Detailed CV

Name : **Dr. J.T. Devaraju**

Qualification : M.Sc, Ph.D, UGC-NET

DATE OF BIRTH : 21-10-1972

Designation : Senior **Professor, Dept, of Elecronic Science**
Teaching Experience : 28 years
Research Experience : 26 years

Contact details : (M) 9845230567 Email: devarajujt@bub.ernet.in,
devarajujt@gmail.com

Positions held :

1. **Served as a Registrar (Evaluation), Bangalore University, Bangalore, from 13.03.2020 to 03.02.2023**
2. Professor-In charge, University Instrumentation Centre, Bangalore University since July 2016.
3. Served as a Chairman Dept. of Electronic Science from 1.10.2008 to 30.9.2010, 7.10.2014 to 6.10.2016 and 7.10.2018 to 13.8.2020
4. Served as Director, MOOC's hosted by SWAYAM, Bangalore University till October 2020
5. Coordinator and custodian, Scanning unit, Digitization of UG valuation of II semester May/June 2019 Examination of Bangalore University. Responsible for implementing Digital valuation successfully first time at Bangalore University.

Courses Taught :

C++ programming, Network Analysis, Analog & Digital Electronics, Communication, Control system, Embedded systems, Microprocessors & Microcontrollers.

Areas of Specialization:

Communication, Digital Electronics, Microprocessors & Microcontrollers and Embedded systems

Research Areas:

WiMAX, Wireless Sensor Networks, LTE and Chalcogenide Amorphous Semiconductors.

Research output:

1. Ph.D. Guided	09
2. No. Ph.D. Students	04
3. M.Phil. Guided	08
4. M. Tech Projects Guided	11
5. Publications	111

Membership of Authorities of the University:

1. Member of the syndicate, Bangalore University, Bangalore, from 13.03.2020 to 3.2.2023
2. Member of the Academic Council, Bangalore University, Bangalore, from 13.03.2020 to 3.2.2023
3. Member of the Finance Committee, Bangalore University, Bangalore, from 13.03.2020 to 3.2.2023
4. Member of the Central Purchase Committee, Bangalore University, Bangalore, from 13.03.2020 to 3.2.2023

UGC Committee membership:

1. Member Expert Committee constituted by **University Grant Commission** for coordinating the development of model curricula for under graduate courses under the Choice Based Credit System.

Selection Committee membership:

1. Subject Expert, Selection/Interaction committee for Promotion under Career Advancement Scheme (CAS)(Senior Professor), Gulbarga University, Kalaburagi, August-2023.
2. Subject Expert, Selection committee for Promotion under Career Advancement Scheme (CAS), Berhampur University, Berhampur, Odisha, May-2023
3. Subject Expert, Selection committee for appointment of Assistant Professor/ Teaching Assistant in Computer science and Electronics, IIIT, Surat, Gujarat.
4. Subject Expert, Selection/Screening cum Evaluation committee for Promotion under Career Advancement Scheme (CAS), University of Mysore, Mysore, May-2018, December 2020, November 2021 and March 2022.
5. Subject Expert, Screening cum Evaluation committee for Promotion under Career Advancement Scheme (CAS), Tumkur University, Tumkur, March-2017
6. Subject Expert, Selection committee for appointment of Associate Professor and Assistant Professor in Electronics (September 2016), **Shivaji University, Kolhapur**, Maharashtra.

Expert/Advisory Committee membership

1. Served as a Member, expert committee for the renewal/recognition of research Centers for Bangalore University (January 2023).
2. Served as a Member, expert committee for the renewal/recognition of research Centers for Bangalore City University (2022).
3. Expert Member, Technical Committee, Bangalore University, Bangalore.
4. Expert Member, Examination Reformation Committee, Bangalore University, Bangalore.
5. Expert Member, Advisory committee for purchase of ICT infrastructure for Bengaluru North University.

6. Expert Member, Scrutiny committee to scrutinize the applications of teaching post, Davangere University, Davangere, April-2017.
7. Expert Member, Technical committee for procurement & installation of CCTV systems to district prisons in Karnataka, constituted by DG of Police and IG of Prisons, Prisons Department, Government of Karnataka, during May-2016.
8. Member Subject expert committee for KSET examinations (Electronic Science) 2014, 2015. 2016, 2017, 2018, 2019, and 2020
9. Served as a Member, expert committee to recognize Dept. of Electronics and Communication, SJBIT, Kengeri, Bangalore, as a research Centre for Kuvempu University.
10. Served as a Member, expert committee to recognize Dept. of Electronics, SJC Research Foundation, Chickballapur, as a research centre for Kuvempu University.
11. Served as a Member, expert committee to recognize Dept. of Electronics, CIT, Gubbi, Tumkur as a research centre for Kuvempu University.
12. Served as member, expert committee to oversee PG admission process for the year 2008-09 and 2009-10.
13. Served as a Member, expert committee for the renewal of recognition of Dept. of Electronics, RV Centre for Cognitive Technologies, Bangalore as a research centre for Kuvempu University.

Local Inquiry Committee Chairman/Member:

1. Chairman Local Inquiry Committee, Local Inquiry Committee, Bangalore University for the year 2020-21
2. Chairman Local Inquiry Committee, Davangere University, Davangere for the year 2017-18.
3. Chairman Local Inquiry Committee, Bengaluru North University, Kolar for the year 2018-19 and 2019-20
4. Member Local Inquiry Committee, Bangalore University for the year 2015-16, 2017-18, 2018-19 and 2023-24
5. Member Local Inquiry Committee, Bengaluru Central University, Bengaluru for the 2018-19 and 2023-24
6. Member Local Inquiry Committee, Davangere University, Davangere for the year 2018-19.

Chairman Academic Bodies:

1. Chairman Board of Studies in Electronic science, Tumkur University, Tumkur for the years 2023-25.

2. Chairman Expert Committee/Board of Studies, BVoc in Smart Manufacturing-Mechatronics, GTTC, Rajajinagar, Bangalore, Bangalore University, under section 66 of KSU act 2000, for the year 2023-25
3. Chairman Board of Studies in Electronic science (PG/UG), Bengaluru Central University, Central college campus, Bangalore for the years 2018-2025.
4. Chairman Board of Studies in Electronic science (PG/UG), Bengaluru North University, Kolar for the years 2018-2023
5. Chairman Board of Studies in Electronic science (PG/UG),Bangalore university for the years 2008-10, 2014-16 and 2018-20
6. Chairman Board of examination in Electronic science (PG),Bangalore university for the years 2002-03, 2004-05, 2006-07, 2008-09, 2012-13,2015-16 and 2018-19
7. Chairman Board of examination in Electronic (PG), Karnataka State Women's University, Bijapur, 2014-15

Member Academic Bodies:

1. Member faculty of science, Bangalore University for the duration 1998-2003, 2007-09, 2009-11 and since 2012.
2. Member Governing council BGS B School, Kengeri, Bangalore, 2023-25
3. Member Governing council, BNM Degree College, Banashankari, Bangalore, 2023-25
4. Member Governing council, Jnana vikas Institute of Management Studies and Commerce, Bidadi, 2023-25
5. Member Governing council, Siddaganga Commerce and Management college, Magadi, 2023-25
6. Member Governing council, Yoga Study center, Rajajinagar, Bangalore, 2016-18
7. Member Governing council Om Prabha First Grade College, Magadi main Road, Bangalore, 2016-18
8. Member Governing council Acharya Women's First Grade College, Gowribidanur, 2016-18
9. Member Governing council Oceanik college of higher education, Devinagar, Bangalore, 2016-18
10. Member Governing council Padma College of Management & Science, Basaveshwaranagar, Bangalore, 2016-18
11. Member Governing council AES National College, Gowribidanur, 2016-18

Doctoral Committee:

1. Member Doctoral Committee, Kuvempu University, Shankaragatta, 2015-17. 2019-21
2. Member Doctoral Committee, Karnataka State Women's University, Bijapur, 2015-18.
3. Member Research Review Committee, Tumkur University, Tumkur, 2014-15 and 2015-18.
4. Member External Research Committee, Mount Carmel College(Autonomous), Bangalore.

5. Member Board of examination for Ph.D course work in Electronics, Kuvempu University, Shankaraghatta for the year 2011-12
6. Member Board of examination for Ph.D course work in Electronics, Mangalore University, Mangalore for the year 2011-12.
7. Member Doctoral Committee, Mangalore University, Mangalore.
8. Member Doctoral Committee, Bangalore University, Bangalore

Board of studies

1. Member Board of studies in Electronics (UG), Akkamahadevi Women's University, Vijayapura, 2017-20.
2. Member Board of studies in Electronics , RLSIC, Rani Channamma University, Belagavi 2020-22.
3. Member Board of studies in Electronics (PG), Kuvempu University, Shankaragatta, 2011-14, 2018-20.
4. Member Board of studies in Electronics, Govt. Science collage (autonomous), Hassan.2018-20
5. Member Board of studies in Electronics (PG & UG), Davangere University, Davangere, 2017-20.
6. Member Board of studies in Electronics (PG), Karnataka State Women's University, Bijapur, 2013-16 and 2016-17.
7. Member Board of studies in Electronics, Govt. Science collage (autonomous), Bangalore, 2015-17
8. Co-opted Member Board of studies in E&C, RVCE, Bangalore 2013-14.
9. Member Board of studies in Electronics[PG], The National Degree College Basavanagudi (autonomous), Bangalore, 2012-14
10. Member Board of studies in Electronics, Mount Carmel College (autonomous), Bangalore, 2012-23.
11. Member Board of studies in Electronics (PG), Mangalore University, Mangalore, 2011-14.
12. Member Board of studies in Electronic science (PG & UG), Bangalore University, Bangalore. Bangalore, 2011-14.
13. Member Board of studies in Electronics (PG), Karnataka State Women's University, Bijapur, 2011-12.
14. Member Board of studies in Electronics (PG), Tumkur University, Tumkur, 2011-12, 2018-20.
15. Member Board of studies in Electronic science, Christ University, Bangalore. Bangalore, 2011-12.
16. Member Board of studies in Electronic science (PG), Bangalore University, 2008-10.
17. Member Board of studies in Electronics (PG), Mount Carmel College (autonomous), Bangalore, 2009-11.

