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Dr. K SHYAMALA



Professor

Department of Computer Science & Engineering

University College of Engineering, Osmania
University

PhDs Awarded: 5

Citations: 68

h-index: 4

Profile: [Google Scholar](#) [Linkedin](#)

email: [Personal](#) [Office](#)

RESEARCH INTERESTS: parallel algorithms, cad algorithms for fpgas, routing protocols for wireless sensor networks and manets, gpu computing

EDUCATION DETAILS

Indian Institute of Technology Madras, Chennai <i>PhD in Computer Science and Engineering</i>	2013
Osmania University, Hyderabad <i>M.Tech in Computer Science and Engineering</i>	2000 - 2002
Osmania University, Hyderabad <i>B.E in Computer Science and Engineering</i>	1992 - 1996

EXPERIENCE

Dean <i>Faculty of informatics</i>	Sep 2023 - present
Director <i>Directorate of academic audit celt, Osmania University</i>	May 2021 - Jan 2023
Head <i>Department of CSE, University College of Engineering, Osmania University, Hyderabad</i>	2021 - 2023
Dean <i>Faculty of Informatics</i>	Apr 2019 - Aug 2021
Professor <i>Department of CSE, University College of Engineering, Osmania University, Hyderabad</i>	2014 - present
Associate Professor <i>Department of CSE, University College of Engineering, Osmania University, Hyderabad</i>	2007 - 2014
Assistant Professor <i>Department of CSE, University College of Engineering, Osmania University, Hyderabad</i>	1997 - 2007

Lecturer*Department of CSE, Q Q Govt Polytechnic College, Hyderabad*

1996 - 1997

Administrative Positions held

2015 - 2019

Director, University Computer Center, Osmania University

Jun 2019 - present

Director, Centre for Cyber Security and Cyber Law

Oct 2016 - present

Coordinator, QIP Admissions, University College of Engineering, OU

Jul 2017 - 19

Head, Dept of Computer Science and Engineering, Osmania University, Hyderabad

Oct 2016 - Jan 2019

Chairperson, Board of Studies (IT), Osmania University

Aug 2008 - 16

Addl Chief Warden, University Girls Hostel, Osmania University

Jan 2013 - 16

Chairperson, Board of Studies in CSE (A), University College of Engineering

2014 - 19

Nodal Officer, TEQIP-II and TEQIP-III

PUBLICATIONS

1. P. Rajeshwari, **K. Shyamala**, "Deep Learning based Super-Resolution for Accurate COVID-19 diagnosis in Chest CT Images", 2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSSES), 2023. [Open](#)
2. J. Suman, **K. Shyamala**, G. Roja, N. Pranay, "Testbed Implementation of MAX LEACH Routing Protocol and Sinkhole Attack in WSN", Proceedings of Third International Conference on Advances in Computer Engineering and Communication Systems: ICACECS 2022, pp 153-162, 2023. [Open](#)
3. B.Sandhya. Rani, **K. Shyamala**, "Secure EELB-AOMDV Protocol to Mitigate Blackhole Attack", 9th International Conference on Advanced Computing and Communication, 2023. [Open](#)
4. P. Rajeshwari, **K. Shyamala**, "Pixel attention based deep neural network for chest CT image super resolution", International Conference on Advanced Network Technologies and Intelligent, 2022. [Open](#)
5. D. Rajeshwari, **K. Shyamala**, "MRI Image Based Relatable Pixel Extraction with Image Segmentation For Brain Tumor Cell Detection Using Deep Learning Model", Journal of Positive School Psychology, 2022. [Open](#)
6. S. Sabeti, **K. Shyamala**, "Detection of Black Hole Attack on Max LEACH Protocol", IEEE 2022 International Mobile and Embedded Technology Conference (MECON), 199-204, 2022. [Open](#)
7. S. Sarikonda, **K. Shyamala**, P. Nigam, "Test bed implementation of energy efficient load balanced ad-hoc on demand multipath distance vector routing protocol in wireless sensor networks", SSRN 4015626, 2022. [Open](#)
8. R. Dharavath, **K. Shyamala**, "MRI Image Based Relatable Pixel Extraction with Image Segmentation for Brain Tumor Cell Detection Using Deep Learning Model", Asian Journal For Convergence In Technology (AJCT) ISSN-2350-1146 7 (3),pp 31-37, 2021. [Open](#)
9. Roja Guntuku, **K. Shyamala**, Pranay Nigam, "Design and testbed implementation of MAX LEACH protocol using SENSEnuts", 2021 IEEE Bombay Section Signature Conference (IBSSC), 2021. [Open](#)

