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Associate Professor, Dept of Medical Electronics Engineering, B.M.S. College of Engineering, Bull Temple Road, Bangalore-560019, India
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Guest Faculty, Maastricht University, the Netherlands
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Visiting Faculty, Ohio State University, USA (appaji.2@osu.edu)

Director, BIG Foundation, Bengaluru



IEEE Professional Body Affiliations

Treasurer, IEEE Education Society, 2025-2026
Member, IEEE MGA Chapter Operations Committee, 2025
Member, IEEE HT Project Monitoring Subcommittee, 2025
Site Enhancements Subcommittee lead and Member, IEEE DataPort Steering 2025
IEEE SPS Ambassador 2025 || Chair, IEEE SPS Bangalore Chapter 2024-2025
Member, IEEE Conference Application Review and Finance Committee, ICC, 2024-2025
Associate Editor, IEEE SPS Newsletter, 2021 onwards
Board Member, COMSNETS Association from 2019 onwards

Past roles

Treasurer, IEEE Bangalore Section 2022-2024
IEEE Region 10 Chapters and Section Subcommittee, 2021-2024
Vice Chair, IEEE Computer Society Bangalore Chapter 2023-2024
Vice Chair, IEEE SPS Bangalore Chapter, 2023
Treasurer, IEEE Computer Society Bangalore Chapter, 2021-2023
IEEE YP Climate & Sustainability Task Force, 2023
SIGHT Chair, IEEE Bangalore Section, 2019-2021
IEEE HAC events Subcommittee Member, 2020-2021
Execom Member, IEEE Bangalore Section 2018-2021
Webmaster - IEEE PES Bangalore Chapter, 2019 -2023
Chair, IEEE Young Professionals Bangalore Section, 2017-2019
Vice-Chair, IEEE Young Professionals Bangalore Section, 2016
Advisor- BMSCE IEEE EMBS Chapter

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

Education:

PhD -Jan 2020

Faculty of Health, Medicine and Life Sciences, Maastricht University, the Netherlands
Title: [Retinal Vascular Features as a Biomarker for Psychiatric Disorders](#) | **Best Thesis Award**

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%**

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(X)

Year of Passing: 2004
Karnataka Board of Secondary Education, Karnataka, India.
Division/Class: First Class with Distinction Percentage: **88.16%**

Academic Experience: Teaching

Nov 2021- till date: Associate Professor, B.M.S.College of Engineering, India (Out of Turn Promotion)
Oct 2022 - till date: Visiting Faculty, Ohio State University, USA
May’2020 - till date: Guest Faculty, Maastricht University, the Netherlands
Aug 2022 - Dec 2024: Head, R&D, B.M.S.College of Engineering, India
March’ 2020 - Jul’2022: Institutional Coordinator for R&D at BMSCE, India
Sept 2010 –Oct 2021: 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.
Jun 2010- Jul 2021: Research associate for project on Intracranial Pressure Sensor at Indian Institute of Science, India (30th Jul 2011 to 2nd Jul 2012).

Responsibilities as Consultant, BIG Foundation, Bengaluru since 23 Aug 2023

BIG Foundation is a Section 8 Company established in 2023 with an aim to nurture startups and entrepreneurs among Alumni, students and faculty members.

- Develop Strategy to sustain and Scale the Incubation Centre
- Manage Finances and compliances
- Develop an Entrepreneurial Ecosystem by mentoring, coaching and training students and faculty
- Create Networking opportunities with startups, investors, mentors and industry experts.
- Create a tailor made innovation program to cater to the needs of students and faculty to become an entrepreneur.
- To provide advice on Business plan, pitch deck, market entry strategy.
- Advice faculty and students on IPR and licensing.
- Facilitate the process of technology transfer
- Research collaborations
- Community engagement

