

Dr.CH. BALASWAMY

Department: Electronics and Communication Engineering
College: Gudlavalleru Engineering College
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RESIDENTIAL ADDRESS:

Flat No. 306, Mahalakshmi Residency,
Near Registrar Office,
Bhagyanagar 2nd lane,
Ongole – 523 001.
Prakasam District,
Andhra Pradesh

ACADEMIC QUALIFICATIONS:

Ph.D in Computer Communication and Networks (ECE)

Master of Engineering in Computer Applications in Industrial Drives (ECE)

Bachelor of Engineering in Electronics and Communication Engineering

ACADEMIC REWARDS/ACHIEVEMENTS:

- Ratified as Professor by JNTUK University, Kakinada
- GATE–1998 Qualified.
- Awarded the Merit Prize for having secured highest marks in Elective-I and Highest Scorer in I-M.Tech during March 2000 examination.
- Got University Second rank in II-M.Tech.
- Best paper award at NCSCA-07, National Conference, Visakhapatnam.

PROFESSIONAL EXPERIENCE:

Designation	Institution	Period
Professor	Gudlavalleru Engineering College	01.06.2018 to till date
Professor, HOD & Vice Principal	QIS College of Engineering & Technology, Ongole	25.09.2014 to 30-04-2018
Professor, HOD	QIS College of Engineering & Technology, Ongole	27.07.2010 to 24-09-2014

Professor	QIS College of Engineering & Technology, Ongole	16.06.2010 to 26-07-2010
Assoc. Professor	Laki Reddy Bali Reddy College of Engineering, Mylavaram	01.08.2005 – 10.06.2010
Asst. Professor	Vignan's Engineering College	10.11.2003 – 30.07.2005
Asst. Professor	QIS College of Engineering & Technology, Ongole	01.07.2002 – 05.11.2003

PROJECTS GUIDED:

