H.K.ESociety´s

Poojya Doddappa Appa College of Engineering, Kalaburagi

FACULTY PROFILE FORMAT

Personal Details	
Name: Dr. Sujata Terdal	
Designation: Professor	
Department: Computer Science and Engineering	
College Address: Aiwan E Shahi Road,Kalaburagi	
Contact:9448982741	
E-mail id (college mail id): sujataterdal@pdaengg.com	

Areas of Interest	Mobile Adhoc Networks wireless sensor networks, Cloud Computing, Cyber Security, Machine Learning

Subjects Taught	
UG	**PG**
Web Application Security	**Cloud Computing**
Machine Learning	Cryptography and Network Security
Data Science	Mobile Application Development
WebTechnology	Wireless Mobile Networks
Cryptography and Information Security	Operating Systems
OperatingSystems	Advanced Computer Networks
Data Communication	Web Engineering
Computer Networks	

Academic Background				
Degree	**Specialization**	**Name of the Institute**	**University**	**Month and Year of Passing**
Ph.D	Computer Science & Engineering	JNTU,Hyderabad	Jawaharlal Nehru Technological University	December 2014
PG (M.tech /M.E)	Computer Science & Engineering	PDA College of Engineering, Kalaburagi	Visvesariah Technical University , Belagavi	October2001
UG (B.Tech /B.E)	Computer Science & Engineering	PDA College of Engineering, Kalaburagi	Gulbarga University , Gulbarga	June1990

WorkExperience							
NameoftheInstitution		**Position**		**From**		**To**	
PDA College of Engineering, Kalaburagi		Lecturer		Feb1992		Jan 2006	
PDA College of Engineering, Kalaburagi		AssistantProfessor		Feb 2006			
PDA College of Engineering, Kalaburagi		AssociateProfessor					
PDA College of Engineering, Kalaburagi		Professor		June 2016		Till date	
Total Experience	32	**Teaching**	32	**Research**		**Administration**	

ResearchPublications					
Total NumberofPublications	**International Journal**	**National Journal**	**International Conference**	**National Conference**	**Total**
	56	0	14	0	70

RecentPublications(Journals)	
1.	"A SHAP and Lime-based explainable AI solution for predicting chronic kidney diseases", published in the International Journal of Advanced Research in Science and Technology, with Vol:13(6), Pp. 1491-1497 and year of publication 2024 published by Institute of Advanced Engineering and Science (IAES). with DOI: https://doi.org/10.62226/ijarst20241396
2.	"Early-Stage Chronic Kidney Disease Detection using Machine Learning with Bigdata". Algorithms in Advanced Artificial Intelligence: ICAAAI-2023 (1st ed.). CRC Press. ,2024, CRC Press Taylor & Francis, Pp:8, eBook ISBN :9781003529231, https://doi.org/10.1201/9781003529231
3.	"A Review on Early Detection of Chronic Kidney Disease". Journal of Scientific Research and Technology, 2024, Vol:2(4), Pp: 35–43. https://doi.org/10.61808/jsrt96
4.	"Caviar Waterwheel Plant Optimization-Based Feature Selection for Early-Stage Chronic Kidney Disease Big Data". Educational Administration: Theory and Practice, Vol:30 30(5) (2024), Pp: 1206–1215. https://kuey.net/index.php/kuey/article/view/3038, https://doi.org/10.53555/kuey.v30i5.3038