Funding and Consultancy

Title & Role	Agency	Amount	Year/Duration
2025 Cycle 1 Forum - 2025 IEEE SPS Forum on Exploring the Metaverse: Innovations in Biomedical Signal and Image Processing	IEEE Signal Processing Society	\$2500 USD	2025
Design and Development of Ground Penetrating Radar with On field Reconfiguration Capability Applicable to Sustainable Industrial and Agricultural Purposes (Co Investigator)	MeitY under Chip to Startup	Rs. 72,00,000	2023- 2026
Global Access Researcher Fund (PI)	UK Biobank	1500 GBP	Apr 2024, May 2024
Visvesvaraya PhD Scheme for Electronics and IT: Phase II (Nodal Officer)	DIC, MeitY, GOI	Rs. 76,62,400	2024-2025 (5 Years)
2024 Cycle 1 Forum - 2024 IEEE SPS Forum on Biomedical Signal and Image Processing - Intro to Metaverse (Event - Lead)	IEEE Signal Processing Society	\$2500 USD	2024
IEEE Signal Processing K12 STEM Program - 4th Edition on Wheels (Event - Lead)	IEEE Pre University Education Committee	\$2000 USD	Mar 2024 to Dec 2024
Hack the Metaverse IEEE CS Emerging Technologies (Event - Lead)	IEEE Computer Society	33,000 USD	Feb 2023 to Oct 2023
IEEE Signal Processing Society Forum on Signal and Image Processing using Machine Learning (Event - Lead)	IEEE Signal Processing Society	\$5000 USD	2023
K12 Science for Signal Processing – Training the School teachers (Event - Lead)	IEEE Signal Processing Society	\$8850 USD	2022
IEEE Signal Processing Society Forum on Biomedical signal and Image Processing (Event - Lead)	IEEE Signal Processing Society	\$5000 USD	2022
IEEE Signal Processing Society Forum on Image and Video Signal Processing (Event - Lead)	IEEE Signal Processing Society	\$5000 USD	2021
A Non-intrusive monitoring Smart Bed to generate personalized health profiles using	DST	Rs. 54,77,955	Feb 2022 to Jan 2025

Artificial Intelligence (PI)			
Industry Experience R&D Programme to Enhance Learning and build capacity in Medical Technology	Turtle Shell Technologies Pvt Ltd	Rs. 60,00,000	Feb 2022 to Jan 2027
3D printed Kit for the Technology deprived underprivileged to combat COVID19 (PI)	IEEE R10 TENHUMCH	\$1000 USD	Nov to Dec 2020
3D Printed Self Care Kit for Underserved Community in Urban Slums (PI)	IEEE HAC/SIGHT	\$5000 USD	Jul to Dec 2020
Are retinal vascular abnormalities endophenotype in Schizophrenia: An examination in first-degree relative (CoPI)	DST	Rs. 32,42,160	Jan 2020 to Jan 2024
Affordable Trauma Kit during RTA (CoPI)	DBT BIRAC BIG	Rs. 50,00,000	Apr 2019 to Apr 2022
Device for Intrapartum Materno-fetal care (PI Mentor)	BIRAC SRISTI	Rs. 15,00,000	Apr 2016 to Dec 2017
Smart Eye Kiosk for Community Screening (SEKC) - (PI)	Neg Teng Fong Healthcare Innovation Programme, Singapore	\$99,989 SGD	Jan 2016 to Dec 2017
Development of Low Cost, Safe, High Resolution, Easy to use Digital X-ray (CoPI)	DST	Rs. 59,37,200	Jan 2016 to July 2018
Consultancy on Mini Mag and I-PCR (PI)	Bhat Biotech Pvt Ltd	Rs. 2,00,000	2016
Retinal Fundus Image as Biomarker for Systemic Disease (PI)	BMSCE FRPS	Rs. 90,000	2015
Consultancy on Cardio Connect (PI)	Arkav MedTech Pvt Ltd	Rs. 48,000	2016
Consultancy on Wireless Ultrasound Transducer for Monitoring Foetal Heart Rate (PI)	FetoH, Oxford	GBP 400	2016
Other IEEE Events Funding (Event Lead)	IEEE	\$20,000 USD	2012 to 2020

