

RESUME

Dr. Jagadamba G, M.Tech, Ph.D

Asst. Professor, Department of Information Science and Engineering
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Current Position : Assistant Professor, Dept. of Information Science and Engineering,
Siddaganga Institute of Technology, Tumakuru, 572103

Qualification : Ph.D in Computer Science and Information Science, VTU, Belagavi, Jan.
2018

M. Tech in Information Technology, VTU, Belagavi, 2004

BE in Electronics and Communication, VTU, Belagavi, 2002

Work Experience : Working as Assistant Professor in the Department of Information Science
and Engineering, Siddaganga Institute of Technology, Tumakuru from
Sep. 2008.

Lecturer at Department of Information Science and Engineering,
Siddaganga Institute of Technology, Tumakuru from Sep. 2004 to 2008.

Lecturer at Department of Information Science and Engineering, Sri
Siddhartha Institute of Technology, Tumakuru from Nov. 2003 to Sep.
2004.

Research Areas : Ubiquitous computing, Network security, Trust and Context based
security in ubiquitous environment, Behavioral biometric security, Image
Processing in security and photography.

Research Details : <https://scholar.google.co.in/citations?user=gD8RHYgAAAAJ&hl=en>

https://www.researchgate.net/profile/Jagadamaba_Guru

<https://orcid.org/0000-0002-7379-7925>

About Ph.D Work:

Thesis title

A trust based context-aware authentication and security scheme for ubiquitous network system

Work carried out

1. A Service-Oriented Adaptive Trust Evaluation Model (SOATEM) was proposed. The proposed model provided a service-oriented trust based security conferring to the service provider's security requirement by evaluating the trust through or recommendation system by imparting intelligence in ubiquitous computing environment.
2. We envision a world where devices, machines, and things are much more intelligent, simplifying and enriching our daily lives. They will be able to perceive, reason, and take intelligent actions based on awareness of the situation, improving just about any experience and even solving problems considered unsolvable. A Context and Trust Based Adaptive Security (CTBAS) Scheme was proposed to provide the required security policies in the Ubiquitous Computing Environment with the correct balance of classification and analysis by efficiently evaluating the trust and context parameters.
3. A Context Aware Access Control (CAAC) model when flexibility with the security is the main concern when utilizing the internet recourses.
4. A Ubiquitous Simulator (UbiSim) was designed and developed for efficient platform to test the proposed schemes by allowing – customization/randomly assigning the computing capacities, and geographical locations for nodes in the Ubiquitous environment.

Utilization of research work for society:

1. *Adaptive access control method for Internet resources based on the context in ubiquitous environment*

In our research work, we have proposed a Context Based Access Control (CAAC) model, where the adaptivity is achieved through the fine-tuned context analysis by considering the dynamically changing location, time, date, and activity context. These contexts are utilized to define user behaviour and requirements in the operating environment. By identifying user behaviour and need, the corresponding access rights can be modified. The work ensured the need for context when adaptivity is required in the ubiquitous computing environment.

This scheme can be adapted to replace the static type of access control system with the adaptive access control system for accessing internet resources based on contextual information in our campus to facilitate the internet service to students and faculties. This type of system can be adapted to any educational organization where the static nature of access control to the Internet resources can be replaced with a context based access control system.

2. *Access control based on context and trust in the healthcare record access control system*

The recent advances in healthcare infrastructure stressed the need for trust in the uncertainty and risk environments for the competence and intentions of the medical professionals. In these situations, trust inspires the reveal of essential health data in the ubiquitous environment for patient health monitoring, adherence and continuous provision of health monitoring services. Thus, trust is assessed and utilized to provide the required patient health record in emergencies,

ubiquitous access and while choosing a reliable service provider. Hence, we proposed the Service-Oriented Adaptive Trust Evaluation Model (SOATEM). The proposed model evaluates and provides the trust value about the service requester before allowing access to the requested services.

In the healthcare system, the electronic records about the patient's health status are maintained to have continuous tracking. However, the revealing of patient personal health records to anyone is a significant crime. But, in some situations, the revealing of data is most required. In that situation, our proposed Context and Trust Based Adaptive Security (CTBAS) scheme can be adapted to identify the anonymous requester before providing access control to the patient health record.