PhD	Post Graduation	Under Graduation
1	11	18

SPECIALIZATION: Computer Communication and Networks

RESEARCH PAPERS/BOOKS: NIL

BOOKS PUBLISHED IN PUBLICATIONS: NIL

PAPERS PUBLISHED IN JOURNALS:3 2

- 1) V.Jai Kumar, Ch.Balaswamy, K.Soundararajan, "Cross layered based Adaptive Secured Routing and Data transmission in MANET" *International Journal of Mobile Network Design and Innovation, a Scopus Indexed Journal, Vol.9, Issue 1, 28th Feb, 2019, H-Index:10; pg. 37-45. [SCOPUS, H.Index:10]*
- 2) V.Jai Kumar, Ch.Balaswamy, K.Soundararajan, "CBC-TBCLA:trust Based Cross Layer Approach for Secure Routing Protocol in MANET", *International Journal of Advanced Research in Dynamical and Control Systems, Scopus, December, 2018, Pg.583-593. [SCOPUS]*
- 3) K.C.KullayappaNaik, Ch.Balaswamy, "Performance Evaluation of Stochastic Mobility Model and Trace based Mobility Model for MANETs", *Journal of Adv Research in Dynamical & Control Systems, a Scopus Indexed Journal, ISSN 1943-023X; Vol.10, Issue 15, November, 2018, Pg 479-484. [SCOPUS]*
- 4) P. Venkata Rao, Ch.Balaswamy, "A Review for Compressive Sensing (CS) Scheme in Cluster Based Wireless Sensor Network", *International Journal of Applied Engineering Research ISSN 0973-4562 Volume 13, No. 8, Nov. 2018, pp. 6118-6124 © Research India Publications. <http://www.ripublication.com>[UGC Approved Journal]*
- 5) V.Jai Kumar, Ch.Balaswamy, "An Efficient Optimization Based Cross Layer Approach to Enhance the Security of MANET", *International Journal of Pure and Applied Mathematics, a Scopus Indexed Journal, Vol 118, Issue 24, May 2018, ISSN:1314-3395 (on line version); pg.1-18. [SCOPUS]*
- 6) K.C.KullayappaNaik, Ch.Balaswamy, "Lifetime Enhancement of AODV Routing Protocol for Homogeneous and Heterogeneous MANETs", *International Journal of Pure and Applied Mathematics (IJPAM), a Scopus Indexed Journal, Vol. 118, Issue No. 24, April 19, 2018, ISSN:1314-3395 (on line version); pg.1-11. [SCOPUS]*
- 7) Jai Kumar Vinayagam, Ch.Balaswamy, K.Soundararajan, "Multicast Routing Protocol to detect malicious node in MANET with Cross layer selection algorithm", *International Journal of Advanced Research Trends in Engineering and Technology (IJARTET) Vol.5, Special Issue 3, January 2018, ISSN 2394-3777(Print), ISSN 2394-3785 (Online).pg. 390-397.*
- 8) KoviMounika, Ch.Balaswamy, "Smart Blood Banking Server using Raspberry Pi", *International Journal for technological Research in Engineering, Volume 4, Issue 10, June-2017, ISSN (Online):2347-4718, pg.2059-2061. Impact factor: 4.62*
- 9) ThanikondaMadhavi, Ch.Balaswamy, "Secure and Reliable Routing Protocols in Multi-hop Wireless Networks using MANET", *International Journal of Engineering Science Innovation Research & Development, Vol. IV. Issue III, September 2017, E-ISSN: 2349-6185; pg.121-129. Impact factor:4.166.*
- 10) G.Narendra Sai Ch.Balaswamy, B.Malleswari, , "Remote Patient Health Care Monitoring over Internet", *International Journal for technological Research in engineering, Volume 4, Issue 10, June-2017. ISSN (Online): 2347-4718; pg.2011-2015. Impact factor: 4.62*
- 11) Ch.Balaswamy, PagadalaVenkataSubba Reddy, Y.V.Bhaskar Reddy, "Performance Evaluation of Data Offloading Approaches for Mobile Social Networks", *International Journal of Engineering Science Invention, ISSN (Online):2319-6734, ISSN (Print):2319-6726, Volume 6 Issue 10, October 2017, PP.58-66. Impact factor: 5.962*
- 12) Lellapalli Sridhar, Ch.Balaswamy, B.Malleswari, "Design and development of power management in intelligent buildings with smart monitoring and controlling system", *International Journal for technological Research in engineering, Volume 4, Issue 10, June-2017. ISSN (Online): 2347-4718; pg.2055-2058, Impact factor: 4.62*

