

## ABHISHEK Mahesh Appaji

### Contact Address:

Assistant Professor, Dept of Medical Electronics, B.M.S. College of Engineering, Bull Temple Road,  
Bangalore-560019, India ([abhishek.ml@bmsce.ac.in](mailto:abhishek.ml@bmsce.ac.in))

### IEEE Affiliations

Advisor- BMSCE IEEE EMBS Chapter

Joint Secretary and SIGHT Chair, IEEE Bangalore Section

Treasurer, IEEE TEMS Bangalore Chapter | IEEE TEMS YP Lead India

YP, Webmaster and Membership Development - IEEE PES Bangalore Chapter

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Residential Address: 118, 5<sup>th</sup> Main, 7<sup>th</sup> Cross, NR Colony, Bull Temple Road, Bangalore-560019, KA, India

DOB: 23<sup>rd</sup> April 1989

### Education:

#### PhD [Pursuing]

Department of Ophthalmology, School of Mental Health and Neurosciences, Faculty of Health, Medicine and Life Sciences, Maastricht University, the Netherlands

Topic: Retina as Biomarker for Psychoses

New Ventures Leadership from Massachusetts Institute of Technology (MIT) Global Entrepreneurship Bootcamp in March 2017 [Winner of the Bootcamp].

#### M.E [Bioinformatics]: 2013

Department of Computer science and Engineering, University Visvesvaraya college of Engineering, K R Circle, Bangalore-560019 Percentage: **86%**

#### M.Tech. [Information Technology]: July'2012

University: KSOU, Manasagangotri, Mysore, Karnataka, India.

Division/Class: Distinction. Percentage: **86.25%**

#### B. E. [Medical Electronics]: July' 2010

Department of Medical Electronics

B M S College of Engineering, Bull Temple Road, Bangalore - 560019, Karnataka, India

University: Visvesvaraya Technological University, Belgaum, Karnataka, India.

Division/Class: First Class with Distinction.

Overall Percentage: **84.26%**

University Rank: **III Rank**

#### Pre-University Course (10+2)

Year of Passing: 2006

Karnataka State Higher Secondary Education, Karnataka, India.

Division/Class: First Class Percentage: **80.5%**

#### SSLC(10)

Year of Passing: 2004

Karnataka Board of Secondary Education, Karnataka, India.

Division/Class: First Class with Distinction Percentage: **88.16%**

### Academic Experience: Teaching

**Sept'2010 –till date:** Assistant Professor, Department of Medical Electronics, B M S College of Engineering, Bull Temple Road, Bangalore – 560019, Karnataka, India.

**Jun'2011 –Jun'2015:** Visiting Faculty, Department of Electronics & Communications, B M S Evening College of Engineering, Bull Temple Road, Bangalore – 560019, Karnataka, India.

### Patent

Patent filed on “Device and Method for Early Detection of Respiratory Distress” **Ref: TEMP/E-1/19108/2014-CHE**

Patent filed on “Digital X-Ray Device and A Method thereof” **Ref: TEMP/E-1/1079/2017-CHE 201741001029**

### Journal Publications

1. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers AB, Berendschot TTJM, Rao NP. (2019). Retinal Vascular Fractal Dimension In Bipolar Disorder And Schizophrenia. Journal of affective disorders., 2019
2. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers AB, Berendschot TTJM, Rao NP., Retinal vascular tortuosity in schizophrenia and bipolar disorder. Schizophrenia Research, 2019
3. Alagumalai, V., Kadambi, P., & **Appaji, A.** (2019). Interdisciplinarity in New Product Development in an Indian MedTech Perspective: Gap and the Solution. Health and Technology, 1-11.
4. **Appaji, A.**, Nagendra, B., Chako, D. M., Padmanabha, A., Jacob, A., Hiremath, C. V., ... & Webers, C. A. (2019). Examination of Retinal Vascular Trajectory in Schizophrenia and Bipolar Disorder. Psychiatry and clinical neurosciences.
5. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers AB, Berendschot TTJM, Rao NP. Retinal vascular abnormalities in schizophrenia and bipolar disorder: A window to the brain. Bipolar Disord. 2019 Apr 22. doi: 10.1111/bdi.12779.
6. C. T. Lin, J T King, A K Singh, A Gupta, Z Ma, JW Lin, A M C Machado, **A Appaji**, and M Prasad, "Voice Navigation Effects on Real-World Lane Change Driving Analysis Using an Electroencephalogram," in IEEE Access, vol. 6, pp. 26483-26492, 2018. doi: 10.1109/ACCESS.2018.2820161
7. C. T. Lin, J. T. King, J. W. Fan, **A. Appaji** and M. Prasad, "The Influence of Acute Stress on Brain Dynamics During Task Switching Activities," in IEEE Access, vol. 6, pp. 3249-3255, 2018. doi: 10.1109/ACCESS.2017.2787673
8. L Chidambara, SGK Gadde, NK Yadav, C Jayadev, D Banushali, **AM Abhishek**, M Akkali, A Khurana, R Shetty, “Characteristics and quantification of vascular changes in macular telangiectasia type 2 on optical coherence tomography angiography”, British Journal of Ophthalmology, vol 100, pp 1482-88, Jan 2016.
9. SC Koganti, HN Suma, **AM Abhishek**, “Analysis and Monitoring of Coma Patients using Wearable Motion Sensor System”, International Journal of Science and Research, Vol 4, Issue 9, pp 1154-58, Sept 2015.
10. Vichal PM, **AM Abhishek**, M Arora, “Device for Intrapartum Materno-Fetal care (IMFC device)”, International Journal of Scientific & Engineering Research, Vol 6, Issue 8, pp 1217-23, August 2015.
11. Radhip NR, Pradeep N, **AM Abhishek** and S.Varadharajaperumal, “Synthesis of Silica Nanoparticles from Malpe Beach Sand using Planetary Ball Mill Method” Journal of Pure Applied and Industrial Physics, Vol. 5(6), pp 165-172, June 2015.
12. Manjunathswamy BE, **AM Abhishek**, Thriveni J, Venugopal KR and LM Patnaik. “Multimodal Biometric Authentication using ECG and Fingerprint”, International Journal of Computer Applications 111(13): pp 33-39, Feb 2015.
13. Suma HN, **Abhishek AM.**, Sahadev R, “Acquisition and Analysis of the Endoscopic Images”, Bioinfo Medical Imaging, Vol 2, Issue 1, pp-25-31, 2014.
14. **AM Abhishek**, Vishwas Shanbhog, Anoop N, Manoj M A and Prajwal R Bhat, “Remote Robot System Based on DTMF For Hazardous Application”, Journal of International Academic Research for Multidisciplinary, Volume 1, Issue 12, pp 418-427, January 2014.
15. Roopesh SO, **AM Abhishek**, HN Suma, “Prognostic Health Monitoring System”, International J of Advanced Research in Computer Science & Software Engineering”, Vol 3, Issue 6, pp-1535-38 Jun 2013.
16. **AM Abhishek**, Thriveni J, HN Suma. “A Novel Approach for Biometric Recognition Using Electrocardiogram Biosignal”. DIGITECH: An International Journal of Computer Science and Applications, 3(6), 59-66, Jan 2013.