5.	“An effective role-oriented binary Walrus Grey Wolf approach for feature selection in early-stage chronic kidney disease detection”. Int Urol Nephrol (2024)., published in the International Urology and Nephrology, Vol: 56, Pp: 3133–3154, (2024) (Springer Nature Link), https://doi.org/10.1007/s11255-024-04067-9
6.	“Artificial intelligence for early-stage detection of chronic kidney disease”, International Journal of Electrical and Computer Engineering (IJECE),p-ISSN 2088-8708, e-ISSN 2722-2578 with Vol:14(4), Pp:4775-4790 2024. DOI: https://doi.org/10.62226/ijarst20241396
7.	“A research article titled “Detection of the viral disease on the potato foliar and tubers using a machine learning approach", published in the Journal International Journal of Swarm Intelligence Research with Vol:(13), Issue No 3, Pp:9336–9354, and year of publication 2022 published by with DOI: https://doi.org/10.53730/ijhs.v6nS4.10740
8.	“Service-level agreement aware energy-efficient load balancing in cloud using hybrid optimization model”, International Journal of Service Oriented Computing and Applications, Vol:17(2), Pp:77–91, April 2023
9.	“Identify and Predict the Image-Based Potato Tuber and Foliar Viral Diseases using Deep Learning Methodology", published in Computer Integrated Manufacturing Systems with Vol: 28(11), Pp:1381-1400, Quartile-Q2 and year of publication 2022 published by DOI: https://doi.org/10.24297/j.cims.2022.11.097
10.	“Effective Feature Extraction and Classification Method for Potato Foliar and Tuber Disease Detection using Machine Learning", published in the International Journal of Science and Research (IJSR) with Vol: 11(12), Pp: 717-723 Impact factor7.58 and year of publication 2022 published by with DOI: https://doi.org/10.21275/SR221214211148
11.	“Energy Aware Load Balancing Using Ant Colony Optimization Technique for Cloud Data Centers”, InternationalTelematique, Vol 21(1), Pp. 7192–7205, December 2022
12.	**“**Potato Viral Disease Dataset on both Foliar and Tuber” in Mendeley Data, Vol:1 and year of publication 2022 published DOI: http://doi.org/10.17632/rgfhzd5mzw.1
13.	“Survey on Energy Efficient-Load Balancing in Cloud", International Journal of Computer Applications, Vol:184(25), Pp:15-24 August 2022
14.	“Detection of Viral Disease on the Potato Foliar and Tubers using a Machine Learning Approach”,International Journal of Health Sciences (IJHS) Vol: 06(4), Pp: 9336–9354, 2022
15.	“Delay Aware Efficient Mobile Sink Path with Distributed Fault Detection and Recovery in Wireless Sensor Networks” International Journal of Computing and Digital Systems (Scopus Indexed) (unpaid)Vol: 11(1),2022. http://dx.doi.org/10.12785/ijcds/110142.
16.	“Grid-Based Design for Dual Monitoring Applications in WSN With Mobile Sink”, International Journal of Advanced Research in Computer Science Vol:13(4), 2022. https://doi.org/10.26483/ijarcs.v13i4.6894.
17.	“Improved Quality of Services with Intelligent MAC in Wireless Sensor Networks for Mission Critical Applications”, Asian Journal of Electrical Sciences, Vol:11(2), 30–34. https://doi.org/10.51983/ajes-2022.11.2.3546
18.	“Improved Quality of Services with Intelligent MAC in Wireless Sensor Networks for Mission Critical Applications” Asian Journal of Electrical Sciences, Vol:11(2), 30–34. https://doi.org/10.51983/ajes-2022.11.2.3546
19.	“Distributed and Energy Balanced Routing for Heterogeneous Wireless Sensor Network” In: Satapathy, S.C., Bhateja, V., Favorskaya, M.N., Adilakshmi, T. (eds) Smart Computing Techniques and Applications. Smart Innovation, Systems and Technologies, Vol:224. Pp:711–717Springer, Singapore. https://doi.org/10.1007/978-981-16-1502-3_70.
20.	“A Hybrid Optimal Feature Selection Algorithm For Potato Disease Classification ", published in the Journal of Harbin Institute of Technology with Vol:36(12), Pp:52-62, Quartile: Q3 andyear of publication 2021 with DOI: http://hebgydxxb.periodicales.com/index.php/JHIT/article/view/814