3. *A Ubiquitous Simulator (UbiSim)*

It's a network simulator designed to test the various scenario in the ubiquitous computing environment. It is in nascent stage and designed for our requirement. It can be used for various networks computing environment by plugging the new features to the existing one.

Research Publications:

Research Papers published in journals

1. Jagadamba. G and Dr. B. Sathish Babu, A Service Oriented Adaptive Trust Evaluation Model for Ubiquitous Computing Environment, International Journal of Ad Hoc and Ubiquitous Computing, Vol.29, no.4, pp.255-269, Inderscience, Oct. 2018.(**Scopus**)
2. Jagadamba. G and Dr. B. Sathish Babu, Context and Trust Based Adaptive Security for Accessing Services in Ubiquitous Environment, International Journal of Systems and Service-Oriented Engineering (IJSSOE), IGI Global, Vol. 6, no. 4, December 2016. (**ACM digital Library**)
3. Jagadamba. G and Dr. B. Sathish Babu, Adaptive Security Schemes based on Context and Trust for Ubiquitous Computing Environment: A Comprehensive Survey, Indian Journal of Science and Technology, Vol. 9, no. 48, December 2016.(**Scopus**)
4. Jagadamba G and Dr. B. Sathish Babu, Adaptive Context-Aware Access Control Model for Ubiquitous Learning Environment, BIJIT - BVICAM's International Journal of Information Technology, vol. 8, no.1, pp. 922-929, 2016.
5. Jagadamba. G and Dr. B. Sathish Babu, Context and Trust based adaptive security policy: A Survey, International Journal of Computer Systems, vol.3, no.2, pp. 102-107, 2016.
6. Chaya Shree. G and Jagadamba. G, Keystroke Dynamics in Authentication Scheme, International Journal of Computer Information Systems, Vol. 12, no.3, 2016.
7. Purohit Shrinivasacharya, Jagadamba G and Suresh Jagadeeshaia, Image Processing Technique to Remove Flash Light Spot on Images, International journal of mobile computing and multimedia communications, 2021. (**Scopus-communicated**)

Full Research papers published/presented in conference

8. Jagadamba G and Chaya Shree G. Online Subjective answer verifying system Using Artificial Intelligence, Proceedings of the Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC) DVD Part Number:CFP20OSV-DVD; ISBN: 978-1-7281-5463-3, IEEE, October 7th to 9th, 2020.(Scopus)
9. Jagadamba G, Rohini K C, Brinda K N, Sheeba R, Prathik S K. Adaptive e-learning authentication and monitoring, in 2nd international conference on Innovative Mechanisms for Industry Applications, IEEE, pp. 277-283, 23rd April 2020. DOI: 10.1109/ICIMIA48430.2020.9074955. (Scopus)
10. Jagadamba G, Aditya T R, Sanath S Pai, Manjunath P, Karthik Bhat U. Real Time Patient Activity Monitoring and Alert System, International conference on Electronics and Sustainable Communication Systems (ICESCS) 2-4 July, pp. 708-712, 2020. doi: 10.1109/ICESC48915.2020.9155602. (Scopus)
11. Jagadamba G, Purohit Shrinivasacharya and Chayashree G, Campus Vehicle Monitoring through Image Processing, Emerging Research In Electronics, Computer Science And Technology, pp. 305-315, 24th April 2019. (Scopus)
12. Jagadamba G and Sharath Kumar S. Adaptive context-aware access control for EPR resource in healthcare system. 6th International Conference on Advances in Computing, Communications and Informatics, IEEE, Manipal, Sep. 2017. (Scopus)
13. Chaya Shree. G and Jagadamba. G. A Three Factor Authentication System Using Keystroke Dynamic, National Conference on Recent Trends in Communication and Computing, Feb. 2016, Davengere
14. Jagadamba. G, Sharmila P and Tejus Gowda. A Secured Authentication using Keystroke Dynamics. Lecture notes in Electrical Engineering 248, 253-260, Springer, New Delhi, 2014. (Scopus)
15. Jagadamba. G and Dr. B. Sathish Babu. A dynamic Context Aware Access Control (CAAS) System. In the proceedings of International Conference on Emerging Computation and Information Technologies (ICECIT-2013), SIT, Tumkur, Elsevier, 2013.
16. Jagadamba. G, Sharmila S P and Tejus Gowda. A Secured Authentication using Keystroke Dynamics. In the proceedings of International Conference on Emerging Research in Electronics, Computer Science and Technology, Mandya, 2012.