18. Member Board of studies in Electronics, Christ University, Bangalore. Bangalore, 2009-10.
19. Member Board of studies in Electronics, NMRKV collage (autonomous), Bangalore, 2009-11.
20. Member Board of studies in Electronics, St. Joseph's collage (autonomous), Bangalore, 2008-11.
21. Member Board of studies in Electronic science (PG), Bangalore university 2002-2024.

Co-ordinator/Custodian

1. Served as a course Co-coordinator for the **Refresher Course** in Material Science organized by UGC-HRDC, Bangalore University, Bangalore, 27th January – 8th February 2020.
2. Served as custodian for valuation unit pertaining to 4 years BS course, Bangalore university, September & October 2013 Examination.
3. Served as custodian for valuation unit pertaining to PG II & IV Semester Science, J.B. Campus, Bangalore university, June & July 2013 Examination.
4. Served as Co-ordinator for Re-valuation unit pertaining to PG II & IV Semester Arts, Science, Education, Physical education and Law (J.B. Campus), June & July 2012 Examination.
5. Served as Assistant custodian for valuation unit pertaining to PG II & IV Semester Science (J.B. Campus), June & July 2012 Examination.

Board of examination

1. Member Board of examiners in Electronics (PG-Regular) & Power Electronics (PG-Distance Education), Kuvempu University for the years 2007-08, 2014-15, 2016-17 and 2018-19.
2. Member Board of examiners in Electronics (PG), Mangalore University for the years 2008-09, 2015-16 and 2018-19
3. Member Board of examiners in Electronics (PG), Karnataka State Women's University, Bijapur, 2013-14, 2012-13 and 2014-15
4. Member Board of examiners in Electronics (PG), University of Mysore, for the years 2012, 2016 and 2021.
5. Member Board of examiners in Instrumentation Technologies (PG), Gulbarga University, Raichur for the years 2012.
6. Member Board of examiners in Electronic science(PG), Bangalore University for the years 2001-2023, and 2023-24
7. Member Board of examiners in Computer application/compter Science(PG), Bangalore University for the years 2008-09

8. Member Board of examiners in Electronics & Instrumentation (UG), Bangalore University for the years 2001-02, 2003-04 and 2010-11
9. Member Board of examiners in Electronics –Vocational (UG), Bangalore University for the years 2001-02 and 2003-04

Teaching Experience:

Name of the College/University	Position held	From	To	No. of Years	Course Taught
Dept. of Electronic Science, Jnanabharti, Bangalore University, Bangalore	Senior Professor	7.11.2022			PG/PhD
	Professor	7.11.2012	6.11.2022	10	PG/PhD
	Associate Professor	7.11.2009	6.11.2012	3	PG/PhD
	Reader	7-11-2006	6.11.2009	3	PG/PhD
	Sr.Scale Lecturer	7-11-2001	6-11-2006	5	PG/PhD
	Lecturer	25.03.98	6-11-2001	3½	PG/PhD
A.V.K College for Women, Hassan.	Lecturer	14.08.95	24.03.98	2½	UG (B.Sc.)
Dept. Electronics, Hemagangotri, P.G. Centre, University of Mysore, Hassan. (Part-time)	Guest Lecturer	26.10.95	24.03.98	2½	PG (M.Sc.)

LIST OF JOURNAL PAPER/BOOKS PUBLISHED

1. **Devaraju J.T**., Mohana H.K., Nethra H.S.**. "**Load Based Carrier Aggregation Algorithm for LTE-Advanced**"**, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-11, Issue-6, May 2022, ISSN: 2278–3075.
2. Mohana H.K., Nethra H.S., **Devaraju J.T. "**HARQ Scheme for different MCS users over LTE and LTE-Advanced Networks**"**, Int. J. Sc. Res. In Network Security and Communication (IJSRNSC), Volume-10, Issue-2, April 2022, E-ISSN:2321-3256.
3. **J.T. Devaraju** and Swetha, **"**D2D Communication on LTE for Disaster Management and Emergency Rescue Operations**",** ICTACT Journal on Communication Technology (IJCT), VOLUME: 13, ISSUE:01,March 2022, ISSN: 2229-6948(ONLINE), pp2598-2607.
4. Swetha, Mohankumar N M, Mohana H K and **Devaraju J T**, "An Optimized User Prioritized Service Provisioning in LTE Network", International Journal of Recent Technology and

Engineering (IJRTE), Volume-8 Issue-6, (March 2020) p.5293, ISSN: 2277-3878 (scopus) IF(VOC)6.04.

5. Swetha, Mohankumar N M, Ramanuja H.S and **Devaraju J T**, "Venue Cast User Prioritized Round Robin Scheduling Algorithm", International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-9 Issue-3, (January 2020) p.3136, ISSN: 2278-3075 (scopus) IF5.54.
6. Suhas K R, Bhavya Shree S B , Mohana H K and **Devaraju J T**, "Performance Evaluation of Hierarchical and Flat Architectures in IEEE 802.15.4 Standard Networks", International Journal for Research in Engineering Application & Management (IJREAM), Vol. 04, Issue 07, p. 518-521, October 2018, ISSN 2454-9150
7. Suhas K R, Mohana H K and **Devaraju J T**, "Design and Performance Evaluation of Novel DCT Frame Based Compression Algorithm for Wireless Video Surveillance Systems", International Journal Of Research In Electronics and Computer Engineering (IJRECE), Vol. 6, Issue 4, p. 462-464, October-December 2018, ISSN: 2348-2281
8. Suhas K R, Mohankumar N M, Swetha and **Devaraju J T**, "Performance of LTE Networks with Multi-Antenna Techniques in Rayleigh and Ricean Fading Environments", International Journal of Computer Networks and Wireless Communications (IJCNWC), Vol.8, No.5, p.71-77, Sep-Oct 2018, ISSN: 2250-3501
9. Swetha, Mohankumar N M, and **Devaraju J T**, "Queue Length and Channel Quality based Proportional Fair Scheduling lgorithm for LTE Network", International Journal of Electronics Engineering (IJEE), Volume 10, Issue 1 (June, 2018), p.266, ISSN: 0973-7383
10. Swetha, Mohankumar N M, Shwetha D and **Devaraju J T**, "Adaptive Proportional Fair Scheduling Algorithm for Delay Constraint LTE Network", International Journal of Electrical Electronics & Computer Science Engineering (IJEECSE), Volume 5, Issue 2 (April, 2018) | E-ISSN : 2348-2273 | P-ISSN : 2454-1222
11. Shwetha D, Swetha, Suhas K R and **Devaraju J T**, "Relay Selection Algorithm for IPTV based Services", Int. J. Sc. Res. in Network Security and Communication(IJSRNSC), Volume-6, Issue-1, February 2018, ISSN: 2321-3256.
12. **Manjunatha D, Mohankumar N M, S. Ravishankar,** J. T. Devaraju, "Node Power Aware Route Search Protocol for Manets", International Journal of Computer Engineering and Applications, Volume XI, Issue X, October 2017, www.ijcea.com ISSN 2321-3469
13. Mohana H.K, Mohankumar N.M, Suhas K.R and **Devaraju J.T**, "Effect of Noise Factor on System Performance in LTE Networks", International Journal of Computer Applications Volume 138 – No.9, March 2016, ISSN:0975 – 8887, p.34
14. Krishna Teja Yadav CH. T, C.Y. Gopinath, Mohankumar N. M., Devaraju J.T, "Performance Evaluation of Scheduling Algorithms with Different MIMO Techniques in LTE Systems", International Journal of Computer Science and Technology (IJCST), Vol. 6, Issue 3, July - Sept 2015 ISSN : 0976-8491 (Online), ISSN : 2229-4333 (Print), p214.
15. K. Bheemarao, C.Y. Gopinath, N.M. Mohankumar, **J.T. Devaraju**, "Performance Analysis of Different Scheduling Algorithms in LTE System for Jitter Constraint", International Journal for Scientific Research & Development (IJSRD) , Vol. 3, Issue 07, 2015, ISSN (online): 2321-0613, p495.

