture for Efficient Motion Estimation in Video Codec Chip*, Proceedings of the 2nd International Conference on Embedded Systems, Mobile Communication and Computing, ICEMC² 2007, Bangalore, August 25-27, 2007.
07. Dhiren M. Parmar, M. Sarma, D. Samanta, A Novel Approach to Domino Circuit Synthesis, IEEE Proceedings of the 20th International Conference on VLSI Design, Bangalore, India, 204-209, January 7-10, 2007.
08. M. Sarma, D. Samanta and A. S. Dhar, *Motion Estimation using Multi-Resolution based on Haar Wavelet Transformation*, IEEE Proceedings of the 10th International IEEE Region 10 Conference (TENCON 2004), Chiang Mai, Thailand, November 21-24, 2004.
09. M. Sarma, D. Samanta and A. S. Dhar, *VLSI Architecture for Three Step Search Algorithm using Multiresolution*, Proceedings of the 5th Intl. Conference on ASIC, Beijing China, 24-27 October, 2003.
10. M. Sarma, R. Sharma, M. John and S. K. Mondal, *Modeling and Simulation of Token Bus LAN with Two-Level Dynamic Priority*, IETE Proceedings of the 37th Annual Technical Convention of the IETE, pp. 83-88, 1-2 October, 1994.

Sponsored and Consultancy Project

01. *Standardization of Virtual Keyboards in Indic Languages*
(DeitY Sanction Letter No. 11(16)/2012-HCC(TDIL) dated 12.08.2013)
Consortium project with IITB, IITG, IITM, IITI, CDAC-Pune
Sponsoring Agency: Department of Information Technology, Ministry of Information and Communication Technology, Govt. of India
Status: Ongoing
02. E-Business Centre of Excellence
Principal Investigator : M K Tiwari, Mamata Jenamani
Co-Principal-Investigators : Monalisa Sarma, B. Mahanty, S. P. Sarmah, Jitesh Thakkar, J. K. Jha, Sri Krishna Kumar, P. Mitra, D. K. Pratihar
Sponsor : MHRD, Government of India
Status: Ongoing
A New Framework for Testing Object-Oriented Programs
(Department of Science & Technology, New Delhi, Grant No. SR/WOS-A/ET-45/2004 dated 01.08.2005, Rs. 15.0 lacks,
(Completed August, 2008).

Research Scholar under supervision

01. Mr. Durbadal Chatteraj, Cloud computing security
02. Ms. Shabnam Shamim, Human Reliability
03. Mr. Tauheed Ahmeed, Big Data Analytics
04. Ms. Arpita Chowdhury, Big Data Analytics