17. HN Suma, **AM Abhishek**, "Semi Quantitative Analysis and Classification of Alzheimer Disease using Positron Emission Tomography Images", *CiiT International Journal of Digital Image Processing*, Vol 4, No 14, pp 819-824, Aug 2012.
18. J.M. Schott, **AM Abhishek** et al., "Using CSF biomarkers to replicate genetic associations in Alzheimer's disease". *Neurobiology of Aging*, 33(7), pp 1-9, 2012.
19. HN Suma, **AM Abhishek**, SA Kumar, "Acquisition and Database Management System for the Endoscopic Images", *International Journal of Computer Applications*, 30(8), pp 19-25, Sept 2011.
20. **AM Abhishek**, "ECG Acquisition and Simulated Transmission by Various Modulation Techniques with Analysis", *International Journal of Computer Applications*, 30(2), pp-1-5, Sept 2011.
21. K Vijayalakshmi, **AM Abhishek**, "Spike Detection in Epileptic Patients EEG Data using Template Matching Technique", *International Journal of Computer Applications*, 2(6), pp-5-8, Jun 2010.

### **International Conferences**

1. Vijayarajan A, Pooja K, Abhishek AM, "Interdisciplinarity in New Product Development, the gap and solution: An Indian MedTech Perspective", International Conference on Interdisciplinarity of Knowledge, Education and Research organized by BITS Pilani during 8 & 9 Feb 2019.
2. Adaikkammai S, Manan Singhal, Evangeline Smita and Abhishek Appaji, "Virtual Reality in Rehabilitating Amputees Suffering from Phantom Limb Pain", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
3. Vishruth Cavale, Dheeraj N and Abhishek Appaji, "Manual to Digital Transition of Partogram in Labour - Existing Gaps and Solution", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
4. Shruti G A, Anvitha Rao and Medha B N, Abhishek Appaji, "PRIMA- A device for minimally invasive breast cancer surgery", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
5. **Abhishek AM**, K M Babu, "Maneuvering a Successful Venture through Entrepreneurship Training", International Conference on Transformations in Engineering Education- Imparting Futuristic Skills, 15-17 July 2018, Amaravathi, Andhra Pradesh, India.
6. Deepthi B, Chaitra S, Neha B, Tanveer M., Mukesh P, **Abhishek AM**, HN Suma and Anand V, "Study of clinical staging and classification of retinal images for Retinopathy of Prematurity (ROP) screening", 2018 International Joint Conference on Neural Networks, IJCNN 2018, 8-13 July 2018, Brazil.
7. Adaikkammai S, Evangeline Smita and **Abhishek AM**, "Leveraging Virtual Testing for Safer Medical Device Development", Net Health Workshop, 10<sup>th</sup> International Conference on Communication Systems & Networks, COMSNETS, Jan 3-7, 2018, Bangalore.
8. Madhurya S, Maria Sonia, Anand Vinekar, **Abhishek A M** and H N Suma, "Comprehensive Analysis of Retinopathy of Prematurity based on Tortuosity with Development of Web Connectivity", 12<sup>th</sup> International Conference on Intelligent Systems and Knowledge Engineering – ISKE 2017, Nov 24-26, 2017, Nanjing, China.
9. Anatha Padmanabha A G, **Abhishek AM**, Mukesh Prasad, Haiyan Lu and Sudhanshu Joshi, "Classification of Diabetic Retinopathy using Textural features in Retinal Color Fundus Image", 12<sup>th</sup> International Conference on Intelligent Systems and Knowledge Engineering – ISKE 2017, Nov 24-26, 2017, Nanjing, China
10. S Sridhar, Madhuri KR, S Shah, J Chaturvedi, A Vijayarajan, **AM Abhishek**, "A Biodesign based study on Chronic Tinnitus and Evaluation of Adaptive Noise Cancellation Technology in its Management", 8<sup>th</sup> International Conference on Communication Systems & Networks, COMSNETS, 5<sup>th</sup> to 9<sup>th</sup> Jan 2016, Bangalore.
11. D Bhanushli, S Dabir, SGk Gadde, **AM Abhishek**, NK Yadav, M Kurian, R Shetty, "Choroidal Imaging Modalities and Optical Coherence Tomography Angiography in Central Serous Chorioretinopathy -A Comparative Matlab Approach", ARVO-India 22nd Annual Meeting, 25<sup>th</sup> & 26<sup>th</sup> Jul 2015, Hyderabad.
12. Lavanya KC, Dr.Santosh Gk Gadde, **AM Abhishek**, M Akkali, NK Yadav, R Shetty, "A Novel Algorithm In Quantification Of Perifoveal Capillary Density on Optical Coherence Tomography-Angiography In Macular Telangiectasia Type 2", ARVO-India 22nd Annual Meeting, 25<sup>th</sup> & 26<sup>th</sup> Jul 2015, Hyderabad.
13. Chaitra C, M Bharadwaj, HN Suma, **AM Abhishek** & A Vinekar, "Evaluating Pseudo 3D Reconstruction of Retinal Images as a tool for Retinopathy of Prematurity", 5<sup>th</sup> IEEE International Advance Computing Conference IACC-2015 on 12<sup>th</sup> & 13<sup>th</sup> Jun 2015, Bangalore.
14. **AM Abhishek**, "Impact of Novel Enhanced Learning on Results for Courses on Control Systems and Biostatistics in Medical Electronics Programme", International Conference on Transformations in Engineering Education, ICTIEE, Jan 6<sup>th</sup> to 8<sup>th</sup> 2015, Bangalore.

15. **AM Abhishek**, TTJM Berendschot, SV Rao, S Dabir, "Segmentation and Analysis of Retinal Layers (ILM & RPE) in Optical Coherence Tomography Images with Edema", 2014 IEEE Conference on Biomedical Engineering and Sciences - IECBES, 8<sup>th</sup> to 10<sup>th</sup> Dec 2014, Malaysia. (Citation 1)
16. **AM Abhishek**, Suma HN, "Comparison of Biosignal Electrocardiography (ECG), Fingerprint and Iris as Biometrics Authentication Tool", 2014 IEEE Conference on Biomedical Engineering and Sciences – IECBES, 8<sup>th</sup> to 10<sup>th</sup> Dec 2014, Malaysia.
17. **AM Abhishek**, H N Suma, "Stress Analysis of a Computer Game Player using Electroencephalogram", IEEE International Conference on Circuits, Communication, Control and Computing-I4C2014, MSRIT, Bangalore, 21<sup>st</sup> & 22<sup>nd</sup> Nov 2014, Bangalore.
18. **AM Abhishek**, "Well Proven and Commercially Available Biometric Technologies versus Electrocardiogram: A Review", IEEE International Conference on Circuits, Communication, Control and Computing-I4C, 21<sup>st</sup> & 22<sup>nd</sup> Nov 2014, Bangalore.
19. **AM Abhishek**, Suma HN, "Comparison of Electrocardiography (ECG) as Biometrics Authentication with Well Proven Fingerprint and Iris Technologies", IEEE EMBS International Student Conference(ISC), Jun 6, 2014, Malaysia.
20. S Haritsa, BJ Sreenidhi, HN Suma, A Vinekar, **AM Abhishek**, "Automatic Detection of Ridges and Optic Disc in Retinal Images of Premature Babies", IEEE International Conference on Communication and Signal Processing-ICCSP'14, 3<sup>rd</sup> to 5<sup>th</sup> Apr 2014, Tamil Nadu.
21. HN Suma, **AM Abhishek**, Shobha NN, S Jyothi KN, "Non-Invasive Blood Glucose Analysis using Blood Impedance Measurement", 2<sup>nd</sup> National Conference on "Advancements in the Era of Multi-Disciplinary Systems AEMDS-2013", 6<sup>th</sup> & 7<sup>th</sup> Apr 2013, Kurukshethra, Harayana, India.
22. HN Suma, **AM Abhishek**, M Gopinath, S Menon, "Structural and Functional Analysis of Attention Deficit Hyperactivity Disorder fMRI Images", 2<sup>nd</sup> National Conference on "Advancements in the Era of Multi-Disciplinary Systems AEMDS-2013", 6<sup>th</sup> & 7<sup>th</sup> Apr 2013, Kurukshethra, India.
23. Mahesh KC, Radhika S, Shriharsha S, Seema GS, Smitha PV, **AM Abhishek**, G Mishra, "Wearable Wireless Intelligent Multi-Parameter Health Monitoring Watch", IEEE Texas Instruments India Educators' Conference (TIIEC 2013), 4<sup>th</sup> & 5<sup>th</sup> Apr 2013, Bangalore, India.
24. **AM Abhishek**, R Hegde, DM Rao, "Vector Quantization (VQ) based Speech Recognition System on TMS32C6713DSK", IEEE Texas Instruments India Educators' Conference (TIIEC 2013), 4<sup>th</sup> & 5<sup>th</sup> Apr 2013, Bangalore, India.
25. HN Suma, **AM Abhishek**, MC Lakshmi, Y Veena, "Multiple Classification Method for Analysis of Liver Lesion with Focal Liver Segmentation Techniques for CT Image", Proceedings of the Fourth International Conference on Signal and Image Processing 2012 (ICSIP), 13<sup>th</sup> to 15<sup>th</sup> Dec 2012.
26. **AM Abhishek**, "ECG Acquisition and Wireless Transmission with Abnormal Heart Rate Alarm", International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), 17<sup>th</sup> & 18<sup>th</sup> Dec 2010, Jalandhar, India.
27. **AM Abhishek**, "Wearable Wireless Bio-Signal Monitoring Device", 6<sup>th</sup> International Conference of Telemedicine Society of India (Telemedicon'10), 14<sup>th</sup> to 16<sup>th</sup> Nov 2010, Bhubhaneswar, India.