21.	"QALPA- An Efficient QoS Aware Hybrid Localization Model Using ParticleSwarm Optimization and Ant Colony Optimization for Cognitive Wireless Sensor Networks," Scopus Quartile- Q2, Int. J. Intell. Eng. Syst., Vol: 14(1), pp. 270–280, Feb. 2021, http://doi.org/10.22266/ijies2021.0228.26.
22.	"Hybrid Max-Min Genetic Algorithm for Load Balancing and Task Scheduling in Cloud Environment", International journal of intelligent engineering and systems, Vol:14, ISSN: 2185-3118, Feb 21
23.	ESRRAK-Efficient Self-Route Recovery in Wireless Sensor Networks Using ACO Aggregation and K-Means Algorithm", In: Satapathy, S.C., Bhateja, V., Favorskaya, M.N.,Adilakshmi, T. (eds) Smart Computing Techniques and Applications. Smart Innovation, Systems and Technologies, vol:224. Springer, Singapore. https://doi.org/10.1007/978-981-16-1502-3_71
24.	"An efficient Qos aware hybrid localization model using particle swarm optimization and ant colony optimization for cognitive wireless sensor networks", International Journal of Intelligent Engineering and Systems, Vol.14(1), 2021 DOI: 10.22266/ijies2021.0228.26
25.	"Energyandtargetcoverageawaretechniqueformobilesinkbasedwirelesssensornetworkswith dutycycling",Int.j.inf.techno.(2021).Vol:13, Pp: 2331–2343, (2021)https://doi.org/10.1007/s41870-021-00794-9
26.	"Energy Effective Data Gathering In WSN: A Hybrid Approach Using K-means and AFSO." Turkish Journal of Computer and Mathematics Education Vol:12(11), 2021.
27.	"A Survey on Bio-inspired Routing Algorithms in Wireless Sensor Network", International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies, Vol :11, Pp:2228-9860 Jan-21
28.	"Cooperative Channel Selection With Q- Reinforcement Learning and Power Distribution in Cognitive Radio Networks." IJACI Vol:12(4) 2021: Pp.22-42. http://doi.org/10.4018/IJACI.2021100102
29.	"A Survey on Bioinspired Cluster-Based Routing and Cognitive Approaches in Wireless Sensor Networks. International Transaction Journal of Engineering, Management, &Applied Sciences& Technologies", Vol:12(3), Pp: 1-12. http://TUENGR.COM/V12/12A3C.pdf DOI:10.14456/ITJEMAST.2021.45 2021
30.	"SMART CITY-ENVIRONMENT AND AIR QUALITY DASHBOARD", International Research Journal of Modernization in Engineering Technology and Science Vol: 2, Pp: 947-951 2582-5208 Aug-20
31.	"Network Intrusion Detection using supervised Machine Learning Techniques",International Journal of Scientific and TechnologyResearch, Vol 8 : ISSN:2277-8616,sep 19
32.	"Evaluation of Machine Learning Algorithm for Crop Yield Prediction: International Journal of Engg. And Advanced Technology, vol: 8, Pp: 4082-4086 2249-8958, Aug-19
33.	"PredictionofTCPCongestionbyUsingMachineLearning", Journal of Innovation in Computer Science and Engineering.2019, Vol: 8(2). ISSN:2455-3506.
34.	"Network Security and Policy Enforcement System", International journal of Computer Science and engineering, Vol:5, Pp:170-174 2347-2693, May-17
35.	"TTPSE:Trusted third party with symmetric encryption towards secured cloud storage",International Journal of Computer science and Engineering, Vol:5, Pp:47-51 2347-2693, May-17
36.	"Comparative Analysis of AODV and WCETT Routing Protocols in Cognitive Radio Network", Journal of Frontiers in Interdisciplinary Research and Technology Development" Vol:1 Feb-14 NA Nov.2018
37.	"Markov Random Field Region Based Text Detection and Segmentation by Stroke Width Transformation" International Journal for Innovative Research in science and technology, Vol:4,Pp:195-200 2349-6010 Jul-17

