

Prof. Smriti Kumar Sinha

Professor

Dept. of Computer Science and Engineering
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Birth

Born in Assam, India on 8th October 1962

Academic Qualification

Ph. D. in Computer Science from Tezpur University in 2001

Thesis Title: Secure Production and Storage of Digital Documents in an Office Environment

Supervisor: Professor Gautam Barua, ex. Director, Indian Institute of Technology, Guwahati, India

Examiners: Professor Eliza Bertino, Purude University, USA

Professor A. K. Pujari, Hyderabad University, India

M. Sc. In Physics in 1988, Gauhati University, assam

Academic Services

Areas of interest: Web Technology, Web service, Formal Languages and Automata, Computational Linguistics, Network Security

Appointments

13 Sept 2007 - Now : Professor of Computer Science, Tezpur University.

1 Jan - 31 Dec 2008 : Researcher, SAP Research, Security and Trust Group, SAP Labs, Sophia Antipolis, France.

26 Apr 2002 - 12 Sept 2007 : Reader in the Dept. of Computer Science and Engineering, Tezpur University.

27 Sept 1997 - 25 Apr 2002 : Senior Lecturer in the Dept. of Computer Science, Tezpur University

10 May 1994 - 26 Sep 1997 : Lecturer in the Dept. of Computer Science, Tezpur University.

31 Mar 1990 - 09 May 1994 : Programmer in the Dept. of Computer Science, Gauhati University.

Administrative Services

Aug 2009 – Oct 2011 : Dean, Students' Welfare, Tezpur University.
2007 – 2010: Member, Academic Committee, Commission for Scientific and Technical Terminology, Ministry of Human Resource Development, Govt. of India, New Delhi
2009 : Centre In-Charge, Central Counselling Board, Tezpur Centre
2003 – 2006: Working President, Alumni Association of Tezpur University
May 1994–Oct 1996: Founder and Head i/c, Department of Computer Science, Tezpur University.
Aug 1997 to Aug 2000 : Member of the Board of Management of Tezpur University
1997 - 2002 : Web Master of the Tezpur University web site
1990- April 1994 : Asstt. Coordinator, IGNOU Study centre, Gauhati University, and started Computer Science courses for the first time in North-East

Research

Guided 2 Ph.D. students, 2 submitted their theses and now guiding 1 more student.

List of Publications: 2009-2016

Research Patents

Granted

[**European Patent EP2173 058 B1**]: *Context-free and Context-Sensitive XML Digital Signatures for SOAP messages*, Co-inventors: Azzedine Benameur, Paul El Khoury, granted as European patent on 29.02. 2012 and published in European Patent Bulletin No 2012/09 dated 29.02.2012. , 2012

[**US Patent US 8495744 B2**] : *Evaluation of Risk of Conflict for Security solutions Integration*, with Paul El Khoury, Azzedine Benameur as co-inventors.

[**US Patent US 8245045 B2**]: Computer implemented methods, systems and computer products for generating and verifying signatures.

Book Chapters

S.I.Singh and S.K.Sinha, "*A New Trust Model Based on Time Series Prediction and Markov Model*" Information and Communication Technologies, Communications in Computer and Information Science, 2010, Volume 101, Part 1, pp 148-156, Springer Berlin Heidelberg.

Smriti Kumar Sinha with Spyros Kokolakis, Panagiotis Rizomiliotis and Azzedine Benameur, *Chapter 6: Security and Dependability Solutions for Web Services and Workflows*, in *Security and Dependability for Ambient Intelligence, Volume 45, ISSN 1568-2633, Book Series Advances in Information Security ISBN 978-0-387-88774-6 (Print) 978-0-387-88775-3 (Online)*, Springer US, 2009

Smriti Kumar Sinha with Azzedine Benameur, Paul El Khoury and Magali Seguran, Chapter 17: SERENITY in e-Business and Smart Item Scenarios, , in *Security and Dependability for Ambient Intelligence, Volume 45, ISSN 1568-2633, Book Series Advances in Information Security ISBN 978-0-387-88774-6 (Print) 978-0-387-88775-3 (Online)*, Springer US, pages 305-322, 2009