Chapters published in Books

17. G. Jagadamba, B. Sathish Babu, Book chapter: Security in Cyber-Physical Systems: Generalized Framework Based on Trust with Privacy, Cyber-Physical Systems: A Computational Perspective, pp.443-462, CRC Press, Taylor & Francis Group, 2015. ISBN: 148225977X, 9781482259773

18. G. Jagadamba, B. Sathish Babu, Book chapter: Keystroke dynamics in e-learning and online exams, Biometric Authentication in Online Learning Environments., pp.1-20, IGI Global, Jan, 2019. ISBN: 9781522577249, DOI: 10.4018/978-1-5225-7724-9.ch001.

Invited Lecturers delivered:

1. One day national level workshop on Cyber Security Outlook 2021, Hindustan College of Arts and Science, PG and Research department of Computer Applications, Coimbatore, Tamil Nadu, on 23rd, March 2021.
2. One day technical talk on “Adaptive Security in Core banking” at Intellectual Info solutions Pvt. Ltd, Bangalore on 29th December, 2020.
3. One technical talk on “Security in Core banking” at Intellectual Info solutions Pvt. Ltd, Tumakuru on 3rd October, 2020.
4. Resource person for 2 day workshop on “LaTeX for Documentation” at Siddaganga Institute of Technology, Tumakuru, Karnataka, on 20th and 21st August 2013.
5. Simulation and VHDL coding at Siddaganga Institute of Technology, Tumakuru, Karnataka, 2006.

Workshops and Symposia conducted in the department:

1. LaTeX for Documentation, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, Aug. 20th and 21st 2013.
2. Mobile Application development using Android, Siddaganga Institute of Technology, Tumakuru, 24th to 26th Oct. 2013.
3. IoT and Python Programming, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 21st to 26th Dec. 2016.
4. R and Python Programming Using Data Analytics, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 23rd to 28th Jul. 2017.
5. Microcontroller and ARM Processor, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 21st to 26th April. 2018.

Awards and Honours:

1. Best Scholar Award from International Research Awards on Science, Health and Engineering, SHEN 2021.
2. CISCO-CCNA Educator certified Instructor by Cisco Networking Academy and Edu Skills.
3. Best paper award for “A Three Factor Authentication System Using Keystroke Dynamic” in the National level Conferences on Recent trends in communication and computation, GIT, Davangere, India, 2016.
4. First prize for major project “Secured Remote User- Server Authentication Using 3-Technique”, RNSIT, Bangalore, 2012.

Student Funded Projects:

1. VTU student funding for major project “Sentimental analysis for deaf and dumb”, 2017-18.
2. VTU student funding for major project “ Real-time patient activity monitoring and alert system”, 2019-20.

Recognition with the outside word:

1. Reviewer for the International journal of Adhoc and Ubiquitous computing, InderScience.
2. Reviewer for the International journals and book chapters published by Tailor and Franchise, CRC press.
3. Reviewer for the International Journal of Handheld Computing Research, IGI Global.
4. Reviewer for the IGI Books, IGI Global -Hershey, US, 2019.
5. Reviewer for the 1st International conference on Advances in Information Technology-2019.
6. Reviewer for the 1st International conference PRIMA-15.

Recognition within the organization:

1. Internal member for department Board of Examination
2. Internal member for department Board of Studies
3. Member of internal auditing: ISO 2000 standard
4. Member of Department Academic Affair Committee
5. Member of Department Project Affair Committee
6. Certified trainer for CCNA courses offered by CISCO

Industry-Imparting training:

1. Information Storage and Management- in partnership with EMC², Bangalore
2. CCNAv7: Introduction to Networks- in partnership with CISCO
3. CCNAv7: Switching, Routing, and Wireless Essentials- in partnership with CISCO
4. CCNAv7: Enterprise Networking, Security, and Automation- in partnership with CISCO
5. CCNAv7: Bridging Course- in partnership with CISCO

Recognition as professional bodies:

1. Member of All Indian Engineers
2. Life member of Computer Society of India

Workshops attended:

1. Campus connect program by INFOSYS, Bangalore, 13th to 17th March 2005.
2. Advances in Computer Networking Dr. AIT, Bangalore, 02nd June 2007.
3. Workshop on Mission 10X Learning Approach Wipro, Bangalore, 15th and 16th Sep. 2008.
4. Guest lecture on Sensors networks by BITES, Bangalore, 19th Sep. 2008.
5. Advanced Programming Practice & Mobile Switching Concepts, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 28th Jan to 02nd Feb. 2008.
6. Soft Computing Tools (Genetic Algorithm/Neural Networks/Fuzzy Logic), Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 1st to 7th Aug. 2008.
7. Mobile Communications, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 19th to 24th Jan. 2009 .
8. Workshop on Advanced Developer Technologies Microsoft, Bangalore, 08th April 2009.
9. Training Program on Information Storage & Management EMC, Bangalore, 29th June to 04th July 2009.
10. Semantic Web, Nature Inspired Computing & Algorithms, Dept. of ISE, SIT, Tumakuru, 24th to 30th Jan. 2010.
11. International Conference on Frontiers of Computer Science Atria Institute of Technology, IISc., Bangalore, 7th to 9th Aug. 2011.
12. Continuing Professional Development Programme on Formulation of Research & Development Initiatives for Women Scientists and Technologists, Engineering Staff College of India,

Hyderabad, 29th May to 2nd Jun. 2014.

13. Information Security and Cyber Forensic Tools, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 14th to 19th Jul. 2016.
14. IoT and Python Programming, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 21st to 26th Dec. 2016.
15. R and Python Programming Using Data Analytics, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 23rd to 28th Jul. 2017.
16. Microcontroller and ARM Processor, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 21st to 26th April. 2018.
17. Microsoft Azure and Cognitive Services, Dept. of ISE, JSSATE, Bangalore, 28th and 29th Sep. 2018.
18. Block Chain Technologies, Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 22nd to 27th April 2019.
19. IoT, Embedded Systems and DSP Architecture, by BITES, Dept. of Electronics and Communication, Siddaganga Institute of Technology, Tumakuru, Karnataka, 5th to 7th August 2019.
20. Cyber Security, by AICTE Training and Learning Academy, New Delhi, Organized by Dept. of Information Science and Engineering, Siddaganga Institute of Technology, Tumakuru, Karnataka, 9th to 13th Nov. 2020.

Department Level Assignments - Coordinator

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| 1. ISO auditing | 10. Curriculum Development |
| 2. NBA | 11. Student Workshop/Seminars |
| 3. NAAC | 12. Technical symposium -BROWSE |
| 4. Industrial visit to EMC2 Bangalore and Infosys Mysore | 13. Science and Agricultural exhibition, Siddaganga Mutt |
| 5. Conferences | 14. ISTE student chapter |
| 6. Faculty development Programs | 15. Time Table |
| 7. Midterm examination | 16. Major Project |
| 8. Website maintenance | 17. Equity Cell |
| 9. National level Project Competition- Tec Expo-2018 | |

College Level Assignments – Coordinator

1. ISO -2000 internal auditing
2. Career counseling for 1st Year students
3. College Summer Fest- HALCYON (Jam, Dumbshards, Western Songs)
4. College Cultural Fest- SPANDANA (Quiz, Indian Classic songs-solo)

Subjects taught till date:

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|---------------------------------------|--|
| 1. Data Communication | 11. Wireless and Mobile Networks |
| 2. Ethical Hacking | 12. Computer Networks |
| 3. Real Time Systems | 13. Cryptography and Network Security |
| 4. Electronic Circuits | 14. File Structures and Information Management |
| 5. Principles of Programming Language | 15. Data Warehouse and Data Mining |
| 6. Operating System Security | 16. Big Data Analytics |
| 7. Operating System | 17. File Structures |
| 8. Data Base Management System | 18. Information Storage and Management |
| 9. Wireless Sensor Networks | 19. Object Oriented Programming with C++ |
| 10. Analog and Digital Electronics | 20. Mobile Communication |

Extra Curriculum activities:

1. Plant seedling in dry land near Basadi Betta, Panditanahalli, Tumakuru in 8 Acres by keeping a motto of going green. It's an initiative made with like-minded friends with the support of college staff and management towards the environment and social responsibility.
2. Actively participating in Swatch Bharath Abhiyan by cleaning various lakes, temples, and tourist spots near Tumakuru area with like-minded friends.
3. Actively involved in fund rising from NGO towards tree plantation assignment.