16. Mohana H K, Mohankumar N M and **Devaraju J T**, "Impact of Adaptive Modulation and Coding Schemes on Bit Error Rate for System Performance in the Uplink LTE System", Int.J.Computer Technology & Applications (IJCTA) ,Vol 6 (5), P 803-809, Sept-Oct 2015, ISSN:2229-6093
17. **J.T. Devaraju**, K.R. Suhas, H.K. Mohana and Vijaykumar A.Patil, "Wireless Portable Microcontroller Based Weather Monitoring Station", Measurement, Elsevier, 76, p189-200, Sept-2015, 0263-2241, //dx.doi.org/10.1016/j.measurement.2015.08.027, IF1.53.
18. Mohana H K, Mohankumar N M, Suhas K R and **Devaraju J T**, "Performance Evaluation of Mobility Effects on Various Transmission Modes in the LTE Network", International Journal of Scientific & Engineering Research (IJSER), Volume 6, Issue 6, June-2015, p 618, ISSN 2229-5518, IF3.2.
19. Shwetha D, Mohan Kumar N M and **Devaraju J T**, "Modulation Aware Connection Admission Control and Uplink Scheduling Algorithm For Wimax Networks", International Journal of Wireless & Mobile Networks (IJWMN) Vol. 7, No. 1, February 2015,p75-90, DOI : 10.5121/ijwmn.2015.7105 75.
20. Jyothi V, Suhas K R, Mohankumar N M, **Devaraju J T**, *"Performance Study of Proactive, Reactive and Hybrid Routing Protocols for MANET in Multiple CBR Scenario*", International Journal of Computer Science and Technology (IJCST), Vol. 6, Issue 1, Jan - March 2015, ISSN: 0976-8491 (Online) | ISSN: 2229-4333 (Print), P. 57-61, IF-1.76
21. Mohana H K, Mohankumar N M, Swetha**, Devaraju J T,** "*The Study and Analysis of Effect of Multi-Antenna Techniques on LTE network with Different Bandwidth Configurations in the Downlink*", Int. J. Advanced Networking and Applications (IJANA), Volume: 6 Issue: 3 Pages: 2314-2318 (Dec. 2014) ISSN: 0975-0290, Pp 2314-2318, IF-3.462
22. Mohana H K, Mohankumar N M, Swetha and **Devaraju J T**, "Effect of Bandwidth Scalability on System Performance in the Downlink LTE Systems ", International Journal of Advanced Research in Computer Science (IJARCS), Vol. 5, No. 7, September-October 2014, p136-140, ISSN No. 0976-5697, IF **3.74.**
23. Mohankumar N. M., M Subramanya Bhat, Jyothi V and **Devaraju J. T**, "*Link Quality Based Power Efficient Routing Protocol (LQ-PERP)*", International Journal of Computer Networking, Wireless and Mobile Communications (IJCNWMC), Vol. 4, Issue 5, Oct 2014, 7- 20, ISSN(P): 2250-1568; ISSN(E): 2278-9448, © TJPRC Pvt. Ltd. IF5.3963
24. Mohankumar N. M., Swetha, Mohana H.K and **Devaraju J. T**, "*Effect of Adaptive Modulation and Coding Schemes on Scheduling Algorithms for LTE Downlink* ", International Journal of Software & Hardware Research in Engineering, Volume 2 , Issue 6, June-2014, ISSN: 2347 – 4890, p53-58. IF2.669(sjif)
25. Swetha, Mohankumar N. M., and **Devaraju J. T**, "*Performance Study of Round Robin and Proportional Fair Scheduling Algorithms by Emulation for Video Traffic in LTE Networks*", International Journal of Computer Applications (IJCA), International Conference on Current Trends in Advanced Computing (ICCTAC), p6-9, May-2014, ISSN: 0975 – 8887.
26. Shwetha D, Thontadharya H.J and **J.T. Devaraju,** "*A Bandwidth Request Mechanism for QoS Enhancement in Mobile WiMAX Networks"*, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Volume 3, Issue 1, January 2014, p6881-6888, ISSN (Print): 2320 – 3765, ISSN (Online): 2278 – 8875,(An ISO 3297: 2007 Certified Organization) (IF1.686)
27. M. Subramanya Bhat, N. M. Mohan Kumar, V. Jyothi and **J.T. Devaraju** "*Performance Study of Adhoc on-Demand Link Quality Aware Route Search Protocol (AO-LQARSP)*", International

Journal of Emerging Technology and Advanced Engineering (IJETAE), Volume 4, Issue 1, January 2014, p78-84, ISSN 2250-2459, ISO 9001:2008 Certified Journal. (IF1.932)

28. Swetha, Mohankumar N. M., and **Devaraju J. T**, "*Performance Study of Proportional Fair Scheduling Algorithm with Transmit Diversity Multi-Antenna Technique for LTE Network*", International Journal of Electrical, Electronics and Data Communication (IJEEDC), Vol. 1, Issue-9, p67-69, Nov-2013, ISSN: 2320-2084. IF:0.6
29. Subramanya Bhat. M., Jyothi. V. and **Devaraju. J.T**. "Establishing a Wireless Sensor Network to Monitor the Temperature in a two storied building", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (**IJAREEIE**), Vol. 2, Issue 4, p1508-13, April 2013, ISSN (Print): 2320 – 3765, ISSN (Online): 2278 – 8875
30. Swetha, Mohankumar N. M., and **Devaraju J. T**, "Performance Evaluation of Round Robin and Proportional Fair Scheduling Algorithms for Constant Bit Rate Traffic in LTE", IRACST – International Journal of Computer Networks and Wireless Communications (IJCNWC), Vol.3, No.1, p41-44, February 2013, ISSN: 2250-3501.
31. G. Ravi Kolarkar, **J. T. Devaraju** and S. Asokan**, "**Composition dependence of optical band gap and thermal diffusivity of In-Se-Tl bulk glasses", International Journal of Applied Engineering Research (IJAER), Volume 8, Number 1 (2013) pp. 23-32, ISSN 0973-4562.
32. G. Ravi Kolarkar, **J. T. Devaraju** and S. Asokan**, "**IR Studies of Impurities in In-Se-Tl Bulk Chalcogenide Glassy System", International Journal of Engineering Research and Applications (IJERA), Vol. 2, Issue 6, Nov-Dec. 2012, pp.1249-1252, ISSN: 2248-9622.
33. G. Ravi Kolarkar, **J. T. Devaraju** and S. Asokan**, "**Effect of Thallium Additive On Heat Capacities Of In-Se Bulk Chalcogenide Glasses", International Journal of Engineering Research & Technology (IJERT), Vol. 1 Issue 9, Nov. 2012, ISSN: 2278-0181.
34. Subramanya Bhat M., Thontadharya H.J and **Devaraju J.T.**, "Performance Evaluation of Reactive Routing Protocols for IEEE 802.11", World Journal of Science and Technology (WJST), 2(10) p1-5, 2012, ISSN 2231-2587
35. Subramanyabhat M, **Devaraju J.T** and Shwetha D, "Wireless Sensor Networks: A Performance Study of IEEE 802.15.4 Standard" International Journal of Advanced Research in Computer Science (IJARCS), Vol. 3, No. 5, Sept-Oct 2012, p132-135, ISSN No. 0976-569**.**
36. Ramani, M.C Radhakrishna, B Angadi and **J.T Devaraju**, "Synthesis Of Nano Bismuth Ferrite Multiferroics By Microcontroller Based Thermogravimetric Analyzer"**,** International Journal Of Scientific Research (IJSR)(Material Science), Volume 1, Issue 4, Sep 2012, p118, ISSN No 2277 – 8179.
37. Mohankumar N. M., Swetha and **Devaraju J. T**, "Performance Evaluation of Multi Antenna Techniques in LTE", International Journal of Mobile Network Communications & Telematics (IJMNCT), Vol.2, No.4, p97-105, August 2012, ISSN:1839-5678 (DOI: 10.5121/ijmnct.2012.2409)(AIRCC).
38. Thontadharya H.J., Shwetha D., and **Devaraju J.T.**, "Study of Routing and Scheduling Algorithms in WiMAX Mesh and Multi Hop Networks", World Journal of Science and Technology (WJST) 2012, 2(5):120-123, ISSN: 2231 – 2587.
39. P.H. Suresha, Ramani, M.C. Radhakrishna, Basavaraj Angadi and **J.T. Devaraju**, "Characterisation of $BiFeO_3$ synthesised by microcontroller based thermogravimetric analyser", Indian Journal of Engineering & Material Sciences, Vol. 19, June 2012, pp. 196-198, ISSN: 0975-1017 (Online); 0971-4588 (Print)**,** (IF 0.223)

40. Thontadharya H.J., Shwetha D., Subramanyabhat M. and **Devaraju J.T**., "Simulation and Emulation Approach for the Performance Evaluation of Adaptive Modulation and Coding Scheme in Mobile WiMAX Network", *International Journal of Computer applications, Vol 44-No 16, April 2012. ISSN: 0975 – 8887.* (IF0.835)

41. Subramanya Bhat M, Shwetha D, Thontadharya H.J and **Devaraju J.T,** "*Simulation Study on Improved AODV Routing protocol*", International Journal of Computer Information Systems (IJCIS), Vol 4, No.1, 29-32, 2012, ISSN:2229-5208.
42. Sandhya Kulkarni, Shwetha D , **Devaraju J.T** and D. Das, "*Channel Aware Uplink Scheduler for a Mobile Subscriber Station of IEEE 802.16e"* , International Journal of Computer Applications (0975 – 8887) Volume 35– No.6,15-22, December 2011. (IF0.835)
43. Morigere Subramanya Bhat, Shwetha D, Manjunath D and **J.T. Devaraju,** "*Scenario Based Study of On-demand reactive routing protocol for IEEE-802.11 and 802.15.4 standards*", International Journal of Computer Science & Communication Networks (IJCSCN), **Vol 1(2),** 128-135, Oct-Nov 2011, ISSN:2249-5789.
44. Shwetha D, Thontadharya H.J, Subramanya Bhat M and **J.T. Devaraju,** "*Performance Analysis of ARQ Mechanism in WiMAX Networks*", International Journal of Computer Science & Communication Networks (IJCSCN), **Vol 1(2),** 123-127, Oct-Nov 2011, ISSN:2249-5789.
45. Thontadharya H.J, Shwetha D, Subramanya Bhat M and **J.T. Devaraju,** "*Performance Study of Bandwidth Request Mechanisms in IEEE 802.16e Networks*", International Journal of Computer Science & Communication Networks (IJCSCN), **Vol 1(2),** 136-141, Oct-Nov 2011, ISSN:2249-5789.
46. **J.T. Devaraju**, P.H Suresh**,** Ramani and M.C. Radhakrishna "*Development of Microcontroller based Thermo gravimetric Analyzer"* Measurement **44** (2011) pp. 2096-2103**, doi:10.1016/j.measurement.2011.08.007. (0.846)**
47. Subramanya Bhat M, Shwetha D and **J.T. Devaraju,** "A Performance Study of Proactive, Reactive and Hybrid Routing Protocols using Qualnet Simulator", International Journal of Computer Applications (0975 – 8887) Volume 28– No.5, 10-17, August 2011. (IF0.835)
48. Shwetha D, Subramanya Bhat M and **J.T. Devaraju, "***Performance Evaluation of Connection Admission Control for IEEE 802.16 Networks"*, International Journal of Computer Applications (0975 – 8887), **Volume 25**– No.8, 1-7, July 2011. (IF0.835)
49. Sandhya Kulkarni, Shwetha D, **Devaraju J.T**, and D. Das, "*Traffic Sensitive and Traffic Load Aware Path Selection Algorithm for MMR WIMAX Networks"*, International Journal of Distributed and Parallel Systems (IJDPS) Vol.2, No.4, 182-193, July 2011. ISSN 2229-3957 (print), 0976-9757 (online)
50. Sandhya Kulkarni, H. J. Thontadharya, **J.T Devaraju,** D Das "*Performance Evaluation of VoIP in Mobile WiMAX; Simulation and Emulation studies"* International Journal on Computer Science and Engineering (IJCSE), Vol. 3, No. 3, 1124, 2011 (ISSN: 0975-3397).
51. **J.T. Devaraju,** H.J. Thontadharya & Nagaraj K, Nine profile & Nine segment Temperature Programmer for Mashing Apparatus, *Instrumentation Science and Technology (T&F), 39:101–109, 2011*. ISSN: 1073-9149(Print), 1525-6030 (Online). (IF-0.448)
52. **Devaraju J.T** & Sandhya Kulakarni "*Development of Isolated Dual Channel Transient Recorder*" Jl. of Instrum. Soc. of India Vol. 39 No.4, Dec 2009.
53. B.H. Sharmila, **J. T.Devaraju** and S. Asokan, "*A Modulated Differential scanning calorimetric study and As-Te-In glasses*", J.Non-cryst. Solids, 326 and 327 (2003) 154-158.
54. **J.T Devaraju**, B.H Sharmila, S Asokan and K.V Acharya, "*Threshold electrical switching in* $As_{45}Te_{55-x}In_x$ *and* $As_{50}Te_{50-x}In_x$ *glasses*", *Appl. Phy.* **A,** 75 (2002).
55. B.H Sharmila, **J.T Devaraju** and S Asokan, "*High-pressure resistivity behaviour of As-Te-In glasses - the effect of network topological thresholds*", *J. of Non-Cryst. Solids*, **303**, 372 (2002).
56. **J.T. Devaraju**, S. Asokan, and E.S.R. Gopal, "*Electrical switching in Chalcogenide glasses: The current status*" in "*Frontiers in Materials Physics*" published by Allied Publishers, Ltd., New-Delhi (2002).