#### **International /National Conferences/Symposium Attended/Participated:**

- India International Test Conference, India 2018, July 22-24, 2018, Bangalore
- IUCEE "International Conference on Transformation in Engineering Education", ICTIEE-2016, 9<sup>th</sup> to 12<sup>th</sup> January 2016, College of Engineering, Pune.
- 2<sup>nd</sup> National Nodal Center Conference of Virtual labs organized by Virtual Amrita Laboratories Universalizing Education on 9<sup>th</sup> September 2015 at Amrita Vishwa Vidyapeetham University.
- IEEE Region 10 Student, Young Professional, WIE Congress 2015 held from 9<sup>th</sup> to 12<sup>th</sup> July 2015 at Colombo, Srilanka
- Appaji M Abhishek, "A Novel Avant-Garde Easy Transquil Needle Insertion Device for Inaccessible Intravenous (IV) During Resuscitation", 7<sup>th</sup> Annual KSTA National Conference on "Science, Technology and Productization – A Means growth" jointly organized by Karnataka Science & Technology Academy (KSTA) & The oxford College of Science held during 5<sup>th</sup> and 6<sup>th</sup> February 2015.
- 1<sup>st</sup> National Nodal Center Conference of Virtual labs organized by Virtual Amrita Laboratories Universalizing Education on 1<sup>st</sup> February 2015 at Amrita Vishwa Vidyapeetham University.
- Appaji M Abhishek, "A Novel Avant-Garde Easy Transquil Needle Insertion Device for Inaccessible Intravenous

(IV) During Resuscitation”, Health Tech Innovations-2015, 9<sup>th</sup> & 10<sup>th</sup> Jan 2015 organized by SAMEER under aegis of DeitY in technical Collaboration with NHSRC & ICMR.

- “IEEE EMBS Special Topic Conference on Point-of-Care Healthcare Technologies- POCHT” from January 16<sup>th</sup> to 18<sup>th</sup> January 2013, Bangalore, India.
- Appaji M Abhishek, K Vijayalakshmi, “*Spike Detection in Epileptic Patients EEG Data using Template Matching Technique*”, AICTE Sponsored National Seminar on Intelligent Computing, 19<sup>th</sup> & 20<sup>th</sup> March 2010, Department of Computer Science and Engineering, Tamilnadu College of Engineering, Coimbatore, Tamilnadu, India
- Appaji M Abhishek, “*Electrocardiogram (ECG) Acquisition & Wireless Transmission (Frequency Modulation) with Analysis*”, National Level Student Symposium on Emerging Areas in Biotechnology, BIOSATUM-10, 30<sup>th</sup> April 2010, Bapuji Institute of Engineering and Technology, Davangere, Karnataka, India.

### **MOOC Courses**

- Coursera on Schizophrenia by Wesleyan University, USA on 12 Dec 2018.
- Coursera on Introduction to Systematic Review and Meta-Analysis by Johns Hopkins University, USA on 20 Dec 2018.
- Startupindia Learning Program by Invest India, Investor Facilitation Cell, Make in India, UGGrad October 31, 2017
- “MED101x: Introduction to Applied Biostatistics” OsakaUx edX June 2, 2017.
- “Online Academic Writing English” from October to December 2015 conducted by Maastricht University, the Netherlands.
- “Healthcare in India: Strategic Perspectives”, February 2016 offered by IIMBx
- “*Problem-Based Learning: Principles and Design*” December 2015 conducted by Maastricht University, the Netherlands.
- Online Introductory Course in Data Privacy Law (India) by Asian School of Cyber Laws, May 23, 2013.

### **International Invited Presentation**

- IEEE Students Young Professionals WIE and Life Members Congress at Bali, Indonesia from August 30 – September 2, 2018.
- Expert lecture on Design Thinking, Innovation and Entrepreneurship at Zyud University, the Netherlands on 15<sup>th</sup> Dec 2017.
- Speaker at MIT Beyond Food Bootcamp, Taiwan, Sept 10 to 15, 2017
- Speaker for IEEE R10 Sectional Leadership Summit in Gujarat on 3<sup>rd</sup> and 4<sup>th</sup> August 2017.
- Speaker for IEEE WIE International Leadership Summit Goa 2017 held from 13<sup>th</sup> to 15<sup>th</sup> July 2017.
- IUCEE International Conference on “Transformations in Engineering Education, Pune, India from 9<sup>th</sup> to 12<sup>th</sup> Jan 2016.
- 2<sup>nd</sup> Nodal Center Conference of Virtual labs 9<sup>th</sup> Sept 2015 at Amrita Vishwa Vidyapeetham University, Kerala, India.
- Bridging Technology with Ophthalmology, Narayana Nethralaya, Bangalore, India on 22<sup>nd</sup> Apr 2015.
- “International Symposium on Medical Electronics - ISME’13” on 30<sup>th</sup> & 31<sup>st</sup> January 2013 organized by department of Medical Electronics, BMSCE.
- International Symposium on Medische Elektronica ISME’14 with University of Twente, the Netherlands on 23<sup>rd</sup> September 2014 organized by department of Medical Electronics, BMSCE.

### **National Invited Presentation**

- Speaker at Make in India Entrepreneurship Bootcamp organized by IEEE Young Professionals from 19<sup>th</sup> to 29<sup>th</sup> July 2017.
- Resource person for workshop on Technical Writing and Publishing at Ambedkar Institute, New Delhi on 13<sup>th</sup> April 2017.
- Resource person for workshop on Technical Writing and Publishing at NIE, Mysore on 4<sup>th</sup> February 2017.
- Resource person for workshop on Technical Writing and Publishing at SSIT, Tumkur on 2<sup>nd</sup> February 2017.
- Invited talk on successful researcher IEEE Spark at National Institute of Engineering Mysore on 12<sup>th</sup> November 2016.
- Resource person for Teacher in Service Program (TISP) ENHANCING THE SKILLS THROUGH PRACTICAL

LEARNING FOR SCHOOLS” at B M S College of Engineering Bangalore on 28<sup>th</sup> October 2016.