Patent

- Indian Patent number 563168 granted for the Invention entitled “Digital X-Ray Device and a method thereof” (Date of filing:10/04/2017 & Date of grant: 25/10/2024)

Book

- R Baskaran, **A. Appaji**, S S Iyengar, Transforming Cybersecurity with AI: A revolutionary approach, IEEE USA, June 2025 <https://ieeexplore.ieee.org/document/11018347>.
- A. Appaji**, R Hariharan, Good Research Practices in Academics: A Perspective for Developing Countries , IEEE, 2021. <https://ieeexplore.ieee.org/document/9584444>

Recent Journal Publications

- V Harish, A Padmanabha, **A Appaji**, P Palaniappan, R Nayak, A Jacob, P Kamaraj, S Ummar, R Sureshkumar, V Kumar, S Varambally, M Kesavan, G Venkatasubramanian, S V Rao, CAB Webers, TTJM Berendschot, N P Rao, “A multicentric study examining a deep-learning-based computer model for classifying bipolar disorder using retinal vascular images”, Journal of Affective Disorder, June 2025 (in press).
- Siddiqui, M.I.H., Khan, S., Limon, Z.H., Rahman, H., Khan, M.A., Al Sakib, A., Swapno, S.M.R., Haque, R., Reza, A.W. and **Appaji, A.***, “Accelerated and Accurate Cervical Cancer Diagnosis Using a Novel Stacking Ensemble Method with Explainable AI”, Informatics in Medicine Unlocked, p.101657, 27 May 2025. <https://doi.org/10.1016/j.imu.2025.101657>
- R Haque; M A Khan; H Rahman; S Khan; Md I H Siddiqui; Z H Limon; S M M R Swapno; **A Appaji***, “Explainable Deep Stacking Ensemble Model for Accurate and Transparent Brain Tumor Diagnosis”, Computers in Biology and Medicine, 191, Jun 2025 <https://doi.org/10.1016/j.compbiomed.2025.110166>
- V Rangaraj, U H Jawad, S Kedia, M Rawooth, U Mohan, P Kadambi, **A Appaji***, “Optimal Ballistocardiography Sensor Placements for Vascular Health Monitoring”, Journal of Computational Methods in Science and Engineering, April 2025. <https://doi.org/10.1177/14727978251337915>