57. **Devaraju J.T**, Sharmila B.H, Acharya K.V, Asokan S, and Gopal E.S.R, "*Non-linear I-V characteristics and threshold switching in As-Te-In glasses*", *Intl. Con. On solid state Cryst., Proc. of SPIE*, **4412**, 250 (2001).
58. **J.T Devaraju**, B.H Sharmila, S Asokan and K.V Acharya, "*Threshold electrical switching in bulk As-Te-In glasses: composition dependence and topological effects*", *Philos. Mag*. **B,** 81, 6, 583 (2001).
59. D.Manjunatha and **Dr. J.T. Devaraju**, "Book on Electronics a complete reference", United Publishers, Mangalore, 2008.

Conference, Seminar organized and attended International and National:

1. Ramanuja H S, Suhas K R, Mohana H K and **Devaraju J T**, "Performance Evaluation of Network Layer Protocols for Multimedia Streaming over Ad Hoc Networks", Presented in National Conference on SAMVIDH-2019, held on 14th October 2019, organized by Seshadripuram First Grade College, Bengaluru.
2. Swetha, Mohankumar N M, Mohana H K and **Devaraju J T**, "User Priority Based Service Provisioning over LTE Network" Presented in National Conference on SAMVIDH-2019, held on 14th October 2019, organized by Seshadripuram First Grade College, Bengaluru.
3. BhavyaShree S B, Mohana H K, Suhas K R and **Devaraju J T**, "Balanced LEACH and Balanced 2-Tier LEACH Protocol for Wireless Sensor Networks", Presented in National Conference on SAMVIDH-2019, held on 14th October 2019, organized by Seshadripuram First Grade College, Bengaluru.
4. Shwetha D, Mohana H K and **Devaraju J T**, "A Survey on Enabling Technologies of IoT", Presented in National Conference on SAMVIDH-2019, held on 14th October 2019, organized by Seshadripuram First Grade College, Bengaluru.
5. Mohana H.K. Ramanuja H.S, Vijaykumar A. Patil and **Dr. J.T. Devaraju**, "Novel Algorithm for Adaptive Carrier Aggregation in LTE-Advanced System", Presented in National Conference on Emerging Trends, Innovations and Applications in Science & Technology, held on 1st October 2019, organized by Nagarjuna College of Management Studies in Association with Infidata Technologies, Bengaluru.
6. Mohana H.K., Suhas K.R., Nethra H. S. and **Dr. J.T. Devaraju**, "Performance Evaluation and Analysis of LTE and Wi-Fi Coexistence for Traffic Offloading in LTE-Advanced Systems", Presented in National Conference on Future India: Science & Technology Exploring New Horizons for a Sustainable Scientific Consortia held on 10th and 11th October 2018, organized by The Indian Science Congress Association Bengaluru Chapter in Association with The Oxford College of Science, Bengaluru.
7. Mohana H.K., Nethra H.S. and **Dr. Devaraju J.T**., "A Study on Challenges and Opportunities in Internet of Things", Presented in National Conference on Innovation, Entrepreneurship and Start-Ups for Economic Transformation-Trends, Opportunities and Challenges" held on 13th April 2018, organized by Sindhi College, Bengaluru.
8. Mohana H.K., Nethra H.S. and **Dr. Devaraju J.T**., **"**A Study on Security and Privacy Issues in Fog Computing", Presented in One Day National Seminar on "Emerging Trends in Physical, Natural And Information Science", held on 15th March 2018, organized by S.E.A College of Science and Commerce & Arts, Bangalore and published in Shanlax International Journal of Arts, Science and Humanities Vol. 5 Special Issue 3 April 2018 ISSN: 2321-788X p.29-33
9. Suhas K.R, Mohankumar N M, Swetha and **Devaraju J. T.** "*Performance of LTE networks with Multi-antenna Techniques in Rayleigh and Ricean Fading Environments*" Presented in National

Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.

10. Swetha, Mohankumar N M, Shwetha D and **Devaraju J. T.** "*Buffer Aware Proportional Fair Scheduling Algorithm for Delay Constraint LTE Network*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
11. Suhas K.R, Mohan H.K and **Devaraju J. T.** "*Implementation and Performance evaluation of Traffic Differential – Carrier Sensing Multiple Access- Collision Avoidance MAC Protocol for Ad hoc networks*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
12. Thontadharya H.J, Shwetha D, and **Devaraju J. T.** "*An Overview of Network Slicing for the Future 5G Mobile Networks*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
13. Bhavyashree S.B, Suhas K.R and **Devaraju J. T.** "*Balanced LEACH and Balanced 2-tier LEACH Protocol for Wireless Sensor Networks*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
14. Ramanuja H.S, Suhas K.R and **Devaraju J. T.** "*A Novel Algorithm for Inter Cell Interference Coordination in LTE Networks*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
15. Shwetha D, Mohankumar N M, Swetha and **Devaraju J. T.** "*Performance Analysis of RS Mobility in IEEE802.16j MMR WiMAX Networks*" Presented in National Conference on "Recent Trends In Electronics and Communication –RTEC-2018", held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
16. Mohana H K, Nethra H.S and **Devaraju J. T,** "*Effect of transmit power on throughput and jitter performance in the downlink* LTE network" Presented in National Conference on "Competency building strategies in business and technology for sustainable development", held on 11th February 2017, organized by S.E.A College of Science and Commerce & Arts, Bangalore and published conference proceedings, ISBN 978-81-933316-6-8, , p.33.
17. Suhas K.R, Bhavya Shree S.B, Shwetha .D and **Devaraju J. T.** "*To Study The Effects of Duty Cycle on IEEE 802.15.4 Standard Networks for Various Configurations of Beacons and Superframe Orders*" Presented in National Conference on "Recent Trends In Physical Sciences –RTPS 16", held on 25th-26th February 2016, organized by Jain University, Bangalore and published in Academic journal,Pariprashna, ISSN 0976-7150, Vol-IX, Issues-I & II, p.280.
18. Mohana H K, Mohankumar N M, Swetha and **Devaraju J. T,** "*Perfromance Study of Transport Blocks Errors on Data Rates in LTE Networks*" Presented National Conference on "Recent Trends In Physical Sciences –RTPS 16", held on 25th-26th February 2016, organized by Jain University, Bangalore and published in Academic journal,Pariprashna, ISSN 0976-7150, Vol-IX, Issues-I & II, p.306.
19. Manjunatha .D, Mohankumar N M, Jyothi V and **Devaraju J. T,** "*Performance Study of power AODV Routing Protocol for MANETS*" Presented in National Conference on "Recent Trends In Physical Sciences –RTPS 16", held on 25th-26th February 2016, organized by Jain University, Bangalore and published in Academic journal,Pariprashna, ISSN 0976-7150, Vol-IX, Issues-I & II, p.254.
20. M Subramanya Bhat, Vijaya Kumar A Patil, D Manjunatha, and **Devaraju J. T,** "*A Bird View of Wireless Sensor Network*" Presented in National Conference on "Recent Trends In Physical

Sciences –RTPS 16", held on 25th-26th February 2016, organized by Jain University, Bangalore and published in Academic journal,Pariprashna, ISSN 0976-7150, Vol-IX, Issues-I & II, p.215.