- 13) Madala Lakshmi Durga, Ch.Balaswamy, K.C.KullayappaNaik, "Efficient Resource Allocation in VANET", *International Journal of Engineering Science Invention*, ISSN (Online): 2319-6734, ISSN (Print):2319-6726, Volume 6, Issue 10, October 2017, PP.48-57. Impact factor: 5.962
- 14) ShaikHarika, Ch.Balaswamy, K.C.KullayappaNaik, "Study and Design of always an alternate route available protocol for MANET", *International Journal of Engineering Science Invention*, ISSN (Online): 2319-6734, ISSN (Print):2319-6726, Volume 6, Issue 10, October 2017, PP.40-47. Impact factor: 5.962
- 15) Ch. Balaswamy, RavichanderJanapati, K.Soundararajan "Enhancement of Indoor Localization in WSN using PSO tuned EKF", *International Journal of Intelligent Systems and Applications (IJISA)*, 2017, MECS publishers, Vol.8. **Hongkong** ISSN:2074-904X(Print), ISSN: 2074-9058 (Online), DOI: 10.5815/ijisa (The impact factor (IF) =0.10 ISI Web of Knowledge), pg.10-17
- 16) RavichanderJanapati, Ch. Balaswamy, K.Soundararajan "Indoor localization of cooperative WSN using PSO assisted AKF with optimum references" published in *Elsevier Procedia Computer Science" at IIMT Bhubaneswar (Scopus indexed), Vol.92, Pg. 282-291, Jan, 2016, doi: 10.1016/j.procs.2016.07.357*
- 17) Dr.Ch.Balaswamy, N ChinnaBabu, V.Jai Kumar, T.Gowri Kishore, "A Novel Routing Protocol based on Periodic Route Discovery for Mobile Adhoc Networks", *International Journal of Engineering Research and Applications*, ISSN:2248-9622, Vol.6, Issue 12, (Part-4), December 2016, pp.74-81, Impact factor: 5.179
- 18) RavichanderJanapati, Ch. Balaswamy, K.Soundararajan "Localization of WSN using Distributed Particle Swarm Optimization algorithm with precise references" in *Journal of Communications Technology, Electronics and Computer Science*, Vol. 7, 2016 ISSN 2457-905X DOI: **10.22385**, Springer.
- 19) RavichanderJanapati, Ch. Balaswamy, K.Soundararajan "Localization of Cooperative WSN using Distributed PSO with Optimum References", *International Journal of Electrical and Computer Engineering (IJECE)* Vol.6, No.6, December 2016, ISSN:2088-8708, DOI: 10.11591/ijece.v6i6-11427, Pg.3094-3102.
- 20) Dr.Ch.Balaswamy, et.al., "The comparison between OLSR and AODV routing protocols for Vehicular Adhoc Networks", *International Journal of Advanced Research in computer and Communication Engineering*, (Impact factor 2.117) Volume 4, Issue 3, March 2015, DOI 10.17148/IJARC015.43112.
- 21) Ch.Balaswamy, VasiliSravani, K.C.K.Naik, "A Novel routing protocol based on multipath routing for mobile adhoc networks", *International Journal of Advanced Research in Computer and Communication Engineering* Vol. 3, Issue 12, December 2014, ISSN (Online) : 2278-1021 ISSN (Print): 2319-5940, DOI 10.17148/IJARCCE.
- 22) Dr.Ch.Balaswamy, P.Gowrisankar, N.Srinivasulu, "Design and Implementation of Black-hole Attacks in AODV Routing Protocol for Mobile Ad-hoc Networks, " *International Journal of Advanced Research in Computer and Communication Engineering IJARCCE*, Vol.2, issue 12, December 2013, ISSN No.(Print): 2319-5940, ISSN No. (Online): 2278-1021.
- 23) Dr.Ch.Balaswamy, T.Durgarao, N.Srinivasulu, K.C.K.Naik, "Traffic Visualisation of Performance Metrics between Routing Protocols for MANETS", *International Journal of Engineering Research & Technology (IJERT)*, ISSN: 2278-018,1 Vol.2, Issue 10, pg.802-811, October – 2013.
- 24) Dr.Ch.Balaswamy, S.Papireddy, N.Sriniasulu, "Evolution of Performance Metrics between Routing Protocols for MANETS", *International Journal of Advanced Research in Computer and*

Communication Engineering, ISSN (Print) : 2319-5940, ISSN (Online) : 2278-1021, pg. 3568-3574, Vol. 2, Issue 9, September 2013.

