

## Dr. PRAMOD TC

Affiliation: Associate Professor, Dept of CSE, SIT

Contact: 7667677891

Email: pramodtc@sit.ac.in

Vidwan ID: 231854

Scopus ID: 56046287500

OrcID: 0000-0002-9022-3464

Faculty ID: SITS0775

### Education

	Degree	Year	Institute	Specialization
1	B. E	2010	Channabasaveshwara Institute of Technology	Information Science & Engineering
2	Integrated MTech + PhD	2018	Siddaganga Institute of Technology	Computer Networks & Cyber Security

### Professional Experience

	Date (from-to)	Designation	Organization
1	27-9- 2024 to Present	Associate Professor	Siddaganga Institute of Technology
2	9-10- 2020 to 27-9- 2024	Assistant Professor	Siddaganga Institute of Technology
3	27-7-2016 to 8-7-2020	Assistant Professor	Dayananda Sagar University
4	5-5-2015 to 5-6-2015	Intern	ABB GISL, Bangalore
5	10-9-2010 to 10-9-2011	Software Testing Engineer	Protonix-India,Bangalore

### Positions held

- Faculty In-charge of Innovation and Entrepreneurship, Dept. of CSE, SIT Tumkur
- ARIIA Coordinator, IIC, SIT Tumkur
- AICTE LITE Faculty Coordinator, SIT Tumkur
- Panel of exam preparation for theory & lab
- Test coordinator
- Mini project coordinator

### Affiliations of Professional organizations

- IEEE Member

## Awards and Honors

- Best paper award in the IEEE International Conference on Research and Development Prospects on Engg. and Technology, (ICRDPET 2013).
- Travel grant award from IEEE IES to attend the 20<sup>th</sup> IEEE International Conference on Emerging Technologies and Factory Automation, held in Luxembourg
- Best Project award in the 47<sup>th</sup> Series of Student Projects Programme – Annual State-Level Poster Presentation and Exhibition at Sharnbasva University, Kalaburagi on 9th and 10th August 2024
- Received grant from AICTE AQIS Scheme for organizing International Conference on Emerging Computation and Information Technologies (ICECIT-2025)

## Courses Taught

### Undergraduate Courses

- Data Communication
- Cryptography and Network Security
- Computer Networks
- Computer Organisation
- Operating Systems
- C programming for problem solving
- Cyber Security
- Web Programming
- Full Stack Development with PHP
- Full Stack Development with Django
- Software Industry Skills for excellence
- Entrepreneurship & Management
- Unix shell programming

### Postgraduate Courses

## Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
1	Mrs. Sangetha S	Malware Analysis	Pursuing
2	Mr. Gangadhar S	Plant Disease Detection for Smart Agriculture	Pursuing
3	Mr. Pradeep S	Sustainable Agriculture	Pursuing

## Research Areas

- Network Security
- SCADA Systems Security
- Edge Computing
- Sustainable Agriculture

## Sponsored Projects

### Ongoing Projects:

1. Title: Design of Algorithms for Embedded Systems Alogorithm-1 & 2  
Funding Agency: Secure Machines  
Amount: 10 Lakhs  
Duration: 3 Years  
Role: CO-PI

### Completed Projects:

1. Title: Precision Farms: Generic Key Management Architecture  
Funding Agency: ABB GISL  
Amount: 7 Lakhs  
Duration: 1 Year  
Role: Research Assistant
2. Title: Precision Farms: Design and Performance Evaluation of Algorithms for Key Management and Security of Routing Protocols for Distributed Sensor Networks  
Funding Agency: AICTE  
Amount: 6.7 Lakhs  
Duration: 1 Year  
Role: Research Assistant
3. Title: Precision Farms: Accelerated Agriculture Analytics with Edge Computing  
Funding Agency: KSCST  
Amount: 10K  
Duration: 6 months  
Role: Mentor
4. Title: Sustainable Coconut Cultivation in Kalpataru Nadu with Edge Computing and Data Analytics  
Funding Agency: KSCST  
Amount: 5K  
Duration: 6 months  
Role: Mentor

5. Title: Developing an ESP32-based full-duplex walkie-talkie system  
Funding Agency: Agro Prudent  
Amount: 15K  
Duration: 3 months  
Role: Mentor