10. **K. Shyamala**, "A Survey on Segmentation & Clustering techniques to detect brain tumor for MRI", IEEE 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON), 2021 . [Open](#)
11. P Rajeshwari, **K. Shyamala**, "Chest CT Image Super Resolution using Deep Learning Network Models", IEEE 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON), 2021. [Open](#)
12. J Suman, **K. Shyamala**, G Roja, "Improving network lifetime in WSN's based on maximum residual energy", IEEE 2021 2nd International Conference for Emerging Technology (INCET), 2021. [Open](#)
13. Chavala Mutyala Rao, **K. Shyamala**, "Analysis and Implementation of a Parallel Computing Cluster for Solving Computational Problems in Data Analytics", IEEE 2020 5th International Conference on Computing, Communication and Security (ICCCS), 2020. [Open](#)
14. B Sandhya Rani, **K. Shyamala**, "Energy efficient load balancing approach for multipath routing protocol in ad hoc networks", IEEE 2019 Second International Conference on Advanced Computational and Communication Paradigms (ICACCP), 2019. [Open](#)
15. Govardhan Rao, **K. Shyamala**, S.Ramachandram, "Parallel Implementation of Cryptographic Algorithm: AES using Open CL algorithm on GPUs", IEEE International Conference on Inventive Systems and Control (ICISC), 2018. [Open](#)
16. Humera Shaziya, **K. Shyamala**, "Design and Implementation of Hand Written Digits Classification on Graphical Processing Unit", IEEE International Conference on Communication and Signal Processing (ICCSP), 2018. [Open](#)
17. Humera Shaziya, **K. Shyamala**, "Automatic Lung Segmentation on Thoracic CT Scans Using U-Net Convolutional Network", IEEE International Conference on Communication and Signal Processing (ICCSP), 2018. [Open](#)
18. **K. Shyamala**, Raj Kiran K, Rajeshwari, "Design and Implementation of GPU-based Matrix Chain Multiplication Using C++ AMP", IEEE International Conference on Electrical, Computer, and Communication Technologies (ICECCT'17), 22-24 Feb 2017. [Open](#)
19. **K. Shyamala** and Mallesh Dasari, "On Adaptive Motion Estimation in Video Coding Based on Video Content Analysis", IEEE International Conference on Advances in Computing,

Communications and Informatics (ICACCI'16) 21-24 September 2016. [Open](#)

20. **K. Shyamala** and P Ravibabu, "Energy Based Multipath Routing in MANETs", IEEE International Conference (INDICON 2015) on Electronics, Energy, Environment, Communication, Computer, Control, (E3-C3), New Delhi, 2015. [Open](#)
21. Ravi Babu P, **K. Shyamala**, Srinivasa Rao K, "Monte Carlo Simulation on GPGPU using Prefix Computation Method", IEEE International Conference on Electrical, Computer and Communication Technologies, 5-7 March 2015. [Open](#)
22. **K. Shyamala** and V Kamakoti, "ReMap: A Novel Peephole Optimization Technique for LUT-based FPGAs", Journal of Low power Electronics, Vol 10, No.1, pp 20-31, March 2014. [Open](#)
23. **K. Shyamala** and Lokhande Suresh Kumar, "Efficient Backup Routing Scheme in AODV With Unidirectional links", IEEE International Conference on Computing and Communication (INDICON), Dec 2011. [Open](#)
24. **K. Shyamala** and Lokhande Suresh Kumar, "Power-based Routing in MANETs", National Conference on Communication, Computation, Control and Automation, pp 1-4, April 2010. [Open](#)
25. **K. Shyamala** and Lokhande Suresh Kumar, "Energy-based Multipath Routing in MANETs", National Conference on Communication, Computation, Control and Automation, pp 11-16, April 2010. [Open](#)
26. **K. Shyamala**, V Kamakoti and Vimal Kumar J, "Novel SAT-based Peak Dynamic Power Estimation for Digital Circuits", Journal of Low Power Electronics, Vol. 5, No.4, pp 1-10, 2009. [Open](#)
27. **K. Shyamala**, V Kamakoti and Shoab K, "Peak Dynamic Power Estimation for FPGA-mapped Digital Designs", International Symposium on VLSI Design And Test 2009, pp 151-164. [Open](#)
28. **K. Shyamala**, Suresh Kumar Lokhande, Ravi babu P, "Instruction Prefetching using Basic block Prediction", IEEE International Conference on Electronics Design, 2009, pp 12-16. [Open](#)
29. **K. Shyamala** and Dr K.V.K . K Prasad, " VLSI Design- A Comprehensive Coverage of VLSI Implementation Technologies, Electronic Design Automation Tools and FPGA Design", Black Book Series, Dream tech Press, pp 1-350, 2014. [Open](#)