- Abhishek Appaji delivered a lecture on “How to select various journals for publishing your work” as a part of one week FDP on 5<sup>th</sup> May 2016 at College of Engineering, Karunagapally, Kerala.
- Resource person for workshop on Technical Writing and Publishing at NIEIT, Mysore on 29<sup>th</sup> April 2016.
- Resource person for workshop on Technical Writing and Publishing at Vemana Institute of Technology, Bangalore on 1<sup>st</sup> April 2016.
- Resource person for workshop on Technical Writing and Publishing at MSIT, New Delhi on 22<sup>nd</sup> March 2016.
- Resource person for workshop on Technical Writing and Publishing at BMSCE Bangalore on 26<sup>th</sup> February 2016.
- Resource person for Technical Writing and Publishing at BIT Bangalore on 13<sup>th</sup> February 2016.
- Invited talk on “Usage of Technology Tool for Biology for Engineers” at OBE Workshop held on 10<sup>th</sup> January 2016 at D Y Patil College of Engineering, Pimpri, Pune.
- Invited talk on “Technology Tool” in OBE Workshop on 29<sup>th</sup> and 30<sup>th</sup> December 2015 at SVCE, Sriperambudur, Tamil Nadu.
- Invited Talk on “Mind Slave Robot: Brain Toys for you” at 2<sup>nd</sup> Indian BCI and Neurostimulation Workshop held on 7<sup>th</sup> and 8<sup>th</sup> November 2015 organized by Neuroelectrics Barcelona SL and ITIE knowledge Solutions.
- Judge for KAGADA 2015, IEEE UVCE's Twelfth National Student Conference on 9<sup>th</sup> October, 2015
- Judge for Paper Presentation – Electronics and Instrumentation Domain in annual technical event TECHNISIUM’ 15 on 25<sup>th</sup> March 2015 organized by Siddaganga Institute of Technology, Tumkur.
- Panel member of “Curriculum Transformation of Image Processing and Application” on 22<sup>nd</sup> March 2014 conducted by BMSCE
- Member of Panel of Judges for Evaluating of 8<sup>th</sup> Semester Engineering Projects in Project Exhibition on 8<sup>th</sup> May 2014, organized by B N M Institute of technology, Bangalore
- Resource person for Pre-Conference workshop on “Medical Signals and Image Processing” on 12<sup>th</sup> April 2014 organized by KARMIC 2014, KIMS, Bangalore.
- Invited talk on “Image Enhancement” in one week TEQIP-II Sponsored workshop on “Digital Image Processing and Its Applications” on 29<sup>th</sup> January 2014 organized by SIT, Tumkur.
- Invited talk on “Operational Amplifiers” on 1<sup>st</sup> October 2013 at PES polytechnic College, Bangalore.
- TEQIP-II One week workshop on “Cyber Forensics and Information Security”, from 26<sup>th</sup> to 30<sup>th</sup> August 2013, organized by IIIC & Dept of Medical Electronics, BMSCE
- Three Day Student Development program on “Statistical Analysis of Biological Datasets” from 9<sup>th</sup> to 11<sup>th</sup> August 2013 organized by Department of Biotechnology, Sir, MVIT, Bangalore.
- One TEQIP-II sponsored workshop on “Analog & Embedded Processing”, organized by Dept of Medical Electronics organized by Dept of Medical Electronics & IIIC, BMSCE in collaboration with TI India University Program and Cranes Software Intl Ltd from 1<sup>st</sup> to 6<sup>th</sup> July 2013.
- Workshop on “Low Power Embedded Systems using MSP430” organized by Dept of Electronics and Communication, Reva Institute of Technology and Management, Bangalore on 19<sup>th</sup> April 2013.
- One day National Level workshop on “Biomedical Image Processing” organized by Department of Biomedical Engineering, JBIET, Hyderabad on 19<sup>th</sup> March 2013.
- One Week TEQIP-II Sponsored FDP on “Biostatistics: Statistical Analysis Through Software Tools” from 11<sup>th</sup> to 16<sup>th</sup> February 2013, organized by department of Medical Electronics and Department of Mathematics, BMSCE.
- Four day TEQIP-II Sponsored Faculty Development Program on “Advanced Microcontroller - MSP430 (With Hands-On) organized by department of Instrumentation Technology, MSRIT in Collaboration with Texas Instruments and Cranes Software Intl Ltd., Bangalore from 4<sup>th</sup> to 7<sup>th</sup> February 2013.
- One Week ISTE Sponsored STTP on “Brain and Cognition: Neuroscience- Signal & Image Analysis” from 7<sup>th</sup> to 12<sup>th</sup> January 2013, organized by department of Medical Electronics, BMSCE.
- One day workshop on “PCB Design” on 2<sup>nd</sup> November 2012 organized by department of Medical Electronics, BMSCE.
- One day workshop on “PCB Design” on 29<sup>th</sup> September 2012 organized by department of Medical Electronics, BMSCE.
- One of the 10 world wide expert panel for reviewing, BETA-Test phase of the Version 2 MSP430 Teaching ROM for **Texas Instruments**, Dallas and University of Beira Interior, Belgium in April 2012.
- Member of Panel of Judges for Evaluating of Engineering Projects at Engineering fair-2012, during 20<sup>th</sup> to 22<sup>nd</sup> March 2012, organized by Vivesvaraya Industrial and Technological Museum, Ministry of Culture, Govt. of India.
- One week workshop on “NXP Trainer Kits”, 1<sup>st</sup> to 5<sup>th</sup> August 2011, organized by department of Medical Electronics, B M S C E.

- One week Value Added Course on “Microcontrollers and Applications”, 20<sup>th</sup> to 25<sup>th</sup> June 2011, organized by department of Medical Electronics, B M S C E.

### **Research Expeditions**

- Technical Expert for developing Software for retinopathy of prematurity for Narayana Nethralaya, India (Jun 2012 to Jun 2016).
- Technical Expert for developing software Assessment of Cone Mosaic in Emmetropes for Narayana Nethralaya, India (Jan 2014 to Mar 2014).
- Consultant/Project Leader for three projects related to wireless Foetal Heart rate monitor and Its analysis for FoetoH FGHS, Oxford, London. (Mar 2012 to Jul 2013).
- Projects on Paediatric Cardiac Ultrasound Images in collaboration with Stanford University, USA (Jan 2011 to Jul 2011 and Jan 2012 to Jul 2012).
- Research associate for project on Intracranial Pressure Sensor at Indian Institute of Science, India (30<sup>th</sup> Jul 2011 to 2<sup>nd</sup> Jul 2012).
- Software engineer for Development of Reports using OBIEE at Tavant Technologies, India (Jul 2010 to Sept 2010).