Smriti Kumar Sinha with Paul El Khoury, Mohand-Said Hacid, and Emmanuel Coquery *A Study on Recent Trends on Integration of Security Mechanisms*, in *Advances in Data Management*, By Zbigniew W. Ras, Agnieszka Dardzinska, Series: Studies in Computational Intelligence , Vol. 223, XIV, ISBN: 978-3-642-02189-3, Springer, 2009

Research Papers

2016

Sarangthem Ibotombi Singh and Smriti Kumar Sinha. A Trust Model based on Markov Model Driven Gaussian Process Prediction. *International Journal of Computer Applications* 146(14):1-9, July 2016

Krishna Das and Smriti Kumar Sinha: A Survey of User Behaviour Analysis in Social Networks, *International journal of Behaviour and Information Technology*, 2016 (Submitted)

Monoj Mushahary and Smriti Kumar Sinha : MMH: An Effective Clustering Algorithm for Trustworthy Cloud Service Provider Selection, *International Journal of Computer Science and Information Security*, Vol. 14 No. 5, May 2016 (accepted)

Pritam Deka and Smriti Kumar Sinha : *A New Probabilistic Model of Language Competition, Endangerment and Extinction*, *International Journal of Computer Applications* (0975-8887), Volume 142 No.12, pp 1-6, May 2016

Krishna Das and Smriti Kumar Sinha: Social Networked Community Analysis Using Graph-Based Data Set, *International Journal of Innovations and Advancement in Computer Science*, Vol 5, No 4, pp 13-19, April, 2016

2015

Borthakur M., Sinha S. K.: Modelling Diachronic and Synchronic Sound Changes in Assamese, In the Proc. Of International Symposium on Advanced Computing and Communication, 2015, IEEE

Singh S. I., Sinha S. K.: A framework for Reputation Model Based on Time and Trust aware Heteroscedastic Gaussian Process, in the Proc. Of International Symposium on Advanced Computing and Communication, 2015, IEEE

2014

Sarmah, A.K., Hazarika S.M., Sinha, S.K.: Formal Concept Analysis: Current Trends and Directions. *Artificial Intelligence Review, Springer, Vol 44, No 1 pp 47-86, 2014*

2013

Sarmah A.K., Sinha, S. K., Hazarika S.M.: A new pattern-based flexible approach for maintaining a constrained workflow. *International Journal of Software Engineering and Knowledge Engineering*, Vol. 24, No. 1 pp 139-161, 2014

Kalita N. J., Saharia N., Sinha S. K.: Morphological Analysis of the Bishnupriya Manipuri Language using Finite-State Transducers, proc of 13th International Conference on Computational Linguistics and Intelligent Text Processing, CICLing 2014, LNCS 8403, Springer, 2014

Kalita N. J., Saharia N., Sinha S. K.: Towards the Development of a Bishnupriya Manipuri Corpus, National Conference on Recent trends and Techniques in Computer Science, 2013, Boroland University, India

Muchahari M., Sinha S. K. :A New Trust Management Architecture in Cloud Computing, ISCOS-13, IEEE.

Muchahari M., Sinha S. K. : A survey on Web Services and Trust in Cloud Computing Env, National Workshop on Network Security(NWNS13), Tezpur University, 2013

2012

Sarmah, A.K., Hazarika S.M., Sinha, S.K.: Composing and Maintaining a Pattern-Based Workflow as a Constraint Graph. In Proceedings of ISCOS 2012, December 17th – 18th 2012, NIT Suratkal ; 146-151; Published by IEEE Society.

2011

Sarmah, A.K., Sinha S.K., Hazarika, S.M.: Constraint propagation in workflow - a pattern based approach. In: Proceedings of National Conference in Machine Intelligence, Narosa (2011) 134–143.

2010

Singh, S.I.; Sinha, S.K.; , "A new trust model using Hidden Markov Model based mixture of experts," *Computer Information Systems and Industrial Management Applications (CISIM)*, 2010 International Conference on , vol., no., pp.502-507, 8-10 Oct. 2010

Sarmah, A.K., Sinha, S.K.: Hazarika, S.M.: An Algorithm for Navigation in a Multi-context Concept Lattice. In: proceedings of National Workshop on Design and Analysis of Algorithms 2010, Tezpur University, 78-84.

