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Education

Doctor of Philosophy, (1997)

Dept. of Electrical Engineering,
Indian Institute of Science, Bangalore, India.
Dissertation: Stochastic Learning Algorithms with Improved Speed Performance.

Master of Engineering (1992)

Dept. of Electrical Engineering,
Indian Institute of Science, Bangalore, India.
Dissertation: Simulated Annealing based Ordering and Scheduling Strategies for Power System Matrices.

Bachelor of Engineering (1989)

Electronics & Communication Engineering,
P.E.S. College of Engineering, University of Mysore, India.
Dissertation: Microprocessor based Universal Interface Controller for CNC to machine interface.

Experience

Cofounder and Director (2010 - Present)

Amplebit Energy Solutions Pvt. Ltd., Bangalore
The company designs, develops and deploys solutions and services based on IoT & MI for Energy Efficiency in buildings, with specific hocus on Heating, Ventilation & AC.
www.amplebitenergy.com

Cofounder and Director (2007 - Present)

Amplebit Technologies Pvt. Ltd., Bangalore
The company provides products and services in the Broadband Telecommunication area

Mentor and Coach – Lean Startup and Entrepreneurship (2019 - Present)

Gopalakrishnan Deshpande Foundation
<http://www.gdc-iitm.org/>

Mentor – Ramaiah Evolute (Aug 2021 - Present)

CEO – Ramaiah Evolute (Dec 2022 – Present)

Ramaiah Evolute incubates high-tech, cross-disciplinary, early stage startups with focus on accelerated growth and early market traction
<http://www.ramaiah-evolute.com/>

Sasken Technologies Ltd., Bangalore (1997 – 2007)

1. Wired Broadband Division Program Manager (2004 –2007) Products Division,
2. Program Manager (2003 –2004) Semiconductors Business Unit,
3. Senior Solutions Architect (2001 –2003) Semiconductors Business Unit,
4. Project Leader (2000 - 2001) Internet Access Solutions
5. Project Leader (1998 - 2001) Broadband Access Technologies,
6. Senior Software Engineer (1997 - 1998) Broadband Access Technologies,

Others

1. Member – Academic Council, Member – Internal Quality Assessment Committee, Member – Board of Studies (Dept. of ECE) - PESCE Mandya (Deemed University)
2. Member – Board of Studies, Dept. of Computer Science, MSRIT Bangalore (Deemed University)
3. Visiting Faculty Member & Research Guide – Dept. of ECE, SJCE Mysore (Deemed University)
4. Visiting Faculty Member – Ramaiah Institute of Management
5. Member – Board of Studies, Dept. of EE, NMIT, Bangalore

Publications

1. Parallel Algorithms for Modules of Learning Automata, (with Prof. Thathachar), IEEE Transactions on Systems Man and Cybernetics, Part II - Cybernetics, pp. 24-33, Vol. 28, No. 1, Feb. 1998.
2. Global Boltzmann Perceptron Networks for Distribution Learning, (with Prof. Thathachar), IEEE Transactions on Neural Networks, pp. 1090-1098, Vol. 10, No. 5, 1999
3. Solution of Goore Game using Modules of Learning Automata, (with Prof. Thathachar), Journal of Indian Institute of Science, Jan.-Feb. 1997, 76, 47-61.
4. Online learning of Probability Distributions using Examples, (with Prof. Thathachar), Proceedings of 5th IEEE Symposium on Intelligent Systems, Nov. 1996.
5. An Algorithm for Channel Equalization with Adaptive Tap Position Control, (with Dr. P G Poonacha), European Signal Processing Conference, Greece, Sept. 1998.
6. Online Algorithms for Modeling Distributions using Examples, (with Prof. Thathachar), Proc. International Conf. on Information, Communication and Signal Processing, Singapore, 1997, 1315-1318
7. A Minimum Variance Single Frequency Estimator using Recursive Least Squares Estimate of Noise Statistics, (with Kaushik Barman), 1998 Midwest Symposium on Circuits and Systems, Notre Dame, Indiana.
8. Learning Algorithms with State Feedback (with Prof. Thathachar), Proc. 6th IEEE Symposium on Intelligent Systems, Bangalore, Nov. 1997, 98-104
9. Parallel Algorithms for a Stack of Learning Automata (with Prof. Thathachar), Proc. 4th IEEE Symposium on Intelligent Systems, Nov. 1994, Bangalore
10. Comparison of Minimum Degree and Modified Minimum Deficiency Heuristics for Power System Matrices (with Prof. Jenkins), Proc. National Power Systems Conference, Dec. 1996.
11. Peak to average power reduction in multicarrier communication systems (with Amit Verma), International Conference on Personal Wireless Communication, Jaipur, India, 1999.
12. A method of equalization for multicarrier communication systems (with Kaushik Barman), National Communications Conference, IIT Kharagpur, India, 1999.
13. Cost-effective DSL Solutions for Developing Countries (with S D Sherlekar), Comsphere-2000, IIT-Madras, India.
14. Parallel Learning Automata Algorithm for Obtaining Conditional Distributions from Input-Output Samples (with Prof. Thathachar), International Conference on Communications, Control and Signal Processing, CCSP-2000, Bangalore, India, 2000.
15. Recent Trends in Resource Management in Communication Networks (with N D Gangadhar), International Conference on Stochastic Optimization and Adaption, Cochin, 2000
16. Smart Buildings for Smart Grids (with Anoop Kulkarni and Richard Tang). International Conference on Smart Grid, 3-4, August 2011.
17. A Benchmarking Process for Determining Monthly Energy Savings (with Anoop Kulkarni). Centenary Conference – EE, Indian Institute of Science, Bangalore, 15-17, December 2011.