38.	"An Internet of Things Based Real Time Traffic Light Control to Reduce Vehicles CO2 Emissions", International Research Journal of Engineering and Technology Vol:3, Pp:713-717 2395 -0056 Jul-16
39.	"Data Retrieval with Security For Decentralized Disruption – tolerant Military Networks", International Journal of Emerging Technology and Advanced Engineering, Vol: 6, Pp:171-173 2250-2459 Jun-16
40.	"Performance Evaluation of IEEE 802.11p MAC Protocol for VANETs", International Journal of Science and Research, Vol:4, Pp:711-715 2319-7064, 9, September 2015
41.	"Cloud Computing Based Forensic Analysis for Network Security System",International Journal of Science and Research, Vol:4, Pp:724-728 2319-7064, 9,September 2015
42.	"Information Leak Detection and Prevention" International Journal of Science and Research, International Journal of Science and Research, Vol:4, Pp:1079-1082 2319-7064, 9,September 2015
43.	"Throughput and Power Aware Routing In Wireless Mesh Network with Path Restoration", International Journal of Computer Trends and Technology (IJCTT), Vol:4, Pp:2231-2803,Sep-13
44.	"Position Based Forwarding Routing in Real Time City VANET",International Journal of Advanced Research in Computer Engineering &Technology IJARCET, Vol:2, Pp:2278-1323, Sep-13
45.	"Augmented Reality Application for Live Transform over Cloud" IJRIT International Journal of Research in Information Technology, Vol:3, Pp:2001-5569, Jan-14
46.	"Enhancing quality in MANET using linear Optimization", International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), Vol:1, Pp:2278-1323,Sep-12
47.	"End-to-end delay improvement using multipath routing in manet",International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), Vol:1, Pp:2278-1323, Sep-12
48.	"Traffic estimation in manet using probe packets", International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), Vol:1, Pp:2278-1323, Sep-12
49.	"Traffic Rank Based QoS Routing in Wireless Mesh Network", International Journal of Computer Trends and Technology (IJCTT), Vol:4, Pp:2899-2904,Aug-13
50.	"Pervasive Monitoring of M-Health Care Using Android", International Journal of Science and Research (IJSR), Vol:4, PP:2319-7064, Aug-13
51.	"A Link Quality based Disparity Routing Algorithm for Mobile Ad Hoc Networks", International Journal of Computer Network and Information Security, IJCNIS, Pp:2074-9104 Jul-12
52.	"Enhanced Multipath Routing with Congestion Avoidance for 802.11E based Mobile Ad Hoc Networks", International Journal of AdHoc Sensor & Ubiquitous Computing (IJASUC), Vol:9, Pp:0976-2205 Sep-11
53.	"A Routing Protocol for facilitating Multimedia Transmission over 802.11e based Mobile Ad Hoc Networks", CSNA 2011,CCISVol: 196, Pp:598-607, Jul-11
54.	"A Load Aware Routing Mechanism for Improving Energy Efficiency in Mobile Ad Hoc Networks", International Journal of Computer Applications (IJCA), Vol: 10, Pp:0975-8887Nov-10
55.	"Program Slicing for Refactoring: Static Slicer using Dynamic Analyzer", International Journal of Computer Applications, Vol: 9, Pp:0975-8887, Nov-10
56.	"Enhanced Ad-Hoc on Demand Multipath Distance Vector Routing Protocol (EAOMDV)", International Journal of Computer Science and Information Security, Vol:7, Pp:171-173, Mar-10