- 25) Dr.Ch.Balaswamy, SreekanthVakati, "Performance Analysis of Routing Protocols in Mobile Ad Hoc Networks", *International Journal of Advanced Research in Computer and Communication Engineering*, ISSN (Print) : 2319-5940, ISSN (Online) : 2278-1021, pg. 2792-2797, Volume no. 2 issue no. 7; ie.. July 2013. **(Impact Factor: 1.77)**.
- 26) Dr.Ch.Balaswamy, Ch.Sudersan Raju, Dr.M.Sailaja, "Adaptability of MANET Routing Protocols for VANETs", *International Journal of Advanced Research in Computer and Communication Engineering*, ISSN (Print) : 2319-5940, ISSN (Online) : 2278-1021, pg. 2823-2829, Volume no. 2 issue no. 7; ie.. July 2013. **(Impact Factor: 1.77)**.
- 27) K.Pranusha, A.Surekha, V.Srikanth, N.Srinivasulu, Dr.Ch.Balaswamy, "Performance Comparison of Proactive and Reactive Routing Protocols in Mobile Adhoc Networks", at *International Conference on Latest Trends in Engineering & Technology (ICLTET) organized by Information Technology Society of India (IT Society of India) held at Tirupati on 27th, April 2013*, ISSN (Print): 2320-8945, Vol.1, Issue.3, PP.57-60.
- 28) Dr.Ch.Balaswamy, A.Ashok Kumar, I.Venu Gopal, "The Improvement of QOS by using a Dynamic Distributed Routing Algorithm over OBS Networks", *International Journal of Advances in Soft Computing Technology*, Volume 2, Issue 2, July-Dec, 2012, pg.6-12, (ISSN: 2229-3515).
- 29) Dr. Ch.Balaswamy, P.Saradha, "Improving Image Data Hiding Capacity Scheme using Sudoku Puzzle in Color Images", *International Journal of Engineering Research and Applications (IJERA)*, Vol.2, Issue 3, May-June 2012, PP.2741-2744. (ISSN: 2248-9622)
- 30) Dr.Ch.Balaswamy, HumairaNishat, Dr.D.Srinivasa Rao, "Energy Efficient Routing Protocols for Mobile Ad Hoc Networks", *International Journal of Computer Applications (0975-8887)*, Volume 26, No.2, pg.1-4, July 2011.
- 31) Ch. Balaswamy, K.Naga Prakash, Ch.HimaBindu, "An Energy Efficient Routing Protocol based on Periodic Route Discovery for Mobile Ad Hoc Networks" *International Journal of Next-Generation Networks (IJNGN) Vol.3, No.1, March 2011, Pg 45-51, DOI : 10.5121/ijngn.2011.3105*.
- 32) Dr.Ch.Balaswamy, J.RaviChandar, E.KumaraSwamy, "SVD Based robust Blind Video Watermarking Algorithm", *International Journal of Information Technology Engineering & Sciences (IJITES)*, June 2011, Vol.1, numbers 1-2, pp:75-79.
- 33) Ch. Balaswamy, Dr. K. Soundararajan, "A Novel Approach For Energy Efficient Routing in Mobile Ad Hoc Networks", *Research Journal of Engineering and Technology (An International Research Journal of Engineering Sciences and Technologies)*, March 2009, page:3-7.
- 34) Ch. Balaswamy, Dr. K. Soundararajan, "An Efficient Route Discovery Mechanism for Mobile Ad Hoc Networks", *IJCSNS International Journal of Computer Science and Network Security*, VOL.8 No.10, October 2008, page:25-32, Seoul, South Korea.
- 35) Ch. Balaswamy, Dr.K.Soundararajan, "Analysis of Table-driven and On-demand Routing Protocols for Mobile Ad Hoc Networks", *An International Research Journal of Higher Education, RIPPLES in Feb 2008, Vol.2, Issue.1, page:52-60*.

- 1) K.C.KullayappaNaik, Ch.Balaswamy, "Performance Analysis of OLSR Routing Protocol for MANETs under Realistic Mobility Model", *IEEE International Conference, Vol.3, February, 2019, Pg 1412-1416. [IEEE International Conference]*
- 2) P. Venkat Rao, Ch. Balaswamy, "Integration of Compressive sensing and clustering in wireless sensor networks using block tri-diagonal matrix approach" *International Conference on Computational and Intelligent Techniques for Automation of Engineering Systems (CITAES), December 1, 2018 at Gudlavalleru Engineering College, Gudlavalleru.*
- 3) J.RaviChander, Ch.Balaswamy, K.Soundararajan, "Enhancement of localized routing using CDPSO in WSN", paper presented at *IEEE Conference conducted at KL University, Vijayawada on 4th, Jan 2018. [IEEE International Conference]*
- 4) Jai Kumar Vinayagam, Ch.Balaswamy, K.Soundararajan, "Adopting Cross Layer Approach for Detecting and Segregating Malicious Nodes in MANET", *IEEE 2015 International Conference on Signal Processing and Communication (ICSPC'17), IEEE Electron Devices Society, July 28th to 29th, July 2017, Karunya University, Coimbatore, pg. 457-461. [IEEE International Conference]*
- 5) J.RaviChander, Ch.Balaswamy, Dr. K.Soundararajan, "Enhanced Mechanism for Localization in Wireless Sensor Networks using PSO Assisted Extended Kalman Filter Algorithm (PSO-EKF)", *IEEE 2015 International Conference on Communication, Information & Computing Technology (ICCICT), Jan. 16-17, Mumbai, India, 978-1-4799-5522-0/15/\$31.00 ©2015 IEEE [IEEE International Conference]*
- 6) Ch.Balaswamy et al., "Multicast Routing Protocol to detect malicious node in MANET with Cross Layer Selection Algorithm", *International Conference on Emerging Trends in Science & Technologies for Engineering Systems, ICETSTES-2018, 11th & 12th January 2018, S.J.C.Institute of Technology, Chickballapur, Karnataka, India, pg. 163-170.*
- 7) RavichanderJanapati, Ch.Balaswamy, "Indoor Localization of Cooperative WSN using PSO Assisted AKF with Optimum References", *International Conference on Intelligent Computing, Communication & Convergence (ICCC-2016) held at IIMT, Bhuvanesar on 24th-25th, Jan 2016, pg. 292-291.*
- 8) Ch. Balaswamy, RavichanderJanapati, K.Soundararajan and V.R Sarma, "Censored Localization for Cooperative WSN using Distributed PSO Algorithm" in *International Conference on Recent Trends in Engineering, Technology and science (ICRETS-2016), pg.1-7*
- 9) Ch. Balaswamy, RavichanderJanapati, K.Soundararajan "Network centric collaborative navigation for target localization using PSO tuned UKF" *Proceedings of International Conference on Emerging Trends in Electronics & Telecommunications (ICETET) 29th - 31st May, 2015 KUALA LUMPUR, MALAYSIA (MT0EC046) ISSN (online): 2349-0020 ISSN (print): 2394-4544*
- 10) Ch. Balaswamy, RavichanderJanapati, K.Soundararajan, "Networks Centric Localization Using Particle Swarm Optimization" at *ICCSP QIS College of Engineering, Ongole, April 2014*
- 11) RavichanderJanapati, Ch. Balaswamy, K.Soundararajan "Study of Localization Algorithms" Presented at *ICCSP, QIS College of Engineering, Ongole, 2nd & 3rd April 2013*
- 12) N.Srinivasulu, Dr.Ch.Balaswamy, Dr.K.Soundararajan, "A Protocol on Routing based on periodic route discovery for adhoc networks", *1st International Conference on Networks and Cyber Security held on January 5-6, 2012, SRK Institute of Technology, Vijayawada, pp.63-65.*