18. Dynamic Demand Response Through Decentralized Intelligent Control of Resources (with Anoop Kulkarni), Proceedings of the 7th International Conference on Advances in Energy Research, IIT-B, December 2019, pp. 931-944, Springer Proceedings in Energy.
19. Active Demand Flexibility to Maximize Renewable Energy Use in the Water Pumping and Cold-Storages – a Model-based Case Study from Indian Power System (with Mahesh Patankar, Kaustubh Arekar, Anoop Kulkarni & Parag Kulkarni), IEEE Greentech, Sustainability & Net-zero Policies & Practices Symposium, Dubai, UAE, 7-8 December 2023.

Patents

1. Timing recovery for Synchronization in Multi-carrier systems, (with Kaushik Barman), United States Patent # **6,577,690**, June 10, 2003.
2. A method of equalization for Multi-carrier Communication systems, (with Kaushik Barman, Amit Verma, C A Subramanian and Rajeev Agrawal), Utility Application to USPTO, August 1999.
3. A method of peak to average power ratio reduction in Multi-carrier systems, (with Amit Verma), United States Patent # **6.853,632**, February 8, 2005.
4. Fast exchange during initialization in multicarrier communication systems, (with Amit Verma and Kiran Sreedharan), Utility Application to USPTO, May 2002.

Invited Lectures

1. Overview of Communication Technologies for AMI – CPRI, December 2012.
2. Lectures on Demand Response and Demand Side Management to various electrical utilities at Power System Training Institute in Bangalore.
3. Intelligent & Automated Energy Efficiency in Commercial Buildings – at IIT Bombay.
4. Internet of Things – lectures in PES College Mandya & Siddhartha Institute of Technology, Tumkur.
5. Broadband Technology Evolution – IIT Bombay.
6. Broadband Technologies and future trends – M S Ramaiah Institute of Advanced Studies, September 2009.
7. Patenting & Standards in India – CII Hyderabad, May 2007.
8. Overview of DSL Technologies, National Conference on Communication, IIT Delhi, New Delhi, 1999.
9. Overview of DSL Technologies (with Prof. V U Reddy), CCSP-2000, Bangalore, India.
10. Inventors' panel at the Conference on IPR, IIM Bangalore, 14-15 December 2001.
11. Demand Side Management and Demand Response – Training program at Reliance Energy, Mumbai, 2012-2014.

Books

1. The Journey of Learning, an adaptation of the Balakanda of Valmiki Ramayana - <https://www.wattpad.com/myworks/237109173-the-journey-of-learning>
2. <https://www.amazon.in/gp/product/B08YLDQKJT> Purusha - a short fictional account of the death & birth of the universe, based on two hymns from the Rg Veda.