CURRICULUM VITAE

Dr. K SOWJANYA

E-mail:sowjanya.kandisa@gmail.com,
ksowjanya.phd2015.mca@nitrr.ac.in

Mobile: +91 7828346829
https://scholar.google.co.in/citations?user=e3q33n4AAAAJ&hl=en

Permanent Address
Qtr. No. 100/D, Railway Colony
Street No. 6, Near Bhilai3 railway station
Dist: Durg, Pin: 490021
Chhattisgarh, India

Presently working as a Post-Doctoral fellow at IIT Hyderabad.

Fields of Research Interest

5G Security: Network Slicing Security, Security in 5G Core.

IoT Security: Attribute Based Encryption, Elliptic Curve Cryptography (ECC), and Lightweight Protocol designing.

IoT Analytics: Big Data Analytics, Machine Learning, Hadoop framework.

Key management in IoT: Lightweight ECC based key management for IoT.

Blockchain: Blockchain in healthcare and education.

Educational Degrees

Year of Passing	Degree	School/Institute	University/Board	Performance
2023	**Post-Doc**	IIT Hyderabad	IITH	In continuation
2020	**Ph.D.**	National Institute of Technology Raipur	Thesis : Issues and Solutions on Data Security and its Applications in Healthcare in the context of Internet of Things.	Awarded
2015	**MTECH(CSE)**	Rungta College of Engineering & Technology, Bhilai	CSVTU, BHILAI	79.9%
2011	**MCA**	Bhilai Institute Of Technology,Durg	CSVTU,BHILAI	84.17%
2008	**BSc. Electronics**	Kalyan college, sector-7 , Bhilai	Pt.RSSU, RAIPUR	75.88%
2004	**12th Class**	Jyoti Vidyalay , Charoda	CGBSE, RAIPUR	79.6%
2002	**10th Class**	Kendriya Vidyalaya , Charoda	CBSE	72.6%

List of Publications

SCI Indexed Journals

1. **K Sowjanya**, Mou Dasgupta, Sangram Ray and Mohammad S. Obaidat, "An Efficient Elliptic Curve Cryptography-Based Without Pairing KPABE for Internet of Things," in IEEE Systems Journal, Vol. 14, Issue: 2, pp: 2154-2163, 2020, DOI: 10.1109/JSYST.2019.2944240. (SCI, IF: 3.931)

2. **K Sowjanya**, Mou Dasgupta and Sangram Ray, "An elliptic curve cryptography based enhanced anonymous authentication protocol for wearable health monitoring systems," in International Journal of Information Security, Vol. 19, pp: 129–146, 2020 (Springer). DOI: 10.1007/s10207-019-00464-9. (SCI-E, IF: 1.988)

3. **K Sowjanya** and Mou Dasgupta, "A Ciphertext-Policy Attribute Based Encryption scheme for Wireless Body Area Networks based on ECC," in Journal of Information Security and Applications, Vol. 54, 2020 (Elsevier). DOI: 10.1016/j.jisa.2020.102559. (SCI-E, IF: 3.872)

4. **K Sowjanya**, Mou Dasgupta and Sangram Ray, "Elliptic Curve Cryptography based authentication scheme for Internet of Medical Things," ," in Journal of Information Security and Applications, Vol. 58, 2021 (Elsevier). DOI: 10.1016/j.jisa.2021.102761. (SCI-E, IF: 3.872)

5. **K Sowjanya**, Mou Dasgupta and Sangram Ray, "A lightweight key management scheme for key-escrow-free ECC-based CP-ABE for IoT healthcare systems," in Journal of Systems Architecture, Vol. 117, 2021 (Elsevier). DOI: 10.1016/j.sysarc.2021.102108. (SCI, IF: 3.777)

Conference Papers

1. **K Sowjanya**, A Singhal and C Choudhary, "MobDBTest: A machine learning based system for predicting diabetes risk using mobile devices," 2015 IEEE International Advance Computing Conference (IACC), pp. 397-402, 2015, Banglore, India.

2. **K Sowjanya** and Mou Dasgupta, "Secure Framework for Ambient Assisted Living System," In Proceedings of Computational Intelligence, Communications, and Business Analytics, (CICBA), pp. 425-440, 2018, Kalyani University, Kalyani. Springer, Communications in Computer and Information Science, Vol. 1031, 2019. (Indexed in: DBLP, SCOPUS).