21. Suhas.K.R, Jyothi.V, Vijaykumar A. Patil and Devaraju .J.T, "Analyzing and Evaluating Beacon and Non Beacon Enabled Mode of IEEE802.15.4 MAC protocol for Streaming" , at National conference on Evolving Trends and Challenged in Science & Research- an Exploration, held on 29th Jnauray 2016, organized by Basaveshwara College of Commerce, Arts & Science, Bangalore, Sponsored by UGC and published in proceedings, pp.24-28.
22. Swetha, Mohankumar N M, Shwetha D, Devaraju J T, " Max-Min aware PF scheduling Algorithm for downlink LTE systems" , at National conference on Evolving Trends and Challenged in Science & Research- an Exploration, held on 29th Jnauray 2016, organized by Basaveshwara College of Commerce, Arts & Science, Bangalore, Sponsored by UGC and published in proceedings, pp.40-43.
23. Mohankumar N M, Swetha, Mohana H K, Devaraju J T, "Channel Quality Based adaptive video quality scaling technique for LTE Networks", at National conference on Evolving Trends and Challenged in Science & Research- an Exploration, held on 29th Jnauray 2016, organized by Basaveshwara College of Commerce, Arts & Science, Bangalore, Sponsored by UGC and published in proceedings, pp.107-110.
24. Jyothi.V, Suhas.K.R, Vijaykumar A. Patil and Devaraju .J.T, "Performance Study of Reactive Routing Protocol for Various Signal Fading Models", at National conference on Evolving Trends and Challenged in Science & Research- an Exploration, held on 29th Jnauray 2016, organized by Basaveshwara College of Commerce, Arts & Science, Bangalore, Sponsored by UGC and published in proceedings, pp.144-148.
25. Bhavya Shree S. B, Suhas.K.R, Jayashri Kori and Devaraju J.T, Performance Evaluation of IEEE 802.15.4 standard in Flat and Hierarchical network topologies, at National conference on Evolving Trends and Challenged in Science & Research- an Exploration, held on 29th Jnauray 2016, organized by Basaveshwara College of Commerce, Arts & Science, Bangalore, Sponsored by UGC and published in proceedings, pp.29-33.

26. Mohankumar N. M, Swetha, Mohana H.K and **Devaraju J. T** "*Throughput and Fairness Performance Evaluation of Scheduling Algorithms for Downlink LTE*" Presented in JNANARJANA 2K14, 6th National Scinece Conference on "Beyond the frontiers in Science & Technology", held on 27th-28th March 2014, organized The Oxford College of Science, Bangalore, and published in proceedings, pp.55-60.
27. Jyothi.V, Suhas K. R, Subramanya Bhat M and Devaraju. J. T, "*Performance Evaluation of On-Demand Reactive Routing Protocol with Multiple CBR Connections for IEEE 802.11 and IEEE802.15.4 Standards*" Presented in JNANARJANA 2K14, 6th National Scinece Conference on "Beyond the frontiers in Science & Technology", held on 27th-28th March 2014, organized The Oxford College Of Science, Bangalore, and published in proceedings, pp.61-67.
28. Mohankumar N. M, Swetha, Mohana H.K and **Devaraju J. T** "*A Performance Evaluation of Different Scheduling Algorithms with AMC for Downlink LTE*" Presented in National Conference on Recent Trends in Electronics and its applications (NCRTEA-2014), held on 14th-15th March 2014, organized by Dept. of Electronics, GFGC, K.R. Pura, Bangalore, and published in proceedings, pp.88-92.
29. Jyothi.V, M. Subramanya Bhat, Suhas K. R and **Devaraju. J. T**, "*A Performance Study of Proactive, Reactive and Hybrid Routing Protocols with multiple CBR connections for IEEE802.11 standard*" Presented in National Conference on Recent Trends in Electronics and its applications (NCRTEA-2014), held on 14th-15th March 2014, organized by Dept. of Electronics, GFGC, K.R. Pura, Bangalore, and published in proceedings, pp.36-41.

30. Jyothi.V, Suhas K. R and **Devaraju. J. T**, "*A Performance Study of Reactive and Hybrid Routing Protocols for various CBR connections*" Presented in International Conference on Current Trends in Advanced Computing (ICCTAC), held on 20th-21st February 2014, organized by Kristu Jayanti College of Management and Technology, Bangalore, Karnataka, India and published in proceedings, pp.15-19.
31. Swetha, Mohankumar N. M and **Devaraju J. T**, "*Emulation Study of Round Robin and Proportional Fair Scheduling Algorithms For Video Traffic In LTE Networks*" Presented in International Conference on Current Trends in Advanced Computing (ICCTAC)), held on 20th-21st February 2014, organized by Kristu Jayanti College of Management and Technology, Bangalore, Karnataka, India and published in proceedings, pp.25-28.
32. Swetha, Mohankumar N. M., and **Devaraju J. T**, "*Performance Study of Proportional Fair Scheduling Algorithm with Transmit Diversity Multi-Antenna Technique for LTE Network*", Presented in International Conference on Electrical, Electronics and Data Communication (ICEEDC), organized by Institute of Research and Journals (IRAJ-7th conference), held on 10th November 2013 at Pune, Published in conference Proceedings, ISBN: 978-93-82702-38-2.
33. Jyothi. V, M. Subramanya Bhat and **J.T.Devaraju**, *"Comparative Performance Evaluation of Different AdHoc Routing Protocols in IEEE 802.15.4", Presented in National Symposium on Low Power Solutions for Communications, organized by Dept. of E & C, RVCE, Bangalore, held on 19th -20th April, 2013. Published in conference Proceedings.*
34. Vedavathi.B.S, M.Subramanya, Shashikumar and **J.T.Devaraju**, *"A Performance Study of AODV and ZRP Protocols for Mobile Adhoc Network (MANET)", Presented in National Symposium on Low Power Solutions for Communications, organized by Dept. of E & C, RVCE, Bangalore, held on 19th -20th April, 2013. Published in conference Proceedings.*
35. Akshaya Y M, M.Subramanya, Shashikumar and **J.T.Devaraju**, "Performance Evaluation Of AODV and LAR with 802.15.4 Standard", P*resented in National Symposium on Low Power Solutions for Communications,* organized by Dept. of E & C, RVCE, Bangalore, held on 19th -20th April, 2013. P*ublished in conference Proceedings.*
36. Thontadharya. H.J, Shwetha. D, Subramanya Bhat M and **Devaraju. J.T**., "Effect of Idle mode on Power Saving in Mobile WiMAX Network", P*resented in International Conference on Advances in Computing (ICAdC-2012),* organized by Dept. of Computer Science & Engg, Information Science & Engg. and Computer Applications, MSRIT, Bangalore, held on 4th -6th July, 2012. P*ublished in Proceedings of ICAdC, Advances in intelligent and soft computing-Springer, 174, pp. 491–499 (ISSN 2194-5357, ISBN 978-81-322-0739-9).*
37. Subramanya Bhat M, Mohankumar. N.M and **J.T Devaraju**, "**Real Time Emulation Study of AODV and Improved AODV Protocols**", Presented at *National Conference on Advances in Electronics & communication technology* (NCAECT-2012), Organized by Department of Studies and Research in Electronics, Kuvempu University held on 18th May 2012 and Published in Proceedings of NCAECT-2012.
38. Shwetha. D, Thontadarya. H.J and **Devaraju. J.T**, "**Study of Handover Threshold and Handover on the QoS Performance of WiMAX**", Presented at *National Conference on Advances in Electronics & communication technology* (NCAECT-2012), Organized by Department of Studies and Research in Electronics, Kuvempu University held on 18th May 2012 and Published in Proceedings of NCAECT-2012.
39. M. Subramanya Bhat, Manjunatha. D, Basavaraj. N. Jagadale and **Devaraju J. T**, "Comparitive Study of AODV,OLSR and ZRP Protocols" Presented at National Conference on Advanced Computing and Computations (NCACC' 12), organized by Dept. of P.G. Studies and research in Computer Science, held on 27th -28th April and published in proceedings of NCACC'12, pp168-171.

40. Sarasa N R, Shwetha D, **J.T.Devaraju**, "Performance Evaluation of Transparent relay mode in MMR WiMAX Systems" Presented at National Conference on Current Trends in Advanced Computing (CTAC'12), held on 9-10th March 2012, organized by Kristu Jayanti College of Management and Technology, Bangalore, Karnataka, India and published in proceedings, pp.69-71.
41. Mohankumar N.M, Manjunatha D and **J. T Devaraju**, *"Overview of LTE: The Next Generation Wireless Access Technology"* Presented at National conference on Recent Trends in Communication Technology, held on 13th January 2012, organized by Karnataka State Higher Education Council, Karnataka, India and published in proceedings, pp.142-152 and Chaired a Technical presentation session.
42. M. Subramanya Bhat, H.J.Thontadharya and **J. T Devaraju**, *"Performance Evaluation of Routing Protocol for IEEE 802.11 using Qualnet Network Simulator"* Presented at International conference on communication, computation, management & nano-technology (ICN-2011), held on 23rd -25th September 2011 at REC Bhalaki, Karnataka, India and published in proceedings of ICN-2011, **ISBN : 978-81-921740-0-6**.
43. Thontadharya H.J, Shwetha D and **J.T.Devaraju**, "*Study of Routing and Scheduling Algorithms in WiMAX Mesh and Multi Hop Networks"*, Presented at International conference on communication, computation, management & nano-technology (ICN-2011), held on 23rd -25th September 2011 at REC Bhalaki, Karnataka, India and published in proceedings of ICN-2011, **ISBN : 978-81-921740-0-6**.
44. B.R. Gowtham, M. Subramanya Bhat, **J.T. Devaraju,** M. Uttara Kumari and Prakash Biswgar, "*Performance Evaluation of DSR and ZRP Routing Protocol using Qualnet*" Presented at National conference on "*Emerging Trends in Biomedical signal processing*" held on 26th Feb, 2011 at RVCE, Bangalore and published in Conference proceedings.
45. N.M. Sunil Kumar, M. Subramanya Bhat, **J.T. Devaraju** and Prakash Biswgar, "*Scenario based Performance Evaluation of Reactive and Proactive Routing Protocols in Mobile Adhoc Networks*" Presented at National conference on "*Emerging Trends in Biomedical signal processing*" held on 26th Feb, 2011 at RVCE, Bangalore and published in Conference proceedings.
46. Sandhya Kulkarni, Shwetha D, **J.T. Devaraju** and D.Das, "*Performance Evaluation of Mobile Multi-hop relay WiMAX Network In Urban Environment"* presented at International conference ICODC, held on November 3rd and 4th, 2010, Oxford college of Engineering, Bangalore and published in Conference proceedings.
47. D. Manjunath, M subramanya bhat, **J.T. Devaraju** "*An overview of wireless sensor networks and applications*" presented in Knowledge utsav- national conference held on 28th august 2010 at Jain University, Kanakapura, Bangalore.
48. **J.T. Devaraju,** H.J. Thontadharya and K. Nagaraj, "*Temperature Programmer for Mashing Apparatus*" chaired a session and presented at ICEPWCH held on 29-31st July, 2010 Dept. of Zoology, Bangalore University, Bangalore.
49. **J.T Devaraju,** B.H. Sharmila and S Asokan "*Electrical Switching In As-Te-Tl Glasses: The Effect Of On State Current And Tl Addition On Switching Behaviour*", presented in *XVsymposium on non-oxide and new optical glasses* held on 10-14th April, IISc, Bangalore (2006).
50. B.H Sharmila, **J.T Devaraju** and S Asokan, "*Extended stiffness threshold in As-Te-In glasses revealed by modulated differential scanning calorimetry*", Presented in XIIIth International symposium on non-oxide glasses and new optical glasses, September 9-13 (2002), Pardubice, Czech Republic.