- 13) Dr.Ch.Balaswamy, Sk.DariaSaheb, P.Malyadri, N.Srinivasulu, “Performance Analysis between routing protocols for Mobile Adhoc Networks”, *International Conference on Electronics and Communication Engineering*” organized by IRNet(India) held at Bangalore on 20th, May 2012.
- 14) Dr. Ch. Balaswamy, N. Naga Raja Kumari, Dr.K.Soundararajan, N. Srinivasulu, “Energy Efficient Routing Protocol for Mobile Ad Hoc Networks”, *International Conference on Electronics and Communication Engineering ICECE-11*, Hyderabad, India on 12th Nov,, 2011.
- 15) Dr.Ch.Balaswamy, Ch. Sai KalyanaDeepthi, Dr.K.Soundararajan, “A Protocol on Periodic Route Discovery for Ad hoc networks”, *International Conference on Electronics and Communication Engineering ICECE-11*, Hyderabad, India on 12th Nov, 2011, PP 44-46.
- 16) Dr. Ch. Balaswamy, Dr. K. Soundararajan, C. Pavan Kumar, “Efficient Energy Saving Routing Protocol for Mobile Ad Hoc Networks”, *International Conference on Advanced Computing & Communication Technologies for High Performance Applications, Cochin, Kerala, India, 24th to 26th September 2008*.

LIST OF WORKSHOPSORGANIZED: 04

- Acted as **Coordinator** for the ICCSP-2014 “International Conference on Communication and Signal Processing” held on 25th – 27th, April 2014 at QIS College of Engineering and Technology, Ongole.
- Acted as **Coordinator** for the ICCSP-2012 “International Conference on Communication and Signal Processing” held on 2nd – 4th, April 2012 at QIS College of Engineering and Technology, Ongole.
- Worked as Coordinator for **2-day Workshop** on “Design and Development of Antennas” from 8th-9th, Jan 2011 conducted at QISCET, Ong
- Worked as Coordinator for **LAKSHYA-2010**, a National Conference, at LBRCE, Mylavaram, Krishna District