### **Organization of International Events**

- Host faculty for MHRD GIAN course on “Future of Imaging” from 8<sup>th</sup> to 14<sup>th</sup> Feb 2019.
- Chair for IEEE COMSNETS Nethealth on 7<sup>th</sup> Jan 2019 at Chancery Pavilion, Bangalore.
- Chair for IEEE Make in India Entrepreneurship Bootcamp 2017 organized by IEEE Young Professionals from 19<sup>th</sup> to 29<sup>th</sup> July 2017 at BMSCE, Bangalore.
- Organizer of IEEE EMBS International Distinguished Lecture by Prof Micheal Friebe, Bengaluru, India (13<sup>th</sup> Feb 2017).
- Program Committee member of NetHealth Workshop 9<sup>th</sup> International Conference on Communication Systems & Networks, COMSNETS, 4<sup>th</sup> to 8<sup>th</sup> Jan 2017, Bangalore.
- Volunteered at 13<sup>th</sup> International IEEE India Conference INDICON 2016 from 16<sup>th</sup> to 18<sup>th</sup> December 2016 held at Indian Institute of Science (IISc), Bengaluru, India.
- Part of Organizing committee as finance head of IEEE HardTech Summit to be held on 26<sup>th</sup> November 2016.
- Volunteered for TEDxMaastricht held in Maastricht, the Netherlands on 17<sup>th</sup> October 2016
- Volunteered for IEEE R10 (Asia Pacific) SYWL Congress at Hotel Lalith Ashok, Bengaluru, India (25<sup>th</sup> to 27<sup>th</sup> Aug 2016).
- Coordinated for “An evening with Peter Singer, CEO Grand Challenges Canada” at Bengaluru, India (12<sup>th</sup> Jul 2016).
- Organizer and License holder of TEDxBMSCE at BMSCE, Bengaluru, India (23<sup>rd</sup> April 2016).
- Program Committee member of NetHealth Workshop 8<sup>th</sup> International Conference on Communication Systems & Networks, COMSNETS, 5<sup>th</sup> to 9<sup>th</sup> Jan 2016, Bangalore.
- Coordinated workshop on "M-Health: Making Healthcare Available, Accessible and Affordable" by IC-IMPACTS: Canada-India Research Centre of Excellence IISC, Bengaluru, India (11<sup>th</sup> Dec 2015).
- Organized b-eCare 2015 International Conference on Preventive and Predictive Healthcare Technologies at Bangalore (25<sup>th</sup> to 28<sup>th</sup> Jul 2015).
- Coordinator for 5<sup>th</sup> IEEE International Advance Computing Conference IACC-2015, Bengaluru, India (12<sup>th</sup> & 13<sup>th</sup> June 2015).
- Organizer of IEEE EMBS International Distinguished Lecture by Prof May D Wang, Bengaluru, India (24<sup>th</sup> Mar 2015).
- Organized International Symposium on Medische Elektronica ISME'14 with University of Twente, the Netherlands at Bangalore (23<sup>rd</sup> Sept 2014).
- Organized International Symposium on Horizon-2020 in collaboration with Maastricht University, the Netherlands at Bengaluru, India (20<sup>th</sup> and 21<sup>st</sup> Nov 2013).
- Organized Two day International Symposium on Medical Electronics –ISME'13 at Bengaluru, India (30<sup>th</sup> and 31<sup>st</sup> Jan 2013).
- Volunteered for “IEEE EMBS Special Topic Conference on Point-of-Care Healthcare Technologies- POCHT” at Bengaluru, India (16<sup>th</sup> to 18<sup>th</sup> Jan 2013).

### **Industrial Innovation**

- Principal co-investigator for “Affordable Trauma Kit during RTA” funded by BIRAC under Biotechnology Ignition grant (Apr 2019 till date) (Rs. 50 Lakhs).
- Principal Investigator for a project on A Comprehensive fully automated Smart Eye Kiosk for Community Screening (SEKC) in collaboration with TTSH and NTU, Singapore (April 2016 to Oct 2017) funded by The Ng Teng Fong Healthcare Innovation Programme, Singapore (Total Fund: SGD \$99,989)
- Co-Principal Investigator for project on Development of Low Cost, Safe, High Resolution, Easy to use Digital X-ray in collaboration with EHE Health Pvt Ltd, India (Feb 2016 to Jan 2018) (Total Fund Rs. 59,14,000/-)
- Consultant for Mini Mag & I-PCR for Bhat Biotech Pvt Ltd, India (Jul 2015 to Mar 2016) (Total Amount: 2Lakhs)
- Consultant for Cardio Connect for Arkav Medtech Pvt Ltd, India (Jul 2015 to Dec 2015) (Total Amount: 0.48 Lakhs)
- Consultant for Device for Stimulation of Inner Ear for Balance Function Testing for Cyclops Pvt Ltd., India (Jan 2016 to May 2016) (Total Amount: 1 Lakh)
- Consultant for Wireless Ultrasound Transducer for Monitoring Foetal Heart Rate for FGHS Pvt Ltd, Oxford, London (Jan 2013 to Jul 2013) (Total Amount: 0.45 Lakh)
- Research Associate for Intracranial Pressure Sensor at IISc, India (Jul 2011 to Jul 2012)

### **Prizes and Awards**

- Outstanding service to 11th IEEE COMSNETS International Conference 2019 during 7th to 11th January 2019.
- Best Poster Award at 16th REV Conference held from 03–06 February 2019 at BMSCE Bangalore.
- IEEE MGA Young Professionals Achievement Award 2018(Award Citation: For exemplary contribution to student and young professionals activities).
- Winner of Massachusetts Institute of Technology (MIT) Global Entrepreneurship Bootcamp during March 26 to 31<sup>st</sup> 2017.
- Winner of Elderly Care Hackathon organized by the Municipality of the Hague, the Netherlands from 2<sup>nd</sup> to 7<sup>th</sup> October 2016.
- Winner of MED4DEV India-Israel affordable healthcare hackathon held from 22<sup>nd</sup> to 24<sup>th</sup> July 2016 with Cash prize of 1500USD.
- Best Nodal Coordinator Award at National Nodal Center Conference of Virtual labs organized by Virtual Amrita Laboratories Universalizing Education on 6<sup>th</sup> May 2016 at Amrita Vishwa Vidyapeetham University.
- Gandhian Young Technological Innovation Awards (GYTI) 2016 for the Innovative Idea "Device For Intrapartum Materno-fetal Care", 13<sup>th</sup> March 2016, at Rastrapathi Bhavan (President House), New Delhi (Grant Amount: Rs. 15,00,000/-)
- Featured Innovator, by CAMTech (Consortium for Affordable Medical Technology), Massachusetts General Hospital, Boston and its published in CAMTech Pulse Magazine for February 2016.
- Second Runner up Prize at the CAMTech Diabetes Innovation Hack-a-thon held at the Indian School of Business, Hyderabad on 10<sup>th</sup> & 11<sup>th</sup> October 2015.
- Best Nodal Coordinator Award at 2nd National Nodal Center Conference of Virtual labs organized by Virtual Amrita Laboratories Universalizing Education on 9th September 2015 at Amrita Vishwa Vidyapeetham University.
- New Initiative Program Award at IEEE Region 10 Student, Young Professional, Women in Engineering Congress 2015 held from 9<sup>th</sup> to 12<sup>th</sup> July 2015 at Colombo, Srilanka
- Winner of CAMTech GE Challenge Jugaad-a-Thon held during 28<sup>th</sup> and 29<sup>th</sup> June 2015 organized by CAMTech India.
- Winner of CAMTech India Jugaad-a-thon held during 19<sup>th</sup> & 20<sup>th</sup> July 2014, organized by CAMTech India
- Best Paper Award - Appaji Abhishek, Suma Ningappa, “*Comparison of Electrocardiography (ECG) as Biometrics Authentication with Well Proven Fingerprint and Iris Technologies*”, IEEE EMBS International Student Conference(ISC2014), Malaysia, 5<sup>th</sup> June 2014.
- Visvesvaraya Technological University Third Rank in Medical Electronics Specialization, Bachelors of Engineering.
- Third best paper presentation award for the National level paper presentation competition organized by The *Institution of Engineering and Technology* - The IET in Chennai, Tamil Nadu.

- Second best paper presentation award for the paper titled “Electrocardiogram (ECG) Acquisition & Wireless Transmission (Frequency Modulation) with Analysis” in Aavishkaar-2010, Bangalore held on 17<sup>th</sup> April 2010, organized by The *Institution of Engineering and Technology* - The *IET*, Bangalore chapter.
- Second Best Paper presentation prize in Srishti-2010 conducted by Akhila Bharatha Vidhyarthi Parishath in collaboration with SSIT, Tumkur on 9<sup>th</sup> May 2010.
- Recipient of Merit Scholarship Award from American Alumni Association and Alumni Association, BMS College of Engineering for the year 2009.
- Recipient of Best Library User Award-2006, Awarded by Vijaya Composite P U College, Bangalore.