51. **K.J. Mallikarjunaiah**, J.T. Devaraju and R. Damle, "Computer Controlled Programmable Pulse Generator for Pulsed NMR Measurements", presented in National Symposium on Instrumentation, 27-29th November, Coimbatore (2002).
52. **J.T Devaraju**, B.H Sharmila, S Asokan and K.V Acharya, "Electrical switching behaviour of bulk As-Te-In glasses", presented in International Conference on Materials for Advanced Technologies, 1-6th July, Singapore (2001).

Special/Invited Lectures:

Conference/Symposia/Workshop

1. Delivered Key Note Address/invited talk on *Overview of trends in Wireless Communication* at National Conference on Recent Trends In Electronics and Communication (RTEC-2018), held on 7th March 2023, organized by Dept. of Electronics, Tumkur University, Tumkur.
2. Delivered invited talk on Recent *Advancement in 4G & 5G technologies* at Inter National Conference on Innovative Trends in Electronics and Communication (ICINEC-2019) on 30th and 31st December 2019, organized by Dept. of Electronics, Kuvempu University, Shankaragatta.
3. Delivered invited talk on ***Advancement in Embedded System*** at National Seminar on **New India @75** held on 16th October 2019, organized by S.E.A College of Arts, Commerce and Science, Bangalore.
4. Delivered invited talk on ***Trends in present and future Wireless Communication Technology*** at National Seminar on **Future India: Science & Technology** held on 10th -11th September 2018, organized by Indian Science Congress Association (ISCA) Bangalore Chapter, and The Oxford College of Science, HSR layout, Bangalore.
5. Delivered invited talk on ***Overview of Advanced Wireless Communication*** at National Seminar on **Emerging Trends in Physical, Natural and Information Science** held on 15th March 2018, organized by S.E.A College of Arts, Commerce and Science, Bangalore in association with Bengaluru North University.
6. Delivered Key Note Address/invited talk on ***Overview of trends in Wireless Communication*** at National Conference on **Recent Trends In Electronics and Communication (RTEC-2018)**, held on 7th February 2018, organized by Dept. of Electronics, Tumkur University, Tumkur.
7. Delivered invited talk on ***Recent Advances in Electronics and Wireless Communication*** at National Seminar on **Emerging Trends in Electronics (NSETE-2016),** held on 15th March 2016, organized by Dept. of Electronics, Kuvempu University, Shankaragatta.
8. Delivered invited talk on ***Recent Advances in Wireless Communication Technologies*** at National conference on **Recent Trends in Physical Science (RTPS 16),** held on 25th & 26th February 2016, organized by Division of Physical Sciences, Jain University, Bangalore.

9. Delivered invited talk on ***Overview of Trends in communication and Embedded system*** at National conference on **Evolving Trends and Challenged in Science & Research- an Exploration,** held on 28th & 29th January 2016, organized by Basaveshwara College of **Commerce, Arts & Science, Bangalore, Sponsored by UGC.**
10. Delivered technical lecture on ***Advances in Wireless communication and Embedded system*** at State level Multidisciplinary Workshop on **Emerging Trends in Basic Sciences and Humanities,** held on 26th August 2015, organized by University College of Science, Tumkur University, Sponsored by UGC.
11. Delivered lecture on ***Mobile Communication & WSN ,*** as a part of Proficiency course titled ***Mobile Communication & WSN simulation using QualNet & NS3,*** *on 20th July 2015,* organized by Dept. of ECE, R.V. college of Engineering, Bangalore.
12. Delivered invited lecture on ***Wireless communication and WSN*** in JNANARJANA 2K14, 6th National Scinece Conference on "Beyond the frontiers in Science & Technology", held on 27th-28th March 2014, organized The Oxford College Of Science
13. Delivered technical lecture on ***Recent Advances in Wireless communication and Embedded system*** at National Conference on **Recent Trends in Electronics and its applications (NCRTEA-2014),** held on 14th-15th March 2014, organized by Dept. of Electronics, GFGC, K.R. Pura, Bangalore.
14. Delivered Invited lecture on ***Trends and Technological Advancement in electronics*** at DST , sponsored Science Internship workshop- **INSPIRE**, on 23rd April, 2013 organized by Christ University, Bangalore.
15. Delivered Invited lecture on ***Wireless Sensor Networks and Research trends in WSN: An overview*** in Faculty Development Program (FDP)/ training program on ***Real time Wireless Sensor Networks and Sensor Web***, April 9-10, 2013 jointly organized by the department of E&C, Dr. AIT and Nihon communications, Bangalore, sponsored by TEQUIP.
16. Delivered Invited lecture on ***Recent trends in Wireless communication & Wireless Sensor Networks,*** in Faculty Development Program (FDP) on ***Wireless Sensor Networks and their applications***, March 18-22, 2013 organized by the department of Information Technology, Shri Guru Gobind Singhji Institute of Engineering and Technology, Nanded, Maharashtra, sponsored by TEQUIP.
17. Delivered Invited lecture/keynote address on ***Wired, Wireless &MANET's Simulation,*** in National Level Workshop on *Wired, Wireless &MANET's Simulation using NS-2*, March 12-13, 2013 organized by CENSA, EWIT & ISTE, Bangalore.

18. Delivered lecture on ***Overview of Wireless Communication & Introduction to Wireless Sensor Network,*** in National Level Seminar on 'Latest trends in Wireless Communication (NSWC 2013)', February 15-16, 2013 organized by Department of Electronics, Christ University, Bangalore.
19. Delivered lead lecture on ***Advanced Research Trends in Electronics & Communication Technology*** at **National Conference on Electronics and Communication Technology (NCAECT-2012)** organized by Dept. of Electronics, Kuvempu University, Shankaraghatta, held on 18th May, 2012.
20. Delivered Keynote address on ***Emerging Technologies in Electronics*** at Symposia organized by Sheshadripuram First Grade College, Yelahanka, Bangalore, held on 15-16th December, 2011.
21. Delivered lecture on ***A Case study : Nine profile & Nine segment Temperature Programmer for Mashing Apparatus*** in **National Level Workshop** on '**Electronic Instrumentation Applications**', September 7-8, 2011 organized by Department of Electronics, Christ University, Bangalore.
22. Delivered lecture on ***Introduction to implementation of Single Purpose Processor*** in **UGC Sponsored two days state level workshop/seminars** on ***VLSI and VHDL,*** January 30, 2010 at Sree Veerendra Patil Degree college of Science, Arts & commerce, Bangalore.
23. Delivered lecture on ***Survey of Software Architecture and RTOS*** in **UGC Sponsored two days state level workshop/seminars** on ***Emerging Trends in Embedded Systems",*** November 3, 2009 at Vijaya college, Bangalore.
24. Chaired technical presentation session and delivered lecture on ***Introduction to Embedded Technology*** in **UGC Sponsored state level seminars** on ***New Frontiers in the Development of Science Technology—Embedded Technology,*** April 17, 2009 at BMS college for Women, Bangalore.
25. Delivered lecture on ***Microcontroller*** **Interfacing** in **UGC Sponsored Workshop** on '**Microcontroller and Embedded Systems**' September 19 -20, 2008 at Christ University, Bangalore.

Refresher course

1. Delivered a lecture on ***Recent Technological Trends*** in Refresher course in ICT organized by UGC-HRDC, Bangalore University, Bangalore, 29th September 2022.
2. Delivered a lecture on ***Treads in present and future wireless technology*** in Orientation program organized by UGC-HRDC, Bangalore University, Bangalore, 10th February 2020.

3. Delivered a lecture on ***Embedded system and Advanced communication: an introduction*** at **Refresher Course** in ICT organized by UGC-HRDC, Bangalore University, Bangalore, 11th September 2018.
4. Delivered a lecture as resource person on ***Advancement in wireless technology, embedded system and Wireless Sensor Networks*** at **Refresher Course** in Natural and Bio science organized by UGC-HRDC, Goa University, Goa, 14th & 15th April 2017 (4 sessions).
5. Delivered a lecture on ***Evolution and advancement in telecommunication and embedded system*** at **Refresher Course** in ICT organized by UGC-HRDC, Bangalore University, Bangalore, 19th November 2015.
6. Delivered a lecture on ***Recent advancement in Electronics: An overview,*** at **Refresher Course** in **Basic Sciences** organized by UGC-HRDC, Bangalore University, Bangalore, 23rd July 2015
7. Delivered a lecture on ***Overview of Control System*** and ***Introduction to 8086 Microprocessor*** at **Refresher Course** in Physics and Electronics organized by CU-Academic Staff College, Christ University, Bangalore, on 25th April 2013
8. Delivered a lecture on ***Technological advancement in Electronics*** at **Refresher Course** in Physics organized by UGC-Academic Staff College Bangalore University, Bangalore, 2nd April 2013
9. Delivered a lecture on ***Recent Trends in Electronics*** at **Refresher Course** in ICT organized by UGC-Academic Staff College Bangalore University, Bangalore, 24th December 2010.
10. Delivered a lecture on ***Microcontroller Interfacing*** at **Refresher Course** in Electronics organized by Department of Electronics & UGC-Academic Staff College, Goa University, Goa, 13th April 2009.
11. Delivered a lecture on ***Embedded system Design*** at **Refresher Course** in Computer Science "Current Trends in Computing" organized by Department Of Computer Science & Applications with UGC-Academic Staff College Bangalore University, Banaglore, 8th April 2009.