LIST OF WORKSHOPS /CONFERENCES /SEMINARS ATTENDED: 17

1. Participated in the one week Faculty Development Programme on “Machine Learning Applications in Signal Processing” *Meity, Govt. of India, sponsored and organized by the E&ICT Academy, National Institute of Technology, Warangal* at Gudlavalleru Engineering College, Gudlavalleru from 4th to 9th February, 2019.
2. Attended the one week Faculty Development Programme on “Internet of Things (IoT) with IB Watson” in association with department of Information Technology & Computer Science and Engineering conducted from Nov 26th to Dec 1st, 2018 at Gudlavalleru Engineering College, Gudlavalleru, Krishna Dist, Andhra Pradesh.
3. Attended the one week Faculty Development Programme on “Communications and Signal Processing”, organized by Department of Electronics and Communication Engineering, Gudlavalleru, during 29th Oct to 3rd Nov 2018.
4. Participated in “6-days Faculty Development Programme on ANDROID APPLICATION DEVELOPMENT” conducted by AVLOG INFOTECH Pvt Ltd, Bangalore held from 9th-14th, January 2018 at QIS College of Engineering and Technology, Ongole.

5. Participated in “6-days Faculty Development Programme on BIG DATA AND HADOOP PLATFORM” organized by Department of Skill Development Centre, QIS College of Engineering and Technology, Ongole from 18th-23rd, December 2017.
6. Participated in “5-days Faculty Development Programme on CISCO NETWORKING” by AVLOG Infotech Pvt. Ltd held from 6th-11th December 2017 organized by Department of Computer Science & Engineering, QIS College of Engineering and Technology, Ongole.
7. Participated in “Faculty Development Programme on Research Methodology & Innovation” at QIS College of Engineering & Technology, Ongole on 29th November, 2014.
8. Participated in “Faculty Orientation Programme” at QIS College of Engineering & Technology, Ongole on 25th, August 2014 by JNTUK Centre of Excellence for E-Resource Development & Deployment (CoEeRD).
9. Participated in “*Faculty Development Programme on Research Methodology*” at QIS College of Engineering & Technology, Ongole. from 19th Oct, 2013 to 20th Oct, 2013.
10. Participated in NPTEL workshop organized by *National Programme on Technology Enhanced Learning (IIT Madras)* on 20th, Sep 2013.
11. Participated in the *One Day Workshop on “New Paradigms in the accreditation system”* at Hotel Taj Gateway, Vijayawada on 28th Sep, 2011.
12. *Two week Short Term Training Programme on “Transform Techniques in Signal Processing”* from 8th June to 20th June, 2009 Under AICTE Sponsored Staff Development Programme at Laki Reddy Bali Reddy College of Engineering, Mylavaram, Krishna Dt.
13. *Short term course on “Wireless communication & Networks”* conducted by G.S. Sanyal School of Telecommunications, **I.I.T. Kharagpur** during 14th – 19th May, 2007.
14. *Short term course on “VLSI Design”* conducted by Lakireddy Bali Reddy College of Engineering, Mylavaram from 22nd – 27th May 2006.
15. *Short term refresher course on “Cellular and Mobile Communications”* conducted by Lakireddy Bali Reddy College of Engineering, Mylavaram from Nov. 28 – Dec. 02, 2005.
16. *Short term Intensive Course on “Digital Image Processing Applications”* conducted by the Vignan’s Engineering College, Guntur from 28th June – 2nd July, 2004.
17. *Short term Intensive Course on “VLSI Design”* conducted by the Vignan’s Engg., College, Guntur from 21st June – 25th June, 2004.

CERTIFICATIONS: NIL

GUEST LECTURES DELIVERED: NIL

MEMBERSHIP IN PROFESSIONAL BODIES: 03

- Life member of ISTE; No. LM74524
- Member of International Association of Engineers (IAENG); Member ship number: 125670
- Member of International Association of Engineers and Scientists (IAEST); Member ship number : 01304870

CONSULTANCY ACTIVITIES:

NIL

GRANTS FETCHED:

02

- Acted as **Chief Coordinator** for the (Modernization and Removal of Obsolescence Scheme (**MODROBS**) and a Grant-in-Aid of **Rs. 5,28,000/-** released from AICTE, New Delhi for the financial year 2012-13 to update and modernize the Microprocessors and Microcontrollers Lab. (**Ref. No: 12/AICTE/RIFD/MOD(Policy-3) Pvt-97/2012-13; dated 02.03.2013**).
- Acted as **Coordinator** for the **International Conference** conducted during 2nd to 4th, April 2012. AICTE sanctioned grant-in-aid towards the seminar grant. (**Ref. No. RIFD/SEM/093/2011/12, dated on 06.08.2012**).