Conference

1.	"Predicting Chronic Kidney Disease using Machine Learning in the Early Stages," 2023 International Conference on Integrated Intelligence and Communication Systems (ICIICS), Kalaburagi, India, 2023, Pp. 1-8, IEEE, doi: 10.1109/ICIICS59993.2023.10420988.
2.	"A Preprocessing and Segmentation Approach for Accurate Identification of Diseases in Potato Plant" 2nd International Conference on Cognitive & Intelligent Computing (ICCIC-2022)27-28 December 2022.
3.	"Self adaptive bald eagle search for energy efficient load balancing in cloud system", 2nd International Conference on Cognitive & Intelligent Computing (ICCIC-2022)27-28 December 2022.
4.	"Improved Quality of Services with Intelligent MAC in Wireless Sensor Networks for Mission Critical Applications-IQMAC" at International Conference on Multidisciplinary Research (ICMR-2022) held on 22nd -24th November 2022 at Sharnbasva University.
5.	"Faulty Node Identification and Retrieval in WSN" at International Conference on Multidisciplinary Research (IMR-2022) held on 22nd -24th November 2022 at Sharnbasva University, Kalaburagi.
6.	"Efficient self route recovery in wireless sensor networks using ACO aggregation and K-Means algorithm", International conference on smart computing and informatics, July 21.
7.	"Distributed and energy balanced routing for heterogeneous wireless sensor networks", International conference on smart computing and informatics, Pp: 3442-3453, May-21.
8.	"Potato (Solanum) Crop Diseases, Symptoms and their Management: A Survey" Proceedings of International Conference on Recent Trends in Science & Technology-2020 (ICRTST - 2020). ISBN: 978-1-6654-0117-3, online Presented by: Impact factor: 7.592 Pp. 589-607, ISSN. 2395-0056.
9.	"Reinforcement Learning Based Channel Selection for Design of Routing Protocol in Cognitive Radio Network",International Conference on Computation Systems and Information Technology for Sustainable Solutions (CSITSS 2019), Vol: 4,ISSN: 978-1-7281-2619-7 .
10.	"An IoT Based Approach to Reduce Traffic on Roads in Metropolitan Cities",International virtual conference on artificial Intelligence for IOT 2019,Dec-19.
11.	"A Systematic Review on Load Balancing Techniques in Cloud Computing Environment",International Conference (ICCRAES-2016),Pp:304-309,Oct-16.
12.	"A Review on Scheduling Algorithms in Cloud Environment",InternationalConference (ICCRAES-2016), Pp:298-303, Oct-16.
13.	"Energy-AwareEnergy-Aware Load balancing Routing Protocol for Mobile Ad Hoc Networks", Proceedings of RTSCITVol:9 Pp:251-255, Jan-10.
14.	"A Load Balancing Multipath Routing Protocol for Mobile Ad Hoc Networks", Proceedings of NCISEPp:22-25, Feb-10.

Patents	
S.No.	**Details of the patents**
1.	"Early Prognosis Of Kidney Diseases Along With Feature Extraction Technique Through Classification Models", 202441000724, application no, filing date 4/01/2024, published date 9/02/2023.
2	"Hierarchical Reinforcement Learning based channel Selection for Routing in Congnitive Radio Networks" 202121041549 application no, filing date 15/09/2021, Date of Grant: 26/08/2024

Memberships in Professional Bodies	
S.No.	**Name of the Professional Body**
1.	IndianSocietyforTechnicalEducation(ISTE)
2.	Institution of Electronics and Telecommunication Engineers(IETE)

Programs Organized	
1.	Convener for Inter Collegiate Technovision 2024 project Exhibition, PDA College of Engineering
2.	Organized a one-day seminar on **"Entrepreneurship and Innovation as a Career Opportunity",** for Undergraduate and postgraduate students on 4th November 2023.
3.	One-day seminar on **"Introduction of Intellectual Property in Academics**" on 16th November 2023
4.	Coordinator, One Week STTP on **Block Chain Technology and its Applications**, 22nd March to 26th March 2021
5.	Coordinator, One Day Seminar on **CyberSmart Citizen**,20th Dec 2020 for the General Public
6.	MainCoordinator, "**InductionProgramme",** phase II for BE I year students, from 13/05/2021 to 19/5/2021
7.	Main Coordinator, **"Induction Programme"** phase I for BE I year students, from 11/12/2020 to 19/12/2020
8.	Main Coordinator, **Induction Programme** for BE I year Students,6/8/2019 to 17/8/2019
9.	Co-Coordinator for **NIRMAN2019**,College Level Cultural Festival, Co-Coordinator 30th , 31st March2019
10.	Coordinator for One Week STTP on "**Automation Using Internet of Things**", 23rd Jan to27thJan2017