## Publications

### Journals

- Pramod, T. C. "A taxonomy of key management schemes of SCADA systems." *Computers and Electrical Engineering* 124 (2025): 110366.
- Vennam, Preethi, Pramod TC, Thippeswamy BM, Yong-Guk Kim and Pavankumar BN. "Attacks and Preventive Measures on Video Surveillance Systems: A Review." *Applied Sciences* 11, no. 12 (2021): 5571
- Pramod T.C, Kianoosh G, M.Hadi Amini, N.R.Sunitha and S.S.Iyengar, "Key Pre-distribution Scheme with Join Leave Support for SCADA Systems", *International Journal of Critical Infrastructure Protection*, 24 (2019): 111-125
- Pramod T.C, Thejas GS, S S Iyengar and N R Sunitha, "CKMI: Comprehensive key management infrastructure design for industrial automation and control systems", *Future Internet journal*, 11, no.6, 2019.
- Pramod T.C and N.R.Sunitha, "Key management infrastructure design and novel techniques to establish secure communications in critical infrastructures", *International Journal of Critical Computer-Based Systems (IJCCBS)*, Vol. 7, No. 2, pp.171–189, 2017
- Pramod T.C and N.R.Sunitha, "Key pre-distribution schemes to support various architectural deployment models in WSN", *International Journal on Information and Computer Security*, Vol. 8, No. 2, pp.139–157, 2016
- Pramod T.C and N.R.Sunitha, "Polynomial Based Scheme for Secure SCADA Operations", *Elsevier Procedia Technology, Smart Grid Technologies*, Vol.21, PP.474-481, 2015.
- Pramod T.C and N.R.Sunitha, "A Framework to Mitigate Attacks and Establish Secure Communications in SCADA Systems", *International Journal of Information Processing*, 8(1), 73-91, 2014 ISSN : 0973-8215 IK International Publishing House Pvt. Ltd., New Delhi, India

### Conference Proceedings

- Varunkumar, M. S., Siddharth Gupta, and T. C. Pramod. "EEG-Driven Machine Learning Framework for Student Cognitive Load Classification." In *2025 3rd International Conference on Smart Systems for applications in Electrical Sciences (ICSSSES)*, pp. 1-6. IEEE, 2025.
- Shreyank, S. Kumar V, Shashwath, V. T and P. T C, "Safe Route Prediction Based on AQI and Machine Learning," 2023 International Conference on Network,

Multimedia and Information Technology (NMITCON), Bengaluru, India, 2023, pp. 1-7, doi: 10.1109/NMITCON58196.2023.10275929.

- N. Mallikarjunaiah, R. S Jain, V. K. R., S. S Navada and P. T.C, "Data Visualisation of Time Tradable Assets Using Machine Learning," 2023 International Conference on Network, Multimedia and Information Technology (NMITCON), Bengaluru, India, 2023, pp. 1-6, doi: 10.1109/NMITCON58196.2023.10275962.
- Charan, K. V., and T. C. Pramod. "Optical Character Recognition System of Telugu Language Characters Using Convolutional Neural Networks." Emerging Research in Computing, Information, Communication and Applications (ERCICA 2022). Springer, Singapore, Lecture Notes in Electrical Engineering, pp. 615-623, 2023.
- Sivakumar S, Pramod TC, "Comprehensive Analysis of Heart Disease Prediction: Machine Learning Approach", 3rd International Conference on Global Conference for Advancement in Technology (GCAT) page no:1-7, 7 October 2022.
- B. M. Thippeswamy, M. Ghouse, A. Deksiso, B. M. P. Prasad, T. C. Pramod and B. N. P. Kumar, "Pilot DroneUI: An User Interface to Control UAV using Robot Operating System," 2022 IEEE 3rd Global Conference for Advancement in Technology (GCAT), Bangalore, India, pp. 1-6, doi: 10.1109/GCAT55367.2022.9971987, 2022.
- Imtiaz, Arsal, S. Nachiket, K. V. Nishanth, Jyoti Angadi, and T. C. Pramod. "Agricultural Loan Recommender System-A Machine Learning Approach." In 2021 International Conference on Innovative Trends in Information Technology (ICITIIT), pp. 1-5. IEEE, 2021
- K. M. Chaitrashree, T. N. Sneha, S. R. Tanushree, G. R. Usha and T. C. Pramod, "Unstructured Medical Text Classification using Machine Learning and Deep Learning Approaches," 2021 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), 2021, pp. 429-433.
- Prema S and Pramod T C "Key establishment scheme to support intra and inter cluster communication in WSN", 2nd International Conference on Computing Methodologies and Communication (ICCMC 2018)
- Pramod T.C and N. R. Sunitha "SCADA:Attacks and Communication Protocols", International Symposium on Sensor Networks, Systems and Security, Florida Polytechnic University Lakeland, Florida, USA, Aug 31st - Sept 2nd 2017.
- Thejas G S, Pramod T C, S S Iyengar and N R Sunitha, "Intelligent Access Control: A self-Adaptable Trust Based Access Control Framework (SATBAC) using Game Theory Strategy", International Symposium on Sensor Networks, Systems and Security, Florida Polytechnic University Lakeland, Florida, USA, Aug 31st - Sept 2nd 2017.
- Pramod T.C and N.R.Sunitha, "KMI for SCADA and WirelessHART in IACS", IEEE 20th Conference on Emerging Technologies and Factory Automation (ETFA), PP.1-4, Luxembourg, Sept 8-11, 2015.
- Pramod T. C and N. R. Sunitha, "Self-Diagnosis Approach for Key Synchronization Problem in Symmetric Crypto Systems Used in SCADA", 8th INDIACom; INDIACom-2014, International Conference on "Computing for Sustainable Global Development", 5th – 7th March, 2014, pp:763-768, ISBN: 978-93-80544-10-6, New Delhi,India.