5. S M M R Swapno, SMN Nobel, P Meena, S K Gupta, VP Meena, **A Appaji***, "Accelerated and Precise Skin Cancer Detection through an Enhanced Machine Learning Pipeline for Improved Diagnostic Accuracy", Results in Engineering, vol 25, 104168, Jan 2025 <https://doi.org/10.1016/j.rineng.2025.104168>.
6. Lavanya B N, Anitha Rathnam, **A Appaji***, Kiran K, P Deepa Sheoy, Venugopal K R, "LLM GPT-3.5 Study for Sentiment Analysis Across Utkarsh Server, Ohio Supercomputer, Google Colab and PC" Results in Engineering, 103218, 9 Nov 2024 <https://doi.org/10.1016/j.rineng.2024.103218>
7. Usha KC, Suma HN, **Appaji A.** Regional-based static and dynamic alterations in Alzheimer disease: a longitudinal study. Arq Neuropsiquiatr. 2024 Jul;82(7):1-11. Epub 2024 Jul 8. PMID: 38977265. <https://doi.org/10.1055/s-0044-1787761>
8. von Scheibler ENMM, **A Appaji**, TTJM Berendschot, NJC Bauer, NP Rao, AMv Eeghen, Tv Amelsvoort, and E Boot. "Optometry in adults with microdeletion 22q11. 2: The eye as a window to the brain." Biomarkers in Neuropsychiatry, 100081, 9 Nov 2023. <https://doi.org/10.1016/j.bionps.2023.100081>
9. L Wang, J L Ambite, **A Appaji**, J Bijsterbosch, J Dockès, R H, Alex K, H. M. Lander, P Lenzini, D Marcus, S M. Moore, J B Poline, A Rajasekar, S S. Sahoo, M D. Turner, X Wang, Y Wang, J A. Turner, "NeuroBridge: A Prototype Platform for Discovery of The Long-Tail Neuroimaging Data" Frontiers in Neuroinformatics, Vol 17, Aug 2023, <https://www.frontiersin.org/articles/10.3389/fninf.2023.1215261/>
10. Sahoo SS, Turner MD, Wang L, Ambite JL, **Appaji. A**, Rajasekar A, Lander HM, Wang Y, Turner JA. "NeuroBridge ontology: Computable provenance metadata to give the long tail of neuroimaging data a FAIR chance for secondary use" Frontiers in Neuroinformatics.; Volume 17 1216443, 24 July 2023 <https://doi.org/10.3389/fninf.2023.1216443>
11. Malini. S, Raj K, Kumari L, Jayant L, Shettihalli A K and **Appaji. A**, "Chloramine-T-induced oxidation of Rizatriptan Benzoate: An integral chemical and spectroscopic study of products, mechanisms and kinetics" Open Chemistry, vol. 21, no. 1, May 2023, pp. 20220341. <https://doi.org/10.1515/chem-2022-0341>
12. Radhika, N. P., Malini, S., Raj, K., Anantharaju, K. S., & **Appaji, A**, Acmella oleracea induced nanostructured Ca₂Fe₂O₅ for evaluation of photo catalytic degradation of cardiovascular drugs and bio toxicity, Heliyon, Apr 2023 .<https://doi.org/10.1016/j.heliyon.2023.e15933>
13. A Prasannakumar, V Kumar, P Mailankody, **A Appaji**, R Battu, TTJM Berendschot & N P Rao, A systematic review and meta-analysis of Optical coherence tomography studies in Schizophrenia, Bipolar disorder and Major depressive disorder, The World Journal of Biological Psychiatry, Apr 2023 DOI: <https://doi.org/10.1080/15622975.2023.2203231>