### **Funding and Consultancy**

- Project on Device for Intrapartum Materno-fetal care for INR.15,00,000 from BIRAC-SRISTI, Govt of India
- Project on A comprehensive fully automated Smart Eye Kiosk for Community Screening (SEKC), SGD \$99,989 from Neg Teng Fong Healthcare Innovation Programme, Singapore
- Project on Development of Low Cost, Safe, High Resolution, Easy to use Digital X-ray for INR. 59,14,000/- from Department of Science and Technology, Govt of India.
- Consultancy on Mini Mag & I-PCR for INR. 2,00,000/- from Bhat Biotech Pvt Ltd, India
- Consultancy on Cardio Connect for INR 48,000/- from Arkav Medtech Pvt Ltd, India
- Retinal Fundus Image as Biomarker for Systemic Disease for INR 90,000/- from BMSCE FRPS
- Consultancy on Wireless Ultrasound Transducer for Monitoring Foetal Heart Rate for GBP 400

### **Current Scientific Collaborators**

Dr Shyam Vasudeva Rao, Director, Forus Health Pvt Ltd, Bangalore.  
 Dr Micheal Friebe, OVG University, Germany  
 Dr Michelle C Fernandes and Dr Ricardo Pachon, Oxford University, London.  
 Dr Tos TJM Berendschot, Maastricht University, the Netherlands  
 Dr Roger Zimmerman, National University of Singapore  
 Dr Naren Rao, NIMHANS, Bangalore, India  
 Dr Rupesh Agrawal, Ten Tock Seng Hospital, Singapore  
 Prof Dr Tjin Swee Chuan, Nanyang Technological University, Singapore  
 Dr Gundu Rao, University of Minnesota, USA  
 Dr Manish Arora, Indian Institute of Science, India  
 Prof C T Lin, University of Technology, Sydney, Australia  
 Dr Mukesh Prasad, Taiwan Semiconductor Manufacturing Company, Taiwan.

### **Reviewer for Conference/Journal**

Inderscience Publishers for Int. J. of Business Intelligence and Data Mining  
 The International Conference on Circuits, Communication, Control and Computing, 2014, Bangalore  
 2<sup>nd</sup> International Conference on Transformations in Engineering Education, 2015, Bangalore  
 International Conference on Biomedical Engineering (ICoBE) 2015, Malaysia  
 International Conference for Innovation in Biomedical Engineering and Life Sciences (ICIBEL), 2015  
 3<sup>rd</sup> International Conference on Transformations in Engineering Education 2016, Pune, India  
 International Academy of Computer & IT Engineering  
 International Journal of Biomedical and Clinical Engineering (IJBCE)  
 IEEE Access

### **Membership of Scientific/Professional Societies**

Member of Institute of Electrical and Electronics Engineers (IEEE) from 2011 (92477249)  
 Member of IEEE Engineering in Medicine and Biology Society (EMBS) from 2011 (92477249)  
 Life Member of The Indian Society for Technical Education (ISTE) (LM83932)

Member of the Institute of Engineering & Technology (IET) from 2011 (1100174067)  
Associate Member of The Institution of Engineers (IEI) from 2015 (AM1580224)

### **Languages**

English: School and good knowledge (reading, writing and speaking)  
Kannada: Mother Tongue (reading, writing and speaking)  
Hindi: Indian national language (reading, writing and speaking)  
Telugu: good knowledge (reading, writing and speaking)  
Tamil: Speaking

### **Knowledge Tour /Premier Universities visited**

In India

Indian Institute of Technology, Delhi  
Indian Institute of Technology, Kharagpur  
Indian Institute of Technology, Madras  
Indian Institute of Technology, Bombay  
Indian Institute of Technology, Roorkee  
College of Engineering, Pune

Abroad

MIT, Harvard, San Jose Univ, USA  
National University of Singapore, Singapore  
Nanyang technological University, Singapore  
Maastricht University, the Netherlands  
University of Twente, the Netherlands  
Ghent University, Belgium  
Nanyang Polytechnic, Singapore  
University Technology Sydney, Australia.  
Queensland University of Technology, Brisbane, Australia.

### **Technical Workshop/School Attended:**

- One-day workshop on My Seizure Gauge by Epilepsy Foundation on 21<sup>st</sup> Feb 2018 at San Francisco, USA.
- IEEE Student and Young Professional Congress, International Burch University, Sarajevo, 1<sup>st</sup> to 4<sup>th</sup> Dec 2017.
- TCS AIP Faculty Development Program on 10th February 2018 at Dr Ambedkar Institute of Technology, Bangalore
- QIP Short Term Course “Embedded System Design for Internet of Things” on June 25<sup>th</sup> to 29<sup>th</sup> 2017 organized by Centre for Development of Technical Education (CDTE), Indian Institute of Technology, Kanpur.
- IEEE-IISC Deep Learning Summit-2017 organized by Indian institute of Science, Bangalore on 3<sup>rd</sup> June 2017.
- MedImg: Workshop on Medical Imaging Techniques, Post Processing and Clinical Applications organized by Centre for Biomedical Engineering, Indian Institute of Technology Delhi (IITD) from 14<sup>th</sup> to 16<sup>th</sup> April 2017.
- Four day workshop on Professional Development Winter School on Clinical Data Analytics, Statistical and Machine Learning using R & Python from 23<sup>rd</sup> to 26<sup>th</sup> January 2017 organized by Dept of Medical Electronics, Ramaiah Institute of Technology, Bangalore and IEEE EMBS.
- International workshop on Brain, Computation and Learning from January 9<sup>th</sup> to 13<sup>th</sup>, 2017 organized by Indian Institute of Science and Pratiksha Trust, Bangalore.
- Two-week faculty development program on Graph Theory – Algorithms and Applications held during 26<sup>th</sup> Dec 2016 to 7<sup>th</sup> Jan 2017 organized by B M S College of Engineering, Bangalore.
- IEEE SmartTech Workshop 2016 held on 18<sup>th</sup> & 19<sup>th</sup> November 2016 at Vivanta by Taj, Bengaluru, India organized by IEEE Bangalore section.