- Sridharan Srivatsan, Pramod T. C., and N. R. Sunitha. "Architecting an integrated framework for utility payment services using automated teller machines." International Conference on Science, Engineering and Management Research (ICSEMR), 2014, pp. 1-6, ISBN: 978-1-4799-7614-0, IEEE, 2014.
- Pramod T C, N R Sunitha et.al , "An Efficient Key-Distribution approach for SCADA Systems", IEEE International Conference on Research and Development Prospects on Engg. and Technology, ICRDPET 2013, March 28th-29th 2013, Vol.5, ISBN: 978-1-4673-4948-2, Nagapattanam, India (Best paper award).
- Pramod T.C. N.R.Sunitha, "An Approach to Detect Malicious Activities in SCADA Systems", IEEE International Conference on Computing, Communications and Networking (ICCCNT 2013), July 4-6 2013, pp:1-7, ISBN:978-1-4799-3925-1, Tiruchengode, Tamilnadu,India.
- Pramod TC and N.R. Sunitha , "An Efficient Key Establishment Approach for SCADA Systems", International Conference on Emerging Computation and Information Technologies, Elesiver Publications, Nov 22-23,2013, Karnataka, India
- Pramod, T. C and N. R. Sunitha, "Matrix based key pre-distribution schemes for WSN", DRDO organized Bilingual International Conference on Information Technology: yesterday, today, and tomorrow, Feb 19th-21st 2015, pp:259-265, ISBN:9678-81-86514-73-3, New Delhi, India.
- Pramod, T. C and N. R. Sunitha, "Key Management Issues for Industrial Automation and Control Systems", DRDO organized Bilingual International Conference on Information Technology: yesterday, today, and tomorrow, Feb 19th-21st 2015, pp:111-116, ISBN:9678-81-86514-73-3,New Delhi, India.

#### Patents

- Patent on "Secure SCADA" is filed in Indian Patent Office Chennai. Application Number: 5972/CHE/2013. Publication date: 24/06/2016.

#### Invited Lectures, talks and workshops

- Invited talk on "Critical Infrastructure Protection: Cyber Security Challenges and Research Opportunities" VIT-AP University on 9-04-2025
- Invited talk on "Website Design" at Sree Siddaganga PU College for Women, Tumkur on 13-12-2024
- Invited talk on "Usage of ICT Tools" at Sree Siddaganga College of Arts, Science and Commerce, Tumkur on 3-12-2022
- Invited talk on "Fundamentals of Python" at Sridevi college of Engineering, Tumkur, 21-08-2023 to 23-08-2023
- Invited talk on "Basics of Python", at Sridevi college of Engineering, 09-05-2022 to 10-05-2022, Tumakuru.
- Invited talk on "Cyber Security Awareness" at Channabasaveshwara Institute of Technology, Gubbi on 27/4/2020.

- Invited talk on “Security Issues in IACS” during the workshop on ‘Computer Networks and Cyber Security’ sponsored by TEQIP III at Sri Jayachamarajendra College of Engineering (SJCE), Mysuru, Karnataka on 18/7/2018.
- Hands-on training on Wireshark, Cisco Packet tracer and Nmap at Sri Jayachamarajendra College of Engineering, Mysuru, Karnataka on 19/7/2018.
- Invited talk on “Cyber security issues” at Siddaganga Ploytechnique College Tumkur, on 14/10/2018.