14. S Shah, Aa Venkataraman, **A Appaji**, M Prabhushanker, G Ganesan, Evaluation of macular perfusion in eyes with proliferative diabetic retinopathy using optical coherence tomography - Angiography following panretinal photocoagulation. Oman Journal of Ophthalmology, Jul 2022. <https://www.ojonline.org/preprintarticle.asp?id=351706>
15. **Appaji A**, Harish V, Korann V, Devi P, Jacob A, Padmanabha A, Kumar V, Varambally S, Venkatasubramanian G, Rao SV, Suma HN. Deep learning model using retinal vascular images for classifying schizophrenia. Schizophrenia Research.;241:238-43, Mar 2022. <https://doi.org/10.1016/j.schres.2022.01.058>
16. Korann V, Suhas S, **Appaji A**, Nagendra B, Padmanabha A, Jacob A, Devi P, Bharath RD, Kumar V, Varambally S, Venkatasubramanian G. et al Association between retinal vascular measures and brain white matter lesions in schizophrenia. Asian Journal of Psychiatry.:103042, Feb 19 2022. <https://doi.org/10.1016/j.ajp.2022.103042>
17. Korran V, **Appaji A**, Jacob A, Devi P, Nagendra B, Chako DM, Padmanabha A, Thonse U, Rose B, Kumar V, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, "Association between Retinal vascular caliber and brain structure in Schizophrenia", Asian Journal of Psychiatry, Volume 61, July 2021, 102707. <https://doi.org/10.1016/j.ajp.2021.102707>
18. Berendschot T, **Appaji, A.**; Rao, N.; Webers, C., "Retinal vascular abnormalities in schizophrenia and bipolar disorder: A window to the brain", ACTA OPHTHALMOLOGICA Volume 98, 16-17, Apr 2020. <https://doi.org/10.1111/aos.14387>
19. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, Relation between retinal vascular abnormalities and working memory impairment in patients with schizophrenia and bipolar disorder, Asian Journal of Psychiatry, Volume 49, Feb 2020. <https://doi.org/10.1016/j.ajp.2020.101942>
20. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, Retinal vascular tortuosity in schizophrenia and bipolar disorder. Schizophrenia Research, 212, 26-32, Oct 2019. <https://doi.org/10.1016/j.schres.2019.08.020>
21. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, Retinal Vascular Fractal Dimension In Bipolar Disorder And Schizophrenia. Journal of affective disorders., 259, 98-103, Aug 2019. <https://doi.org/10.1016/j.jad.2019.08.061>
22. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, Examination of Retinal Vascular Trajectory in Schizophrenia and Bipolar Disorder. Psychiatry and clinical neurosciences, 73 (12), 738-744, Aug 2019. <https://doi.org/10.1111/pcn.12921>
23. Alagumalai, V., Kadambi, P., & **Appaji, A.**, Interdisciplinarity in New Product Development in an Indian MedTech Perspective: Gap and the Solution. Health and Technology, 9(5), 817-827, July 2019. <https://doi.org/10.1007/s12553-019-00344-1>
24. **Appaji A**, Nagendra B, Chako DM, Padmanabha A, Hiremath CV, Jacob A, Varambally S, Muralidharan K, Venkatasubramanian G, Rao SV, Webers CAB, Berendschot TTJM, Rao NP, Retinal vascular abnormalities in schizophrenia and bipolar disorder: A window to the brain. Bipolar Disorder, 21(7), 634-641, May 2019. <https://doi.org/10.1111/bdi.12779>