30. Suresh Chandra Satapathy, K Srujan Raju, **K. Shyamala**, Margarita, N Favorskaya, "Advances in Decision Sciences, Image Processing, Security and Computer Vision", International Conference on Emerging Trends in Engineering (ICETE), Vol. 1, 2019. [Open](#)
31. S. Jonnalagadda, **K. Shyamala**, G. Roja, "Energy-efficient routing in WSN: a review", ECS Transactions, Vol 107, Issue 1, 1111, 2022. [Open](#)

TEACHING

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STUDENTS

PhD STUDENTS

Name	Roll number	Area	Date of Joining	Title
D.Rajeshwari	560505574001	Image processing	23/11/2015	Automatic Detection of Brain Tumor through MR Images using GPU's.
B.Sandhya Rani	-	Ad-hoc Networks	28-07-2016	Energy Efficient and Secure Routing Protocol for Ad-hoc Networks
Chavala.Mutyala Rao	-	Parallel Computing	28-07-2016	Analysis and Implementation of Parallel Computing Cluster for Solving Computational Problems in Data Analytics.
Kothapalli Mandakini	-	Data mining	30-03-2017	A comparison of Approaches for Large-Scale Data Mining
S Maruthi	-	Cyber Security	-	-
P.Rajeshwari	-	Image processing using Deep learning	30-03-2017	Single image Super resolution for chest x-ray medical image enhancement using Deep learning models
Humera Shaziya	-	Deep learning for medical	28-7-2016	-

Name	Roll number	Area	Date of Joining	Title
		imaging		
J.Suman	1005-2017-3051	Image processing	2018-19(AY)	"Power and Energy-Aware Secure Routing protocol in Wireless Sensor Networks".
Kamelia Namdarpour	-	Image Processing	23/02/2016	-
D.Sandhya Rani	-	Computer Vision using Deep Learning	28/03/2017	-

MTech STUDENTS

Name	Roll number	Title	Duration
Malakapuri Mahesh	100517742207	Face Detection and Stress Recognition using kera's	2017-2019
N.Meghana	100519742208	WSN	Oct 2020 - June 2021
B. Saideepthi	100518742303	building a templated approach to convert a visual design for landscape to a portrait.	10 months
Harshika Vakulabharanam	100518742212	Improving the lifetime of Wireless Sensor Networks	Jan 2020 - September 2020
A.Rachana	100519742209	-	December to may

Name	Roll number	Title	Duration
Pranay Nigam	1005-19-742310	Removal of Pattern Lock in Android Mobiles	-
K.Haritha	100519742116	Early stage lung cancer detection and classification using feed forward neural networks	2020-2021
Ravali Boppa	1005-18-742202	Skill Matrix	2019-2020
D pranay Kumar	100518742121	Aircraft simulation system integrated standby instrument system	2018-2020
Samira	100518742123	security issues in wireless sensor network	2018-2019

WORKSHOPS AND CONFERENCES

Organized:

1. Convener of 3-day IEEE International Conference on Computing and Communication Technologies (ICCT '14) during 11-13 December 2014.
2. Coordinator of 2-day National workshop on Network Security Championship, jointly organized by the IIT Bombay and Dept. of Computer Science and Engineering, July 2013.
3. Coordinator of 2-day National Workshop on Adobe, jointly organized by the Dept. of Computer Science and Engineering and ACM student chapter, Oct 2013.
4. Coordinator of 5-day Faculty Development Program on MASTER TRAINING IN FSIT Technical Skills Under TEQIP-II , jointly organized by NASSCOM and SPFU at University College of

Engineering , OU , Hyderabad. during 21st - 28th October 2013.

5. Coordinator of 3-day National Workshop on Embedded Systems, jointly organized by the Dept. of Computer Science and Engineering and Institute of Government Polytechnic College, during 26-28 June 2008.
6. Coordinator of 2-day National Workshop on “Embedded Systems”, organized by the Dept. of Computer Science and Engineering, during 16 -17 March 2009.
7. Coordinator of 2-day National Workshop on “Soft Computing”, organized by the Dept. of Computer Science and Engineering, during 30-31 March 2009.
8. Coordinator of 21-day Short term course on “Refresher Course in IT Education”, organized by the Academic Staff College, Osmania University, 2010.
9. Staff Co-ordinator of INFINITY 2008 and 2009: A National Level Technical Symposium organized by the students of Dept. of Computer Science and Engg, University College of Engg, OU, 2008 and 2009
10. Staff Co-ordinator of INFINITY 2011 and 2012: A National Level Technical Symposium organized by the students of Dept. of Computer Science and Engg, University College of Engg, OU, 2011 and 2012.
11. Teaching Assistant at Indian Institute of Technology, Madras Assisted in Research laboratory for the course CAD for VLSI, Digital Systems Testing and Testable Design and Computer Architecture (2005-2006).
12. Coordinator of Two-day National Workshop on “Heterogeneous Computing: Platforms, Tools and Applications”, jointly organized by Department of Computer Science and Engineering and Department of Electronics and Communication Engineering, during 31 August 2012 – 1 September 2012.

