



**Dr. K. Shyamala**

Professor

## About

About details

## Research Guidance:

 Resources

M.Tech Projects: 23

PhD Students : 8

## Research Projects:

Design and Implementation of Parallel Algorithm to find Minimum Spanning Tree for Large Graphs

Power and Energy-Aware Secure Routing protocol in Wireless Sensor Networks

## EDUCATION

### Indian Institute of Technology Madras, Chennai

*PhD in Computer Science and Engineering* • 2013

Details of the program

### Osmania University, Hyderabad

*M.Tech in Computer Science and Engineering* • 2000 - 2002

Details of the program

### Osmania University, Hyderabad

*B.E in Computer Science and Engineering* • 1992 - 1996

Details of the program

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## **WORK EXPERIENCE**

### **College**

*Designation* • Duration

### **Company**

*Designation* • Duration

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## **WORKSHOPS AND CONFERENCES**

### **ORGANIZED:**

Convener of 3-day IEEE International Conference on Computing and Communication Technologies (ICCT '14) during 11-13 December 2014.

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.

Coordinator of 2-day National Workshop on Adobe, jointly organized by the Dept. of Computer Science and Engineering and ACM student chapter, Oct 2013.

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.

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.

Coordinator of 2-day National Workshop on "Embedded Systems", organized by the Dept. of Computer Science and Engineering, during 16 -17 March 2009.

Coordinator of 2-day National Workshop on "Soft Computing", organized by the Dept. of Computer Science and Engineering, during 30-31 March 2009.

Coordinator of 21-day Short term course on "Refresher Course in IT Education", organized by the Academic Staff College, Osmania University, 2010.

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

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.

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).

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:**

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)

Participated in Workshop on Outcome based Accreditation Process, at NMIMS, Shirpur campus, Maharashtra. (15-17 March 2013).

Participated in 10-day FDP program on Foundation Skills in IT (FSIT) at JNTUH, Hyderabad.(19 – 26 August 2013)

Participated in Two-Day TEQIP Conclave at IIIT, Hyderabad. (30-31 August 2013)

Six-Day Training Program on Pedagogical training at ESCII, Hyderabad. (20-25 Jan'2014)

Two-Weeks Faculty Development Program in Entrepreneurship sponsored by DST, NSTEDB at EDC, UCE, OU (30-12-2013 to 10-01-2014)

Chaired as Session at National Conference on Computer Networks and Information Security, Vasavi College of Engineering, Hyderabad. (4th March 2014).

Participated in 5-day Training program on Management Capacity Enhancement program at IIM-Kozhikode during 5-10 December 2016.

#### **LECTURES DELIVERED:**

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.

Lecture on “Introduction to Computers”, at Faculty Development Program organized by UGC- Academic Staff College, OU on 25-08-2010.

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.

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.

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.

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.

Lecture on "Introduction to Parallel Architectures", organized by Bharat Institutions on 20-03-2015.

Lecture on "Parallel Computer Architectures" organized by Loyola Academy Degree And P.G College, Hyderabad on 11-09-2015.

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.

Delivered a Lecture on "Python Programming Basics", at 5-day Workshop on Python Programming, organized by Dept of Mathematics, Osmania University, Hyderabad.

## **CONTRIBUTIONS**

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### **Department level:**

Departmental Convener for M. Tech (CSE) admissions (2001-2003, 2009-2011, 2013)

Faculty advisor for the M Tech (CSE and PDS) students (2008 – till date)

Departmental Co-ordinator (NBA): Involved in preparation of NBA - SelfAssessment Report (UG and PG ) of the CSE department.

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

### **College/University Level/State Level:**

Chairperson, Board of Studies in CSE (A) (2013-2016)

Assistant Chief Warden for University Girls Hostel (2008- 2016)

Chairperson, Board of Studies in IT.

Director, University Computer Center, Osmania University

Member of Telangana State Council of Higher Education, Hyderabad.

Coordinator, QIP-Admissions, Osmania University

## RESEARCH PUBLICATIONS

### Publications in International Journals:

*Shyamala K* 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. [↗](#)

*Shyamala K*, 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, Dec 2009. [↗](#)

### Publications in International Conference:

*Shyamala K*, V Kamakoti and Shoab K, "Peak Dynamic Power Estimation for FPGA- mapped Digital Designs", International Symposium on VLSI Design And Test , July 2009, pp 151-164. [↗](#)

*Shyamala K*, Suresh Kumar Lokhande, Ravi babu P, "Instruction Prefetching using Basic block Prediction", IEEE International Conference on Electronics Design, Dec 2009, pp 12-16. [↗](#)

*Shyamala K*, and Lokhande Suresh Kumar, "Efficient Backup Routing Scheme in AODV With Unidirectional links", IEEE International Conference on Computing and Communication (INDICON), Dec 2011. [↗](#)

Ravi Babu P, *Shyamala K*, 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. [↗](#)

*Shyamala K* and P Ravibabu, "Energy Based Multipath Routing in MANETs", 12th IEEE International Conference (INDICON 2015) on Electronics, Energy, Environment, Communication, Computer, Control, (E3-C3), New Delhi during 17th -20th Dec 2015. [↗](#)

*Shyamala K* and Malleshham 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. [↗](#)

*Shyamala K*, 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. [↗](#)

### Publications in National Conference:

**Shyamala K**, and Lokhande Suresh Kumar, “Power-based Routing in MANETs”, National Conference on Communication, Computation, Control and Automation, pp 1-4, April 2010. [↗](#)

**Shyamala K**, and Lokhande Suresh Kumar, “Energy-based Multipath Routing in MANETs”, National Conference on Communication, Computation, Control and Automation, pp 11-16, April 2010. [↗](#)

### Books Published:

**Shyamala K** 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. [↗](#)

## Teaching

List of 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

NAME	ROLL NUMBER	AREA	DATE OF JOINING	TITLE
				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 imaging	28-7-2016	-
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	-

#### List of MTech students

NAME	ROLL NUMBER	TITLE	DURATION
Malakapuri Mahesh	100517742207	Face Detection and Stress Recognition using kera's	2017-2019

NAME	ROLL NUMBER	TITLE	DURATION
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
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