- TEQIP II sponsored One-week FDP on Materials in Engineering and Technology held from 11<sup>th</sup> to 15<sup>th</sup> July 2016 organized by department of Electrical and Electronics Engineering, BMSCE, Bangalore
- Entrepreneur Bootcamp from 20<sup>th</sup> to 22<sup>nd</sup> Jan 2016, organized by CAMTech India and InnAccel, Bangalore.
- CCICI and IEEE Joint Workshop on Cloud Computing Innovation in India: A Framework and Roadmap on October 31<sup>st</sup>, 2015 at IIIT Bangalore.
- CAMTech Diabetes Clinical Summit and Innovation Hackathon held from October 9<sup>th</sup> to 11<sup>th</sup> 2015 at Hyderabad
- 2<sup>nd</sup> Indian BCI and Neurostimulation Workshop held on 7<sup>th</sup> and 8<sup>th</sup> November 2015 organized by Neuroelectronics Barcelona SL and ITIE knowledge Solutions.
- TEQIP II sponsored one week workshop on Principles, Practices and Applications of Computer Vision held from 17<sup>th</sup> to 21<sup>st</sup> October 2015 at BMSCE, Bangalore.
- IEEE Medical Devices and the Internet of Things (IoT) Workshop on 16<sup>th</sup> & 17<sup>th</sup> October 2015 organized by IEEE Standards Association.
- IEEE SYW 2015 Leadership Congress held from 28<sup>th</sup> to 30<sup>th</sup> August 2015 at Christ University, Bangalore.
- The A&A of IoT: A Tutorial on Arduino and Android conducted by IEEE Computer Society (Bengaluru Chapter, India) on 17<sup>th</sup> July 2015 at RBCCPS, IISc Bangalore.
- CAMTech India Jugaad-a-thon from 27<sup>th</sup> to 28<sup>th</sup> June 2015 organized by CAMTech India at GE John F Welch, Bangalore.
- TEQIP-II sponsored one-day Interactive Training Program on “Sustainability and Social Innovation” organized by Department of Electrical & Electronics Engineering, BMSCE on 29<sup>th</sup> May 2015
- NIMHANS-Maastricht University joint workshop on Neuro Psychiatry from 12<sup>th</sup> to 14<sup>th</sup> March 2015 organized by NIMHANS, Bangalore.
- Entrepreneur Bootcamp from 28<sup>th</sup> to 30<sup>th</sup> Jan 2015, organized by CAMTech India and InnAccel, Bangalore.
- Integrating Innovative Entrepreneurship with Engineering Education, on January 6<sup>th</sup> 2015 as a part of Pre-conference activity of ICTIEE 2015 organized jointly by BMSCE and IUCEE.
- Innovative Undergraduate Labs for Control, Mechatronics and Robotics, conducted by Quanser on January 5<sup>th</sup> 2015 as a part of Pre-conference activity of ICTIEE 2015 organized jointly by BMSCE and IUCEE.
- Dr Mahadevan Pillai Memorial CME: Functional MRI Seeking new frontiers on 23<sup>rd</sup> Nov 2014 organized by Dept of Neuroimaging and Interventional Radiology, National Institute of Mental Health and Neurosciences, Bangalore.
- Patient Specific Implant using 3D Scan Data (PreConference I4C) on 20<sup>th</sup> Nov 2014 organized by IEEE EMB Bangalore Chapter & IEEE EMB MSRIT Student Chapter, Bangalore.
- CAMTech India Jugaad-a-thon on 19<sup>th</sup> & 20<sup>th</sup> July 2014 organized by CAMTech India at GE John F Welch, Bangalore.
- Analog Circuits for Electronic System Design from 30<sup>th</sup> to 9<sup>th</sup> July 2014 organized by Texas Instruments India University Program in support with BMSCE
- TEQIP-II Sponsored two days Refresher Course on “Classical Control Theory & Design using Matlab/Simulink on 22<sup>nd</sup> & 23<sup>rd</sup> May 2014 organized by Department of Electrical & Electronics Engineering and Department of Telecommunication Engineering, BMSCE, Bangalore
- FDP on Detailed Statistics for Researchers from 8<sup>th</sup> to 10<sup>th</sup> May 2014 organized by Department of Management Studies and Research Centre, BMSCE.
- Engineering & Science Innovation Summit on 16<sup>th</sup> April 2014 organized by National Instruments, India.
- TEQIP-II Sponsored two day Workshop on Image Processing and Application using OpenCV. on 22<sup>nd</sup> & 23<sup>rd</sup> March 2014 organized by Dept of Electronics & Communication Engg & Dept of Medical Electronics, BMSCE
- Machine Learning on 15<sup>th</sup> March 2014 organized by Board for IT Education Standards (BITES) and SIT, Tumkur.
- TEQIP-II Sponsored STC on Medical Signal Processing and its Interpretation from 23<sup>rd</sup> to 27<sup>th</sup> December 2013 organized by Dr B R Ambedkar National Institute of Technology, Jalandhar.
- FDP on Biomechanics for Engineers from 15<sup>th</sup> to 21<sup>st</sup> December 2013 organized by National Institute of Technology, Calicut. Sponsored by: MHRD-AICTE-TEQIP-II.
- Three day hands on workshop on Neural Networks, Fuzzy Logic and Pattern Recognition for Engineering and Healthcare Applications from 27<sup>th</sup> to 29<sup>th</sup> September 2013 organized by IEEE EMBS Bangalore Chapter and MSRIT, Bangalore
- Matlab & Simulink for Engineering Education from 17<sup>th</sup> September 2013 organized by MathWorks India Pvt. Ltd, India
- Identification of Slow Learners and Performance Enhancement from 20<sup>th</sup> August 2013 organized by BMS College of Engineering, TEQIP-II.
- MHRD A Satellite Event of Amrita Bioquest 2013 “Value Virtual Labs” from 14<sup>th</sup> August 2013. organized by Amrita University, Amritapuri, Kerala.

- DBT Sponsored preconference workshop on Cellular to Circuit and Brain Functions: Passing through Mathematical Models on 10<sup>th</sup> August 2013 organized by Amrita Institute of Medical Sciences (AIMS), Kochi, Kerala.
- Solar Clan from 29<sup>th</sup> July to 3<sup>rd</sup> August 2013 organized by TEQIP-II, Dept of Medical Electronics and Electrical & Electronics Engineering in collaboration with SINE, IIT Bombay and Enelek Power Ltd, Mumbai.
- Indian Technology Congress 2013, Towards Making India A Hub of Knowledge & Innovation on 24<sup>th</sup> & 25<sup>th</sup> July 2013.
- Medical Image & Signal Processing from 15<sup>th</sup> to 19<sup>th</sup> July 2013 sponsored by AICTE organized by Indian Institute of Technology, Roorkee.
- TEQIP-II Sponsored two day workshop on Research Challenges in EEG Signal Analysis and Application on 25<sup>th</sup> & 26<sup>th</sup> June 2013 organized by Dr Ambedkar Institute of Technology, Bangalore in association with NIMHANS, Bangalore
- Advanced Faculty Up-gradation Training Program on “Information Security on Virtual Training Environment (VTE)” from 20<sup>th</sup> to 31<sup>st</sup> May 2013 organized by C-DAC, Hyderabad.
- Towards Affordable Healthcare on 7<sup>th</sup> May 2013 organized by Swissnex India, Bangalore.
- TEQIP II sponsored five days training program on “Safety & Health Issues in Industrial Environment” from 13<sup>th</sup> to 18<sup>th</sup> April 2013 organized by Department of Chemical Engineering, B M S College of Engineering, Bangalore.
- Image Processing using OpenCV from 6<sup>th</sup> to 7<sup>th</sup> April 2013 organized by Department of Electronics and Communications, B M S College of Engineering, Bangalore.
- TEQIP II funded four-day workshop on Cyber Forensics and Information Security from 1<sup>st</sup> to 4<sup>th</sup> April 2013 organized by Department of Information Science and Engineering, P E S Institute of Technology, Bangalore.
- Three day workshop on Mathematical Morphology and Pattern Recognition: Theory and Applications from 26<sup>th</sup> to 28<sup>th</sup> March 2013. organized by Systems Science and Informatics Unit (SSIU), Indian Statistical Institute, Bangalore and IEEE Geoscience and Remote Sensing Chapter, Bangalore.
- Five day workshop on Medical Imaging Technology: Fundamentals to Advanced from 13<sup>th</sup> to 17<sup>th</sup> March 2013 organized by Department of Medical Electronics, MSRIT, Bangalore and IEEE EMBS Chapter, Bangalore.
- ARM made Easy from 19<sup>th</sup> February 2013 organized by Department of Electronics & Communication, Bangalore and ARM University Program, Bangalore.
- One Week TEQIP-II Sponsored FDP on “Biostatistics: Statistical Analysis Through Software Tools” from 11<sup>th</sup> to 16<sup>th</sup> February 2013 organized by Department of Medical Electronics & Mathematics, BMSCE.
- Four day TEQIP-II Sponsored Faculty Development Program on “Advanced Microcontroller - MSP430 (With Hands-On) from 4<sup>th</sup> to 5<sup>th</sup> February 2013. organized by Department of Instrumentation Technology, MSRIT, Texas Instruments and Cranes Software Intl Ltd., Bangalore
- One day Hands-on workshop on “Working with Oscilloscopes” from 1<sup>st</sup> February 2012 organized by Department of Telecommunication Engineering, BMSCE and Tektronix, Bangalore.
- One week ISTE Sponsored STTP on “Brain & Cognition: Neuroscience – Signal & Image Analysis” from 7<sup>th</sup> to 12<sup>th</sup> January 2013 organized by Department of Medical Electronics, BMSCE.
- Winter School on “Computational Aspects of Neural Engineering” from 12<sup>th</sup> to 19<sup>th</sup> December 2012 organized by IISc Mathematical Initiative, CNS and ICERM.
- Five day course on Spatial Statistical Tools in Data Processing and Analysis from 26<sup>th</sup> to 30<sup>th</sup> November 2012 organized by Systems Science & Information Unit (SSIU), Indian Statistical Institute (ISI), Bangalore Centre, India
- Two day ISTE workshop on Aakash for Education from 10<sup>th</sup> & 11<sup>th</sup> November 2012 organized by IIT, Bombay, National Mission on Education through ICT (MHRD).
- ADF workshop from 17<sup>th</sup> October 2012 organized by Planet PCI Infotech Ltd., Bangalore & IDS, Italy.
- One week Value Added course on NGS data analysis & genome Annotation from 13<sup>th</sup> to 18<sup>th</sup> August 2012. organized by Department of Biotechnology, BMSCE and LabIndia Instruments Pvt Ltd.
- One Week AICTE Sponsored Short Term Course on Real Time and Embedded Systems (CEP) from 19<sup>th</sup> September to 25<sup>th</sup> September 2012. organized by Department of Computer Science & Engineering, Indian Institute of Technology, Kharaghpur (IIT-Kh).
- One Week AICTE Sponsored Industry Institute Partnership Cell Activity>> One-week Faculty Development Program on “Matlab Programming Concept” from 31<sup>st</sup> July to 7<sup>th</sup> August 2012 organized by Department of Telecommunication Engineering, BMSCE.
- One Week VTU-VGST, Faculty Development Program on “Cognitive Science and Brain Computer Interface Technology” from 26<sup>th</sup> to 30<sup>th</sup> March 2012 organized by Department of Information Science & Engineering, MSRIT.
- MATLAB Workshop from 24<sup>th</sup> to 25<sup>th</sup> March 2012 organized by Artarvan workshops and BMSCE