25. B. Nagendra, **A. Appaji**, D. Maria Chacko, C.V. Hiremath, K.M. Gowda, M. Krishnappa, A. Jacob, S. Varambally, M. Keshavan, G. Venkatasubramanian, N.P. Rao, "A window to the brain: Examination of retinal microvasculature in bipolar disorder", *Rapid Communications. Bipolar Disorder*, 20(S1): 60, 2018.
26. 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, April 2018. <https://doi.org/10.1109/ACCESS.2018.2820161>
27. 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, Dec 2017. <https://doi.org/10.1109/ACCESS.2017.2787673>
28. L Chidambara, SGK Gadde, NK Yadav, C Jayadev, D Banushali, **A. Appaji**, 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. <https://doi.org/10.1136/bjophthalmol-2015-307941>
29. SC Koganti, HN Suma, **A. Appaji**, "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.
30. Vichal PM, **A. Appaji**, 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.
31. Radhip NR, Pradeep N, **A. Appaji** and S.Varadharaja Perumal, "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.
32. Manjunatha swamy BE, **A. Appaji**, 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.
33. Suma HN, **A. Appaji**, Sahadev R, "Acquisition and Analysis of Endoscopic Images", *Bioinfo Medical Imaging*, Vol 2, Issue 1, pp-25-31, 2014.
34. **A. Appaji**, 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.
35. Roopesh SO, **A. Appaji**, 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.
36. **A. Appaji**, 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.
37. HN Suma, **A. Appaji**, "Semi Quantitative Analysis and Classification of Alzheimer's Disease using Positron Emission Tomography Images", *CiiT International Journal of Digital Image Processing*, Vol 4, No 14, pp 819-824, Aug 2012.
38. Carmichael, O., **A Appaji**., et. al from ADNI, "Localized hippocampus measures are associated with Alzheimer pathology and cognition independent of total hippocampal volume", *Neurobiology of aging*, 33(6), 1124-e31, 2012
39. J.M. Schott, **A. Appaji** et al. from ADNI, "Using CSF biomarkers to replicate genetic associations in Alzheimer's disease". *Neurobiology of Aging*, 33(7), pp 1-9, 2012.
40. HN Suma, **A. Appaji**, SA Kumar, "Acquisition and Database Management System for the Endoscopic Images", *International Journal of Computer Applications*, 30(8), pp 19-25, Sept 2011.
41. **A. Appaji**, "ECG Acquisition and Simulated Transmission by Various Modulation Techniques with Analysis", *International Journal of Computer Applications*, 30(2), pp-1-5, Sept 2011.
42. K Vijayalakshmi, **A. Appaji**, "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. U Kumaran,, Sreeraag G, A Narendran, V. P. Meena, S K Gupta, and **A Appaji**, "Understanding Cybercrime: A Study of Malware Analysis, Phishing Attacks and Sentiment Trends", 3rd IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical, and Electronics (ICIITCEE2025), Jan 16-17, 2025, Bengaluru. <https://doi.org/10.1109/IITCEE64140.2025.10915529>
2. Nithara P. V, Anand R, J Ramprabhakar, V P Meena, S K Gupta and **A Appaji**, "Nonlinear Disturbance Observer-based Passivity Controller for an Interleaved Boost Converter Feeding a Constant Power Load", 3rd IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical, and Electronics (ICIITCEE2025), Jan 16-17, 2025, Bengaluru. <https://doi.org/10.1109/IITCEE64140.2025.10915482>
3. Pooja Kadambi, Rahul Seshadri, Chengappa M R, **A Appaji**, "Public Insight and Policy Foresight: A Policy Review of AI Governance in India", 16th International Conference on COMmunication Systems & NETworkS (COMSNETS) NetHealth, January 3 - 7, 2024, Bengaluru. <https://doi.org/10.1109/COMSNETS59351.2024.10427081>
4. Lavanya B. N; Anitha Rathnam K. V; Kiran, K., **A Appaji**, P. Deepa Shenoy, K R Venugopal "Sentiment Analysis of Textual Data using Word Embedding and Deep Learning Approaches." 2023 IEEE North Karnataka Subsection Flagship International Conference (NKCon), Nov 2023. <https://doi.org/10.1109/NKCon59507.2023.10396439>
5. Lavanya, B.N., Rathnam, K.V.A., Kiran, K., **Appaji, A.**, Shenoy, P.D., Venugopal, K.R. (2025). Exploring Deep Learning and Word Embedding Techniques for Sentiment Analysis on Diverse Textual Data. In: Kumar Singh, K., Singh, S., Srivastava, S., Bajpai, M.K. (eds) *Machine Vision and Augmented Intelligence*. MAI Nov 2023. Lecture Notes in Electrical Engineering, vol 1211. Springer, NIT Patna https://doi.org/10.1007/978-981-97-4359-9_33
6. Kilgore, B., Estrada Petrocelli, L. C., Molino, J., Ibarra Ramirez, E. A., **Appaji, A. M.**, Garcia Contreras, R., Rao, R. R. (2023, June), Board 20: Work in Progress: Investigating the Impact of International Education on Cultural Understanding, Health Disparities and Collaboration through Project-based Learning Paper