Sinha S., Sinha S. K.: *Signature Replacement Attack and It's Counter Measures*, Proc. ofIEEE International Advance Computing Conference (IACC 2010), pp-229-235, India.

Sinha S., Sinha S. K.: *Extra Tree: A Model to Organize Execution Traces of Web Services*, to be published in the Proc of IEEE 6th Int Conf. on Next Generation Web Services Practices (NWeSP 2010) 23-25 Nov 2010, Guwalior

Sinha S., Sinha S. K.: *Synchronization of Authorization flow with a Work Object Flow using XACML and BPEL*, 2010, Springer Digital Library, pp 365-370

2009

S. I. Singh and Smriti Kumar Sinha, *A New Trust Model based on Social Characteristics and Reputation Mechanisms using Best Local prediction Selection Approach*, Proc. of International Conference on New Trends in Information and Service Science, 2009 (NISS'09), pp 329-335, IEEE Press, 2009

Sarmah, A.K., Sinha, S.K., Hazarika, S.M.: Exploiting Multi-context in a Security Pattern Lattice for Facilitating User Navigation. In: Proceedings of 17th International Conference on Advanced Data Communication, Bangalore (ADCOM, 2009), 215-222.

Smriti Kumar Sinha with Azzedine Benameur, Serge Fenet and Ayda Saidane, *A Pattern-Based General Security Framework: An eBusiness Case Study*, The 11th IEEE International Conference on High Performance Computing and Communications (HPCC-09), Korea University, Seoul, Korea June 25-27, 2009

Hobbies

Main hobbies of Dr. Sinha are acting, recitation and writing

Acting

He appeared on stage as an actor more than 200 times in different roles in amateur theatre. His father Late Aswini Kumar Sinha was a dramatist and was the director of many productions where Prof. Sinha was acting. The spectrum of plays varies from mythological to third theatre. His memorable role was as *Oedipus* in the famous Greek drama by Sophocles named *Raja Oedipus* directed by his father and translated by Broajendra Kumar Sinha. In Tezpur University he is still active in drama. He organized drama workshops. Memorable play in a workshop was ‘Durbal Dalang’ under the direction of Prof. Amarjyoti Chaudhury.

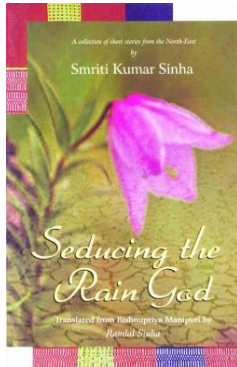
Recitation

He was adjudged as the best in recitation in Bengali and Bishnupriya Manipuri during his college days in Gurucharan College, Silchar. At that time he was privileged to recite Kazi Nazarul Islams “Bidrohi” as a tribute to welcome his recitation icon Kazi Sabyasachi ‘when he visited Gurucharan College, Silchar.

Writing

Writing is Dr. Sinha’s main hobby now. He is basically a short story writer. He writes in Bishnupriya Manipuri, a language enlisted by the UNESCO as an endangered language. It is

an Indo-Arian language. The speakers of this language, estimated to be half a million, mainly reside in the north-eastern states of India (Assam, Tripura and Manipur etc.), Bangladesh and Myanmar. It is already a dead language in its place of origin at Bishnupur, Khangabok, Heirok, Ningthoukhang areas near Imphal, Manipur. The people migrated from these areas to Assam, Tripura and Bangladesh in different phases due to Burmese invasions, political unrest and various other pressures. Even in their new lands, the language was also almost on the verge of extinction in 19th century.



Dr. Smriti Kumar Sinha stands for minor and endangered languages and has been working in this direction for the last three decades. He is considered as a leading and dedicated short story writer in Bishnupriya Manipuri. He has to his credit three collections of short stories published in Bishnupriya Manipuri. Some of these stories have been translated into Assamese, Bengali, Kannada and English. He published two stories, namely “Fish of a Dead River” and “God for a Night” in Indian Literature, Sahitya Akademi. A collection of fourteen short stories, translated into English by Ramlal Sinha, titled “Seducing the Rain God”, is published in 2015 by Niyogi Books, New Delhi.