3. **K Sowjanya** and Mou Dasgupta, "Secure Ambient Assisted Living System using Elliptic Curve Cryptography based CPABE," In Proceedings of 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), IEEE-45670, 2019, IIT Kanpur. DOI: 10.1109/ICCCNT45670.2019.8944521.

4. **K Sowjanya** and Mou Dasgupta, "Big Data based Enhanced Ambient Assisted Living System Framework," In Proceedings of 10th International Conference on Computing,

Communication and Networking Technologies (ICCCNT), IEEE-45670, 2019, IIT Kanpur. DOI: 10.1109/ICCCNT45670.2019.8944522.

5. **K Sowjanya** and Mou Dasgupta, "Survey of Symmetric and Asymmetric Key Management Schemes in the context of IoT based Healthcare System," In Proceedings of First IEEE International Conference on Power, Control and Computing Technologies (ICPC2T), pp: 283-288, IEEE, 2019, NIT Raipur.

6. **K Sowjanya** and Mou Dasgupta, "Provably Secure Lightweight Key Policy Attribute-Based Encryption for Internet of Things," In Proceedings of First International Conference on Machine Learning, Network Security, Image Processing and Data Science (MIND-2019), NIT Kurukshetra. CRC Press, Cloud Security book, First Edition, pp: 146-160, eBook ISBN9780367821555, 2021.

7. **K Sowjanay**, Amit Porwal, Sudhakar Pandey and Pavan Kumar Mishra, "TLBO-based Resource Allocation scheme in 5G H-CRAN," accepted to publish in IEEE Xplore as the proceedings of COMSNET 2022.

Books

1. **K Sowjanya** and Mou Dasgupta, "Risk of Readmission for Diabetes Patients: A Machine Learning Approach: Readmission rate predictor," Glasstree Publication, ISBN: 978-1-5342-9961-0, 2019.

Workshop Attended

1. "Big Data and Analytics" IEEE SMART TECH Metro area workshop series, Hotel Lalit Ashok, Bangalore 26, 27 September 2014.

2. First IEEE Bombay Section Symposium (IBSS) on " Frontiers of Technology: Fueling Prosperity of Planet and People", Usha Mittal Institute of Technology, SNDT, Mumbai, 2015.

3. IEEE Innovains Technologies workshop on "Internet of Things", National Institute of Technology Raipur, 2016.

Course Attended

1. Completed 15 days course on "Big data and Hadoop" from www.edureka.co, Bangalore.

2. Completed 6 days course on "Expert IoT Training" from www.axelta.com, Hyderabad.

3. Completed 6 days course on "IoT Analytics" from www.axelta.com, Hyderabad.

4. Completed 3 days course on "MQTT" from www.axelta.com, Hyderabad.

Awards and Honors

1. Best Paper Award, at 1st International Conference on Machine Learning, Image Processing, Network Security and Data Sciences. 3 - 4 March, 2019, NIT Kurukshetra, INDIA.

2. GATE 2013 Qualified in Computer Science and Information Technology.

3. NET-JRF Qualified in Computer Science and Applications in 2014.

4. MHRD Fellowship during PhD.

5. State First Rank in Pre-MCA Entrance Exam-2008, Chhattisgarh.

Academic Projects

MobDBTest: A machine learning based system for predicting diabetes risk using mobile devices

Front End: Android
Back End: WEKA tool
A novel mobile application based solution for this problem is offered. This mobile app, MobDBTest (*Live Better Life with Diabetes*) will move as an important tool that can help in predicting the risk of diabetes and also provides knowledge about this chronic disease and many more.

Faculty & Student Communication System

Front End: Java
Back End: Oracle 10g
Designed and implemented a communication system between a student and faculty in which a student can register for multiple courses and can download the lectures which the faculty uploads,coding was done Using JAVA Servlet, JSP, JDBC 3.0.

JSNAP-The Image Editor

Front End: Java
Designed and implemented a basic image editor which can perform basic operations like cut ,copy, paste, rotations, shaping etc. Coding was done in JAVA.

Online Shoppe

Front End: ASP.NET
Back End: SQL Server
Designed and implemented a basic online shopping system which helps to buy various items like Electronic, fashionable, kitchen items etc while sitting at home. Coding was done in Asp.Net using VB.

Personal Information
Date of birth: February 23, 1986
Place of birth: Bhilai, Chhattisgrah India
Husband: M Anand
Daughter: M Ananya
Son: M Siddharth
Father: K M K Naidu
Mother: K Anuradha