- presented at 2023 ASEE Annual Conference & Exposition, Baltimore, Maryland, USA.
<https://peer.asee.org/42602>
7. B. Kilgore, L C E Petrocelli, J. Molino, E A I Ramirez, **A. Appaji**, R. G. Contreras, R. R. Rao, "Project-based Learning Course for Addressing Global Healthcare Needs and Biomedical Innovation", Institute of Biological Engineering (IBE) Annual Conference, Apr 13 to 15, 2023, Iowa State University, USA
 8. Ume Hani Jawad, Vaishnavi Rangaraj, Arpitha Kumar, Rakshith K. Shetty, Swarna Kedia, **A Appaji**, Madhusmita Rawoath, Pooja Kadambi P, Pavan Kaushik, Vishwa Singh, "Micro-Vibration based Health Monitoring: Effect Of External Factors on Ballistocardiogram Signals", 15th International Conference on COMMunication Systems & NETworkS (COMSNETS) NetHealth, January 3 - 8, 2023, Bengaluru.
<https://doi.org/10.1109/COMSNETS56262.2023.10041350>
 9. Shriraksha M, Ojasvi Bhasin, Ananya Markande, Lisanne M Jenkins, Lei Wang and **A Appaji**, "Variation In Gray Matter Nonsuicidal Self-Injury (NSSI) Individuals" 9th Annual Conference of Cognitive Science (ACCS9), 8 to 10 Dec 2022, IIT Delhi.
 10. Swarna Kedia, Vaishnavi Haritwal, Shrutika Pathak, Lei Wang and **A Appaji**, "Analysis of Effects Of Substance Use On Brain Morphometry", 9th Annual Conference of Cognitive Science (ACCS9), 8 to 10 Dec 2022, IIT Delhi.
 11. X Wang, Y Wang, J..L Ambite, **A Appaji**, H Lander, S. M. Moore, A. K. Rajasekar, J A. Turner, M. D. Turner, L Wang, S S. Sahoo, "Enabling Scientific Reproducibility through FAIR Data Management: An ontology-driven deep learning approach in the NeuroBridge Project", AMIA 2022 Annual Symposium, November 5 - 9, 1135-1144, 2022, Washington DC, USA. <https://pubmed.ncbi.nlm.nih.gov/37128458/>
 12. L Wang, J L Ambite, **A. Appaji**, J Bijsterbosch, R Herrick, W Horton, A Kogan, H Lander, P Lenzini, D Marcus, S M. Moore, S S. Sahoo, J A. Turner, M D. Turner, X Wang, Y Wang, A Rajasekar, NeuroBridge: a discovery platform for dark neuroimaging data, Collaborative Research in Computational Neuroscience CRCNS PI MEETING ATLANTA October. 27-28, 2022, USA
 13. J. A. Turner, M. D. Turner, **A. Appaji**, A. K. Rajasekar, L. Wang, and S. Sahoo, NeuroBridge ontology development for shared neuroimaging datasets, INCF Neuroinformatics Assembly, Sept 12 to 16 2022, USA (Virtual).
 14. S. Dabir, A. Mohan Kumar, S. Munusamy, **A Appaji**, TTJM Berendschot, M Rajan, Correlation between fractal dimensions in babies with and without retinopathy of prematurity, World ROP congress 2022, Sept 1 to 4, 2022, Dubai.
 15. E.N.M.M. von Scheibler, **A. Appaji**, T.T.J.M. Berendschot, N.J.C. Bauer, N. P. Rao, T.A.M.J. van Amelsvoort, A. M. van Eeghen, E. Boot, Retinal vessel geometry: A biomarker for major neurocognitive decline in 22q11.2 deletion syndrome?, 12th Biennial International 22q11.2 Scientific Conference, Split, Croatia, 29 Jun to 1 Jul 2022.
 16. M. D. Turner, S. Sahoo, **A Appaji**, H. Lander, Y. Wang, A. K. Rajasekar, L. Wang, and J. A. Turner, Iterative Development of Gold-Standard Data for Machine Curation, NLM Curation at Scale Workshop, March 28 - 30, 2022, USA (Virtual).
 17. Raj R. Rao, **A. Appaji**, Rogelio Garcia Contreras, "Enabling Social Entrepreneurship and Service Learning Opportunities Between India and the US, BMES Annual Meeting, Oct 6-9, 2021, USA.
 18. Sanjana Gururaj, Alexis Applequist, Sujata Bhattarai, **A Appaji**, P Kadambi, "Self-powered cardiac pacemaker: the viability of piezoelectric energy harvester", 2020 12th International Conference on Communication Systems & Networks (COMSNETS), 11 Jan 2020, Bangalore.
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 20. Vijayarajan A, Pooja K, **A. Appaji**, "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.
 21. Adaikkammai S, Manan Singhal, Evangeline Smita and **A. Appaji**, "Virtual Reality in Rehabilitating Amputees Suffering from Phantom Limb Pain", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
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 22. Vishruth Cavale, Dheeraj N and **A. Appaji**, "Manual to Digital Transition of Partogram in Labour - Existing Gaps and Solution", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
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 23. Shruti G A, Anvitha Rao and Medha B N, **A. Appaji**, "PRIMA- A device for minimally invasive breast cancer surgery", IEEE COMSNETS NetHealth Jan 11, 2019, Bangalore.
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 24. **A. Appaji**, 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.
 25. Deepthi B, Chaitra S, Neha B, Tanveer M., Mukesh P, **A. Appaji**, 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.
 26. Adaikkammai S, Evangeline Smita and **A. Appaji**, "Leveraging Virtual Testing for Safer Medical Device Development", Net Health Workshop, 10th International Conference on Communication Systems & Networks, COMSNETS, Jan 3-7, 2018, Bangalore.
 27. Madhurya S, Maria Sonia, Anand Vinekar, **A. Appaji** and H N Suma, "Comprehensive Analysis of Retinopathy of Prematurity based on Tortuosity with Development of Web Connectivity", 12th International Conference on Intelligent Systems and Knowledge Engineering – ISKE 2017, Nov 24-26, 2017, Nanjing, China.
 28. Anatha Padmanabha A G, **A. Appaji**, Mukesh Prasad, Haiyan Lu and Sudhanshu Joshi, "Classification of Diabetic Retinopathy using Textural features in Retinal Color Fundus Image", 12th International Conference on Intelligent Systems and Knowledge Engineering – ISKE 2017, Nov 24-26, 2017, Nanjing, China