Invited Talks/Special Lectures

1. Delivered a Keynote address on ***Emerging Trends in Wireless communication*** at CELESTRA-2K16 organized by Sheshadripuram First Grade College, Yelahanka, Bangalore, held on 8th March, 2016

2. Delivered a special lecture on **Recent Advances in *Mobile Broadband Communication & WSN,*** at Dept. of Electronics, The Oxford College Of Science, Bangalore *on 12th February 2016.*
3. Delivered a lecture on ***Recent Trends in Electronics and Communication,*** at Dept. of Physics (PG), Christ University, Bangalore on 24th January 2013.
4. Delivered a lecture on ***Embedded System in present World*** in Sadhana Club inauguration, held on 7th April, 2011 at Surana College (PG campus), Bangalore.
5. Delivered a lecture on ***Trends and Development in Electronics*** at Dept. of Electronics, Jain University, on 9th March 2010.
6. Delivered a lecture on ***Role of Embedded System in today's Digital World*** in **Vijnana Sangam** one days Experts Multiface Interaction on 5th March 2010 Surana College, Bangalore.
7. Delivered a lecture on ***Embedded system Design*** in **Teachers Training Program** organized by Department Of Electronics Jain University, Bangalore, 19th August 2009.
8. Delivered a lecture on ***Introduction to Embedded Technology*** at National college, Bangalore, on 17th June 2009, Organized by The Bangalore Science Forum (Regd).
9. Delivered a lecture on ***Introduction to Embedded system*** at Dept. of Electronics, Basaveshwara College of Commerce, Arts & Science, on 29th April 2009.
10. Delivered a special lecture on *Microprocessors* in the refresher course for teachers held at Department of Electronics, Jain college, Bangalore, during September 2006.

Ongoing Project details with funding agency, funding, time frame and title:-

1. Agency: Bangalore University
   Date of sanction: 24-2-2023
   Duration: 2 years.
   Grant: Rs. 200000.00
   Status: Ongoing
   Title: Enhancement of Radio Resources allocation and Congestion Control Mechanism in C-V2X.

Completed Project details with funding agency, funding, time frame and title:-

2. Agency: Bangalore University Inter disciplinary project
   Date of sanction: 10-7-2004
   Duration: 3 years.
   Grant: Rs. 300000.00
   Status: Completed
   Title: Characterisation and study of reactivity of nano-size crystallites of transition metal compounds and complexes with automatic electrobalance

(thermogravimetric analyser), x-ray diffraction and mossbauer effect.

2. Agency: UGC
   Date of sanction: 1-2-2010
   Duration: 3 years.
   Grant: **Rs. 1168987 /-**
   Status: Completed.
   Title: *Performance Evaluation of QoS In WiMAX IEEE802.16e Std*

Agency: BBMP (Consultancy)
   Date of sanction: 4-8-2018
   Grant: **Rs. 3,00,000 /-**
   Status: ongoing.
   Title: *Technical Consultancy service for Providing and Installation of Surveillance Cameras in selected Arterial and Sub arterial roads in Bangalore*

PhD Guided

Sl.No	Name	Topic
1	Sandhya Kulakarni	Performance Evaluation Of Mobile And Mobile Multi-Hop Relay Wimax Mac Layer
2	H.J. Thontadharya	QoS Enhancement and Performance Evaluation in Mobile WiMAX
3	G. Ravi kolarkar	Electrical Switching, Thermal and Optical Studies on Thallium Doped In-Se Glasses
4	Subramanya Bhat	*Design and Performance Evaluation of Routing Protocol for MANET and Wireless Sensor Networks*
5	Shwetha D	Quality of Service Enhancement in Mobile and Mobile Multi-Hop Relay WiMAX
6	Mohankumar N M	Performance Evaluation of novel algorithms for betterment of QoE for multimedia services over LTE network
7	Swetha	Performance Evaluation of Proposed Scheduling Algorithms for Enhancement of Quality of Service in LTE Network
8	Suhas K R	Performance Evaluation of Novel Algorithms for Streaming Multimedia Over Ad Hoc Networks
9	Mohana H K	Quality of Experience Enhancement Strategies in LTE and LTE - Advanced Networks

PhD Students currently working

Sl.No	Name	Topic
1	Bhavya Shree S B	Performance enhancement of hierarchical routing protocol for Ad-hoc networks

2	Ramanuja H S	Design and Performance evaluation of novel algorithms to support advanced multimedia applications and QoS optimization in LTE networks.
3	Ashwini	Enhancement of radio resource allocation and congestion control mechanism in C-V2X
4	Sanjay	Radio resource management mechanisms for Enhancement of quality of services in LTE-Advanced networks

M. Tech Projects Guided

1. Performance Evaluation of Adaptive Modulation and Coding schemes for LTE systems- **Krishna Teja Yadav CH.T**, Bangalore Institute of Technology (BIT), VTU, August-2014 to July 2015.
2. Performance study of Handover mechanism in LTE - **Bheem Rao K**, Bangalore Institute of Technology (BIT), VTU, August-2014 to July 2015.
3. Implementation of Ad hoc On-Demand Multipath Distance Vector (AOMDV) - **Swathi,** M.Tech Computer Science, East West Institute of Technology, VTU, August-2013 to July 2014.
4. Implementation of Link Quality Based Power Efficient Routing Protocol- **Bhagyashree.K**, M.Tech Digital Electronics, East West Institute of Technology, VTU, August-2013 to July 2014.
5. Wireless Video Streaming For Surveillance Application- **Naveen.V,** M.Tech Digital Electronics, East West Institute of Technology, VTU, August-2013 to July 2014.
6. Wireless Weather Station Monitoring System Using Modbus- **Raghuram.K.G,** M.Tech Digital Electronics, East West Institute of Technology, VTU, August-2013 to July 2014.
7. Establishing Wireless Sensor Test Bed Using EZ430-RF2500 nodes For Implementation of Simpliciti Protocol to Monitor Temperature In Industry- **Vedavathi B.S,** M.Tech in Digital Electronics, East West college of Engineering, VTU, August-2012 to July 2013.
8. Implementation of AODV Routing Protocol On Wireless Sensor Network For Real Time Data Collection- Akshaya Y.M, M.Tech Digital Electronics, East West college of Engineering, VTU, August-2012 to July 2013.
9. Implementation of Mobility to Relay Station of IEEE802.16j in QualNet and Performance Evaluation- **Sarasa N R,** M.Tech in Computer Science and Engineering, RNSIT, VTU, August-2011 to July 2012.

10. Performance Evaluation of Reactive and Proactive Routing Protocols for MANET using Simulation and Emulation- **Sunil Kumar N**, M.Tech in Communication System, RVCE, VTU, August-2010 to July 2011.
11. Simulation and Performance study of Multipath based Routing Protocols for Wireless Sensor Networks- **B.R. Goutham**, M.Tech in Communication System, RVCE, VTU, August-2010 to July 2011.

Accomplishments as Registrar (Evaluation), Bangalore University (from 13.03.2020 to 03.02.2023)

During my tenure as Registrar (Evaluation), Bangalore University has always been in the forefront for adopting novel technologies & implementing new methods in education. In alignment with this vision, Bangalore University has adopted technology for the seamless administration of examinations and evaluation processes. The main objective behind this was to develop confidence among the stakeholders and to ensure error-free outcomes. To attain this significant milestone, the adoption and implementation of technology were imperative. Here are some of the noteworthy accomplishments achieved during my tenure.

I. Reforms implemented in Practical examination

In pursuit of our digitization mission and the objective of achieving error-free practical examinations, the following modifications were implemented:

1. Scrapping of OMR sheets for capturing practical marks;
2. Online batch creation was facilitated in the portal by providing list of eligible candidates only, thereby automating the preparation of time table;
3. Implementation of online approval processes for batches, timetables, and examiner allocations, accompanied by automated email and SMS notifications to the assigned examiners.
4. Introduction of an online invigilation diary.
5. Capturing of marks without any hassle and double entry are made by both the examiners independently with error entry check;
6. Empowering the Board of Examination (BOE) Chairperson to monitor day-to-day proceedings effectively.

II. Reforms implemented in theory examination

Recognizing certain irregularities in result processing when outsourcing to external agencies, Bangalore University embarked on the development and deployment of an in-house, cost-effective, and foolproof online digital evaluation system. This initiative aimed to maintain the highest standards of service for all stakeholders.

Addressing 'Not Processed' (NP) Results: Bangalore University addressed the issue of 'Not Processed' (NP) results, which had posed challenges for affiliated college principals in obtaining these results. Following a comprehensive Structured Program Survey, the following reforms were implemented:

1. **Incorporation of Barcodes and QR Codes:** To enhance the security and integrity of the examination process, Answer booklets were redesigned to incorporate barcodes on odd pages and QR codes on the facing OMR sheets. This measure significantly reduced the potential for tampering and ensured the authenticity of the evaluation process.
2. **Online Question Paper (QP) Indent:** The introduction of an online QP indent system eliminated errors in entering paper names and paper codes, streamlining the examination process.
3. **Online Room Allotment & Online Invigilation Diary:** Implementation of Online Room Allotment & Online invigilation diary had multiple benefits, including:
   - Reducing errors in recording absentees and ensuring prompt result declarations.
   - Minimizing errors in room allotment.
   - Decreasing the manpower required at the examination branch and examination centers.
   - Invigilators are less burdened with entry of register numbers etc.;
4. Providing Answer Script Packing Details and Online Acknowledgement: This step improved transparency and efficiency in handling answer scripts.

The feedback received on these procedures was overwhelmingly positive, with Chief Superintendents expressing satisfaction with the error-free and hassle-free examination process. These reforms represent a significant stride toward ensuring the quality and reliability of examinations at Bangalore University.

