



P.E.S. College of Engineering, Mandya - 571401

(An Autonomous Institution, affiliated to VTU, Belagavi)

Faculty Profile

General

Name	Dr Sahana Raj B S
Designation,	Associate Professor
Address for communication	Associate Professor Electronics & Communication Engineering, P.E.S College of Engineering Mandya- 571401
Research Area	Cryptography, IOT.
Contact Number	9632091216
Email ID	sahanagandhi@gmail.com, sahanarajbs@pesce.ac.in



Academic Profile

Educational Qualifications

Degree	College	University	Year of Passing	% ge	Class
Ph. D	PESCE, Mandya	VTU	2023	-	-
M.Tech	PESCE, Mandya	Autonomous under VTU	2014	88/9.55	FCD
B.E.	PESCE, Mandya	Autonomous under VTU	2012	81.3/8.8 8	FCD

Professional Experience

Organization and Department	Designation	Period	Total Experience
PES College of Engineering, Mandya. Electronics and Communication Engineering	Associate Professor	01/08/2023	
PES College of Engineering, Mandya. Electronics and Communication Engineering	Assistant Professor	27/1/2015 to 31/7/2023	8 Years, 6 Months
National Institute of Engineering, Mysore. Electrical and Electronics Engineering	Contract Lecturer	30/7/2014 to 26/1/2015	6 Months

Reports on Academic and Research Activities

Academic Activities

Teaching Records (Details of courses taught)	Basic Electronics, Biometrics, Embedded Systems, Advanced Microcontroller, Microcontroller, DSPAA, C++, Automotive Electronics, Digital Design using Verilog.
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Research Publications in Refereed Journals and Conferences/Symposia

Number of Publications in	National	International
Journals	--	08
Conferences/Symposia	--	06

Research Patents

German Patent Granted with title "Blockchain Supported Searchable Encryption for Electronic Health Records" with IPC G06F 21/60

Book Published

The book titled "Secured Storage and Retrieval of Medical Records using Crypto Systems", by Dr. Sahana Raj B. S and Dr. V. Sridhar, LAP LAMBERT Academic Publishing, Europe. ISBN: 978-620-6-15849-3, 2023.

Other Important Responsibilities Held Currently in the Department

- Website Coordinator from department of ECE.
- Board of Studies (BoS) member for PG during 2022-2025.
- Working in Criteria 2 for NBA.
- Guided under graduate students as a Mentor.

- Involved in framing syllabus for the various academic year.
- I had taken the responsibility in the department as an Industry Visit co-ordinator, Association Secretary, Alumni Coordinator association.
- Involved in all the activities of the department and rendering my service to the department as and when needed.

Other Important Responsibilities Held Currently in the College

- Social-Media Coordinator for the institute.
- Actively involved in the organizing committee for the various institute level programs like orientation day, graduation day and So on.
- Member of Registration committee in ICERECT-2022.
- As a Reviewer for different conferences and journals have successfully reviewed research articles.
- Rendering my service to the Institute as and when needed.

LIST OF PUBLICATIONS

Conference Publications:

1. Raj, S., & Venugopalachar, S. (2022, October). Traitor Tracing in Broadcast Encryption using Vector Keys. In *2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon)* (pp. 1-5). IEEE.
2. B. S. S. Raj and S. Venugopalachar, "A Survey on Healthcare Standards and Security Requirements for Electronic Health Records," *2022 Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT)*, Mandya, India, 2022, pp. 1-6, doi: 10.1109/ICERECT56837.2022.10060831.
3. Sahana Raj, B.S., Sridhar, V. (2020) "Efficiently Revocable Identity Based Broadcast Encryption Using Integer Matrices as keys", Sixth International Conference on Emerging Research in Computing, Information, Communication and Applications: ERCICA 2020, Volume1, ISBN: 978-981-16-1337-1.
4. Sahana Raj B S and Sridhar V, (2021), "User Authentication in Cipher Domain for a Cloud Based Electronic Health Record Access System", is accepted in 2021 Asian Conference on Innovation in Technology (ASIANCON '2021), An International Conference sponsored by IEEE Bombay Section and hosted by Pimpri Chinchwad College of Engineering and Research.
5. PrajwalGowda B.S, Nisarga M A, Rachana M, Shashank S, Sahana Raj B.S. (2020). Paddy Crop Disease Detection using Machine Learning, *International Journal of Engineering Research & Technology (IJERT)*, ISSN: 2278-0181. NCCDS - 2020 Conference Proceedings.
6. Sahana Raj B S, Sowmyashree A N.(2020). A Survey on Electronic Health Record Maintenance Using Blockchain, *ICEECS-2020, Our Hertiage*, ISSN: 0474-9030 Vol-68-Issue-30-February-2020.

Journals Publications:

1. Raj, B. S., & Venugopalachar, S. (2022). Multi-data Multi-user End to End Encryption for Electronic Health Records Data Security in Cloud. *Wireless Personal Communications*, 1-29.
2. Sahana Raj, B.S., Sridhar, V. "Identity Based Cryptography Using Matrices", *Wireless Pers Commun* (2021). Springer Publisher, <https://doi.org/10.1007/s11277-021-08526-9>.
3. A paper with title "Searchable Encryption for Electronic Health Records Based on Order Preserving Encryption Techniques" is under review in the Journal of SN Computer Science, Springer publisher.
4. Kavya M, Meghana K J, Neha Ananth , Nithya Shree, Dr. Sahana Raj B S (2023), A Survey on Smart Crop Protection System during Harsh Climatic Conditions, *International Journal of Scientific Research in Engineering and Management (IJSREM)* Volume: 07 Issue: 07 | July, ISSN: 2582-3930, DOI: 10.55041/IJSREM24320

5. Ahalyesh Gowda M K, Dayananda Raje Urs M R, Deepu Raghavendra, Bhanushree H R, Dr. Sahana Raj B S, Review on Semi-Autonomous Vehicle for Safe Commute, International Journal of Scientific Research in Engineering and Management (IJSREM) Volume: 07 Issue: 07 | July – 2023, ISSN: 2582-3930, DOI: 10.55041/IJSREM24308
6. Sowmyashree A N, Sahana Raj B S.(2020). An Efficient Method for Secure Access of EHR, International Journal for Research in Applied Science & Engineering Technology (IJRASET), ISSN: 2321-9653;Volume 8 Issue VIII Aug 2020.
7. Rashmi P, Rashmitha C M, Shivukumar ,Swathi M D, B S Sahana Raj. (2017) Design of Tele command SOC-IP by AES Cryptographic Method Using VHDL, IDL - International Digital Library Of Technology & Research Volume 1, Issue 3, Mar 2017.
8. Sahana Raj B S, Punith Kumar M B. (2017). FPGA Implementation of High Speed 8bit Vedic Multiplier using Barrel Shifter, IDL- International Digital Library Of Technology & Research, Volume 1, Issue 2, Mar 2017.