Attended:

1. Attended Two-Day Master Trainer/Evaluator on Outcome-based Education organized by NBA, New Delhi at Suresh Gyan Vihar University, Jaipur. (18-19 Feb 2013)

2. Participated in Workshop on Outcome based Accreditation Process, at NMIMS, Shirpur campus, Maharashtra. (15-17 March 2013).
3. Participated in 10-day FDP program on Foundation Skills in IT (FSIT) at JNTUH, Hyderabad.(19 – 26 August 2013)
4. Participated in Two-Day TEQIP Conclave at IIIT, Hyderabad. (30-31 August 2013)
5. Six-Day Training Program on Pedagogical training at ESCII, Hyderabad. (20-25 Jan'2014)
6. Two-Weeks Faculty Development Program in Entrepreneurship sponsored by DST, NSTEDB at EDC, UCE, OU (30-12-2013 to 10-01-2014)
7. Chaired as Session at National Conference on Computer Networks and Information Security, Vasavi College of Engineering, Hyderabad. (4th March 2014).
8. Participated in 5-day Training program on Management Capacity Enhancement program at IIM-Kozhikode during 5-10 December 2016.

Lectures Delivered:

1. Lecture on” Introduction to Computer Fundamentals and Organization” at Refresher Course on IT Application organized by Moulana Azad Urdu University, Hyderabad on 6-05-2010.
2. Lecture on” Introduction to Computers”, at Faculty Development Program organized by UGC-Academic Staff College, OU on 25-08-2010.
3. Lecture on “C++ AMP FOR C++ Developers”, at National Symposium on Heterogeneous Computing: tools and Platforms organized by AMD and Dept of ECE on 01-09-2012.
4. Lecture on “FPGA-based Digital Design” at One-Week Faculty Development program on Recent Advances in VLSI organized by Dept of ECE, UCE(A), OU, Hyderabad on 10-06-2014.
5. Lecture on “Introduction to Computing Technologies” at Two Week STTP on Emerging Trends in Mobile and Cloud Computing at CBIT, Hyderabad on 29-12-2014.

6. Lecture on “Parallel Architectures: tools and techniques using C++ AMP”, at A Three-Day Workshop On Parallel and Distributed Computing organized by MVSR Engg College, Hyderabad on 21-01-2016.
7. Lecture on “Introduction to Parallel Architectures”, organized by Bharat Institutions on 20-03-2015.
8. Lecture on “Parallel Computer Architectures” organized by Loyola Academy Degree And P.G College, Hyderabad on 11-09-2015.
9. Lecture on “ Parallel Computing : Research Issues and Case Study”, at Three-Day National Workshop On Research Methodologies organized by Stanley College of Engineering and Technology, Hyderabad. on 24-02-2016.
10. Delivered a Lecture on “Python Programming Basics”, at 5-day Workshop on Python Programming, organized by Dept of Mathematics, Osmania University, Hyderabad.

CONTRIBUTIONS

Department level:

1. Technical Program Chair for 3-day International Conference on Emerging Trends in Engineering, 2018 organized by OUCE Alumni Association
2. Technical Program Chair for 3-day IEEE International Conference on Innovative Technologies in Engineering, 2017.
3. Convener of 3-day IEEE International Conference on Computing and Communication Technologies (ICCT '14) during 11-13 December 2014.
4. Departmental Convener for M. Tech (CSE) admissions (2001-2003, 2009-2011, 2013)
5. Faculty advisor for the M Tech (CSE and PDS) students (2008 – till date)
6. Departmental Co-ordinator (NBA): Involved in preparation of NBA - SelfAssessment Report (UG and PG) of the CSE department.

7. Involved in curriculum development since 2007 as Member/Invitee BOS in CSE(A), CSE (University) and IT.

College/University Level/State Level:

1. Chairperson, Board of Studies in CSE (A) (2013-2016)
2. Assistant Chief Warden for University Girls Hostel (2008- 2016)
3. Chairperson, Board of Studies in IT.
4. Director, University Computer Center, Osmania University
5. Member of Telangana State Council of Higher Education, Hyderabad.
6. Coordinator, QIP-Admissions, Osmania University