Digital evaluation

The journey towards digitization took a significant leap with the introduction of the Digital Valuation System (DVS) at Bangalore University. The university procured software from Visvesvaraya Technological University (VTU), Belgaum, and tailored it extensively to suit the specific needs of Bangalore University. Given the complexity of question papers in terms of both volume and variety, spanning undergraduate (UG) and postgraduate (PG) courses, simplifying and successfully implementing the system was a remarkable achievement. Annually, the university generates approximately 4084 different question papers. Answer scripts are scanned using in-house scanners (42 scanners) and securely stored on servers. Each UG answer script undergoes four valuations (main valuation, reviewer, and two valuations in case of revaluation requests). PG answer scripts go through four valuations as well (first valuation, second valuation, third valuation if there's a significant difference, and revaluation). This approach has effectively addressed numerous issues, such as eliminating totaling mistakes, facilitating the creation of marks lists, enabling contactless/smart valuation (particularly beneficial during the pandemic), easy retrieval of answer scripts in problematic cases, and while providing copies of answer sheets to students. These measures ensure stakeholder satisfaction, transparency, and reduce negative publicity and result publication delays.

The system incorporates stringent quality measures to enhance efficiency, accuracy, and confidentiality throughout the result announcement and valuation processes. Coding and decoding are fully automated, and a workflow process has been introduced, from receiving answer bundles to assigning digitized scripts to evaluators. Continuous improvement remains a core focus, as the Examination branch strives to elevate standards across all DVS operations.

III. Data migration and Result processing software

The computer section at Bangalore University faced several limitations, and proactive actions were taken to address these issues:

Outdated Hardware: The Computer section of the Examination Branch was using a Sun Solaris Server R280, which was procured in 2003 and had no support from the original equipment manufacturer (OEM) with no available spares.

Limited Storage Capacity: The storage capacity was inadequate to accommodate the increasing data volume of the university, and regular upgrades had not taken place.

Obsolete Result Processing Software: The result processing software was built on RDBMS Oracle 9i in 2003. It contained numerous bugs, lacked proper security measures for stored data, and couldn't be enhanced to meet new security compliance standards set by government bodies. Oracle had ceased support for this database, and it wasn't compatible with modern 64-bit operating systems and hardware, making data migration a challenging task.

System Failures: In the event of hardware, software, or operating system failures, restoring the system was nearly impossible.

To address these challenges, the following actions were taken:

Data Migration: The old data was successfully migrated from Oracle 9i Database to Oracle 11g/12C and thoroughly tested and validated.

Front-End Compatibility: Compatibility was established between the front end and the new Oracle 11g/12C database.

Software Development: New software for generating reports after data migration was developed and tested.

Migration Cost: The university invested 10 lakhs for migrating the databases from Oracle 9i to Oracle 11g/12C and upgrading the server hardware to Windows 2019 Enterprise server, featuring robust specifications.

Cost Savings: Implementing new software from scratch would have cost the university approximately Rs. 2.00 crore and taken around six months for development, testing, and

implementation. By migrating and optimizing the existing system, significant cost savings and time efficiency were achieved.

Future-Proofing: The installation of a new system with the latest server configuration ensures scalability and reduces the future cost associated with hardware upgrades and software redesign.

Overall, these actions have transformed the university's system into a more efficient, secure, and sustainable one, ensuring smoother operations and lower maintenance costs in the long run.

IV. Adopting DigiLocker

The Examination branch at Bangalore University has achieved a significant milestone by seamlessly integrating DigiLocker into its operations. This initiative aligns with the Ministry of Electronics & Information Technology's (MeitY) flagship program, Digital India. Here are the key achievements:

Digital Credentials: The Examination branch has successfully embraced DigiLocker by uploading both marks cards and degree certificates using their in-house facilities. This digitization effort has resulted in the secure storage and easy accessibility of academic credentials.

Impressive Scale: More than 40 lakh marks cards and degree certificates have been uploaded to DigiLocker, reflecting the comprehensive scope and impact of this initiative. This ensures that a vast number of students can benefit from the convenience of digital access to their educational documents.

Instant Access at Convocation: Notably, all the degree certificates awarded during the 56th and 57th convocations have been swiftly uploaded to DigiLocker. Students can now access their degree certificates on the very day of their convocation ceremony, simplifying and expediting the process of obtaining this important credential.

This forward-looking adoption of DigiLocker underscores Bangalore University's commitment to embracing digital transformation and enhancing accessibility and convenience for its students.

V. Issuing of Consolidated Marks card for semester scheme:

The adoption of consolidated marks cards for the semester scheme marks a significant improvement in Bangalore University's administrative processes. Here's a breakdown of the key developments:

Implementation of Consolidated Marks Cards: The university has successfully addressed a long-standing issue by introducing consolidated marks cards for each semester.

Concurrently, marks cards for all attempts by candidates across all semesters are uploaded to DIGILOCKER, a move aimed at providing greater convenience and benefits to the students.

Benefits of consolidation:

Reduced Number of Marks Cards: Students will now receive a reduced number of marks cards, aligned with the number of semesters in their respective courses. This simplifies the document management process for both students and the university.

Streamlined Administrative Burden: By reducing the volume of marks cards issued to colleges, the university significantly lessens its administrative burden in terms of tracking and distributing these documents.

User-Friendly Software: The university is actively developing user-friendly and advanced software for the easy and straightforward printing of marks cards and other certificates. This modern software aims to replace the previous cumbersome and time-consuming system, which required substantial manpower. The introduction of this software will streamline administrative processes, reduce resource requirements, and enhance overall efficiency.

Overall, these initiatives demonstrate Bangalore University's commitment to improving the student experience, simplifying administrative tasks, and adopting technology-driven solutions to enhance the quality of services provided to its stakeholders.

VI. Modernization of Network Infrastructure for Examination Branch

The Examination branch at Bangalore University has undergone a significant modernization of its network infrastructure and facilities. Here are the key enhancements:

Network Infrastructure: The Examination branch is now fully networked with a robust infrastructure. This includes three manageable core switches and 25 distributed switches, all connected through an Optical Fiber Cable (OFC) backbone. This network infrastructure supports 730 network points, ensuring seamless connectivity for various operations.

Surveillance and Security: Security measures have been bolstered with the installation of a comprehensive Closed-Circuit Television (CCTV) surveillance system. A total of 96 cameras are deployed, along with a Network Video Recorder (NVR). Additionally, there are five access control systems in place, enhancing security and access management within the branch.

Data Center: A dedicated data center has been established, equipped with five HP DL 360 series RACK servers for data processing. Furthermore, eleven ML350 servers have been deployed for the valuation process. Four Network-Attached Storage (NAS) boxes are utilized for the storage of scanned scripts. To ensure uninterrupted operation, there are two Precision Air Conditioning (AC) units and a 20kVA Uninterruptible Power Supply (UPS).

Digital Evaluation Center: A state-of-the-art digital evaluation center has been set up, featuring the latest technology. This includes 175 high-performance HP I7 desktop computers and 10 HP I7 laptops. To support the center's operations, there are four 20kVA UPS units and additional AC units.

These infrastructure upgrades reflect a commitment to modernization, efficiency, and security within the Examination branch. The network enhancements, surveillance systems, data center facilities, and digital evaluation center collectively contribute to the smooth and effective management of examination-related processes and operations.

VII. Restructuring of Examination Branch

The Examination branch at Bangalore University has undergone a significant restructuring process, which has resulted in several improvements and efficiencies:

Decentralization of Computer Section: The branch has initiated the decentralization of its Computer section. By integrating computer personnel into respective sections, the university aims to reduce unnecessary delays in addressing student grievances. This decentralization has led to quicker resolutions of student issues and complaints, significantly improving the overall processing time for such matters.

Streamlined Distribution of Certificates: The distribution of marks cards and other certificates to both colleges and students has been streamlined. The establishment of a single-window system ensures a smooth and hassle-free distribution process, benefiting both educational institutions and students.

Dedicated Computer Section Unit: A dedicated Computer Section Unit has been established to oversee and manage result processing. This unit plays a pivotal role in coordinating with the University's Online Pre-examination and Post-examination systems, as well as with the Digital Evaluation Unit, which provides students' results after evaluation of answer scripts. Moreover, after the results are declared, the marks card data is uploaded to Digilocker, allowing students to conveniently download their marks cards online.

Efficient Document Processing: A single-window system has been introduced for providing essential documents such as Provisional Degree Certificates (PDC), Migration Certificates, Official Transcripts (OT), Genuineness Certificates, and English Medium Certificates. This has significantly reduced the processing time for these documents, making it quicker and more convenient for students. The printing and processing of these documents have also been computerized for greater efficiency.

These restructuring efforts reflect a commitment to improving the overall student experience, reducing administrative bottlenecks, and embracing technology-driven solutions to enhance service delivery to students and educational institutions.

VIII. Fee Receipt Scanning

The implementation of fee receipt scanning represents a significant enhancement in preventing misuse and ensuring transparent financial transactions related to examination fees at Bangalore University. **Introduction of Fee Receipt Scanning:** Beginning in 2020, the Examination branch introduced a system to scan the barcodes generated on fee receipts submitted by students and colleges towards processing fees for Examination related purposes.

Barcode Scanning Process: The process involves using a barcode scanner to read and capture the barcode information from the fee receipt. Subsequently, a unique alpha-numeric code is generated and recorded on the fee receipt itself.

Preventing Multiple Uses: The introduction of this procedure has a crucial benefit - it mitigates the possibility of a single receipt being used for multiple purposes. This ensures that the same receipt cannot be utilized by students or colleges to claim payments for purposes other than the intended examination fees.

Immediate Detection of Misuse: If someone attempts to use a fee receipt for a purpose other than what it was originally paid for, the software is designed to provide a clear indication, stating "RECEIPT ALREADY SUBMITTED TO DEPARTMENT." This immediate detection helps maintain the integrity of financial transactions and prevents potential loss of revenue to the university funds.

By implementing fee receipt scanning with these safeguards, Bangalore University not only enhances financial transparency but also safeguards its resources, ensuring that funds are utilized for their intended purposes.