Training Programmes Attended			
Sl. No	**Title**	**Date**	**Place**
1.	Federated machine learning	21st to 25 Nov 2023	Vardhaman College of Engineering Hyderabad
2.	Introduction to Cyber Security	22 May to 26th May 2023	VTU, RC, Muddenahalli
3.	Machine Learning and IoT applications using MATLAB	5th to 8th April 2023	PDACEK
4.	Cyber Forensics And Cyber Security	15th June-19th June2020	GNITS, Hyd
5.	Malware Trends And Analysis Coe, Cyber Security	8th July 2020	Gok,Banglore
6.	Contemporary Research Trends in Electronics and Communications and Computer Science	06th to10th July2020	VTU,Kalaburagi
7.	Research Trends And Challenges In Computer Science	13th-17thJuly2020	Vvce,Mysuru

8.	Build Dynamic Web Applications Using Servlets And Jsp	20thJuly2020	Ewit, Blore
9.	Machine Learning on a Distributed Platform	27thto31stJuly2020	IEEE Society, RVCE
10.	Opportunities and Challenges of Post Pandemic Era: An Overview	10th-14thAug2020	BMSIT, Blore
11.	Block chain Technology and its Applications	17thto21stAugust2020	JNNCE, Shivamogga
12.	Data Sciences	07th to 11th Sept 2020	ATAL, University Of Hyd
13.	Effective Teaching And Learning In OBE & Life Skills For Engineers	9th March 2019	PDACEK
14.	Cyber Security	14th to 18th March2019	PDACEK
15.	Cyber Security & Forensic Investigation Tools & Techniques	22nd to 26th July2019	Engineering Staff College Of India, Hyderabad
16.	Role Of IoT In Research & Industrial Applications	23rd - 24th Aug2019	PDACEK
17.	Biomedical Signal Processing And Analysis For Cognitive Neuro Science Study	1st to 2nd Jan 2018	PDACEK
18.	Machine Intelligence For Data Analysis Using Python	4th to 9th April 2018	PDACEK,Klb
19.	Outcome Based Education: A Transformational Approach For Quality Education	21st and 23rd June, 2018	PDACEK,Klb
20.	Data Analytics Using R	7th - 11th March2017	PDACEK,Klb
21.	Software Testing And Quality Assurance	21st To 23rd March 2017	PDACEK,Klb
22.	FeaturingUserInterfacesUsingPython	24th To 26th March 2017	PDACEK,Klb
23.	Real-Time Data Warehousing And Visualization: Tools And Technology	25th & 26th March2017	PDACEK,Klb
24.	Use Of E-Resources For Teaching And Research	19th May2017	PDACEK,Klb
25.	Automation Using the Internet Of Things	23rdto28thJan2016	PDACEK,Klb
26.	Pedagogical Skills Training For Engineering Teachers	27th Feb to 3rd March2016	PDACEK,Klb

Special Lectures Presented	
1.	ResourcePersonforFDPon**CyberSecurity andForensics**7thto11thDecember2020
2.	Resource Person for FDP on **Cyber Security held** on 14thto 18th March 2019, Topic:**"BlockChain Technology"**

Role & Responsibilities	
1.	Head o f Department
2.	Dean of R & D
3.	Programme Coordinator
4.	Dean Student Affairs
5.	Nirman Co Coordinator
6.	Induction program coordinator
7.	PG Coordinator Computer Network Engineering
8.	PG coordinator Computer Science Engineering
9.	Technovision projects Exhibition coordinator