- Two-day state level workshop on Low Power Embedded Systems using MSP430 from 14<sup>th</sup> to 15<sup>th</sup> March 2012 organized by Department of Electronics & Communication Engineering, BMSIT.
- One-day Workshop on “MATLAB & SIMULINK for Engineering Education” on 06<sup>th</sup> March 2012 Sponsored /organized by MathWorks Pvt ltd, Bangalore
- Non-Linear Control System Design & Industrial Applications from 5<sup>th</sup> to 8<sup>th</sup> March 2012 organized by Department of Electrical and Electronics Engineering, BMSCE, ABB Limited & BMSCE IEEE Students Chapter.
- Two days Faculty Development Workshop on “Low Power Embedded Systems using MSP430 Microcontroller” on 18<sup>th</sup> & 19<sup>th</sup> January 2012 organized by Texas instruments India University Program, Cranes Software International Ltd., Board of Studies, VTU Belgaum.
- NXP Technical Workshop from 28<sup>th</sup> November 2011 organized by NXP Semiconductors, Bangalore.
- One-day Workshop on “MATLAB & SIMULINK for engineering Education” from 11<sup>th</sup> November 2011 sponsored /organized by MathWorks Pvt ltd, Bangalore
- 2-days Wireless Physiological Monitoring Systems and Neurofeedback-Biofeedback Systems Workshop – a Professional Competence Development Program on 28<sup>th</sup> & 29<sup>th</sup> October 2011. Training Partners: CNS Vital Signs, Equival, Cambridge Cognition. organized by Gunjan Human Karigar Pvt. Ltd, New Delhi & Department of Medical Electronics, BMSCE.
- Symposium on MEMS, Optical MEMS and Nano-Electronics. from 14<sup>th</sup> & 15<sup>th</sup> October 2011 organized by Department of Electrical & Electronics, BMSCE and IEEE.
- INDO-UK Workshop on Inertial Microsensors from 28<sup>th</sup> to 30<sup>th</sup> July 2011 organized by Centre for Nano Science and Engineering, IISc, Bangalore
- International Workshop on Brain and Cognition from 5<sup>th</sup> to 14<sup>th</sup> July 2011 sponsored by IUSSTF & DST organized by Cognitive Neuroscience Department, IISc, Bangalore.
- Medical Image & Signal Processing from June 13<sup>th</sup> to 17<sup>th</sup> June 2011 sponsored by AICTE and organized by Indian Institute of Technology, Roorkee.
- Two days Faculty Training Program on “Embedded Control System design using LabVIEW” from 18<sup>th</sup> to 19<sup>th</sup> March 2011, organized by Department of Electrical & Electronics, BMSCE, Bangalore in collaboration with National Instruments, Bangalore with IEEE & IET.
- Three days Faculty Development Program on “Automotive Infotronics” from 27<sup>th</sup> to 29<sup>th</sup> January 2011 sponsored by VTU, Belgaum & VGST, Govt of Karnataka organized by Department of Electrical & Electronics Engg, SJB Institute of Technology, Bangalore.
- Three days Faculty Development Program on “Biomedical Signal, Image Processing & Analysis – BIOSIP’11” from 20<sup>th</sup> to 22<sup>nd</sup> January 2011 sponsored by VTU, Belgaum organized by Department of Medical Electronics, BMSCE, Bangalore.
- Continuing Medical Education Programme on “Cardiac Emergency Management” from 21<sup>st</sup> August 2010 sponsored and organized by Fortis Hospitals, Bangalore.
- “Application Development with SQL Server and Visual Basic.net” from 9<sup>th</sup> to 12<sup>th</sup> February 2010 organized by Department of Medical Electronics and Medical Electronics Association, BMSCE, Bangalore.
- “Fundamentals of LabVIEW” from 4<sup>th</sup> & 5<sup>th</sup> January 2010 organized by Department of Telecommunication Engineering, BMSCE, Bangalore.
- “Linear Integrated circuits and Applications in Biomedical Arena” from 27<sup>th</sup> to 29<sup>th</sup> October 2009 organized by Department of Medical Electronics and Medical Electronics Association, BMSCE, Bangalore.
- “Entrepreneurship Awareness Camp” from 17<sup>th</sup> to 19<sup>th</sup> August 2009 organized by Entrepreneurship Development Cell, Visvesvaraya Technological University, Belgaum & BMSCE
- “Digital Signal Processing and its Applications in Biomedical Arena” from 26<sup>th</sup> & 27<sup>th</sup> September 2008 organized by Department of Medical Electronics and Medical Electronics Association, BMSCE, Bangalore with Professional Body BMESI.
- “Introduction to MATLAB” from 2<sup>nd</sup> to 4<sup>th</sup> April 2008 organized by Department of Medical Electronics and Medical Electronics Association, BMSCE, Bangalore with Professional Body BMESI.
- “Advances in Bio Medical Engineering” from 16<sup>th</sup> September 2006 organized by Electrical Science Cluster (Medical Electronics Department), BMSCE, Bangalore sponsored by TEQIP-I.

#### **Internships:**

Biomedical Engineering in Jeevana Deepa Hospitals, Bangalore from 1<sup>st</sup> September 2009 to 30<sup>th</sup> April 2010.

Biomedical Engineering in Sagar Hospitals, Bangalore from 29<sup>th</sup> July to 13<sup>th</sup> August 2009.