29. S Sridhar, Madhuri KR, S Shah, J Chaturvedi, A Vijayarajan, **A. Appaji**, "A Biodesign based study on Chronic Tinnitus and Evaluation of Adaptive Noise Cancellation Technology in its Management", 8th International Conference on Communication Systems & Networks, COMSNETS, 5th to 9th Jan 2016, Bangalore.

30. D Bhanushli, S Dabir, SGk Gadde, **A. Appaji**, 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, 25th & 26th Jul 2015, Hyderabad.
31. Lavanya KC, Dr.Santosh Gk Gadde, **A. Appaji**, 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, 25th & 26th Jul 2015, Hyderabad.
32. Chaitra C, M Bharadwaj, HN Suma, **A. Appaji** & A Vinekar, "Evaluating Pseudo 3D Reconstruction of Retinal Images as a tool for Retinopathy of Prematurity", 5th IEEE International Advance Computing Conference IACC-2015 on 12th & 13th Jun 2015, Bangalore.
33. **A. Appaji**, "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 6th to 8th 2015, Bangalore.
34. **A. Appaji**, 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, 8th to 10th Dec 2014, Malaysia. (Citation 1)
35. **A. Appaji**, Suma HN, "Comparison of Biosignal Electrocardiography (ECG), Fingerprint and Iris as Biometrics Authentication Tool", 2014 IEEE Conference on Biomedical Engineering and Sciences – IECBES, 8th to 10th Dec 2014, Malaysia.
36. **A. Appaji**, H N Suma, "Stress Analysis of a Computer Game Player using Electroencephalogram", IEEE International Conference on Circuits, Communication, Control and Computing-I4C2014, MSRIT, Bangalore, 21st & 22nd Nov 2014, Bangalore.
37. **A. Appaji**, "Well Proven and Commercially Available Biometric Technologies versus Electrocardiogram: A Review", IEEE International Conference on Circuits, Communication, Control and Computing-I4C, 21st & 22nd Nov 2014, Bangalore.
38. **A. Appaji**, 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.
39. S Haritsa, BJ Sreenidhi, HN Suma, A Vinekar, **A. Appaji**, "Automatic Detection of Ridges and Optic Disc in Retinal Images of Premature Babies", IEEE International Conference on Communication and Signal Processing-ICCSP'14, 3rd to 5th Apr 2014, Tamil Nadu.
40. HN Suma, **A. Appaji**, Shobha NN, S Jyothi KN, "Non-Invasive Blood Glucose Analysis using Blood Impedance Measurement", 2nd National Conference on "Advancements in the Era of Multi-Disciplinary Systems AEMDS-2013", 6th & 7th Apr 2013, Kurukshethra, Harayana, India.
41. HN Suma, **A. Appaji**, M Gopinath, S Menon, "Structural and Functional Analysis of Attention Deficit Hyperactivity Disorder fMRI Images", 2nd National Conference on "Advancements in the Era of Multi-Disciplinary Systems AEMDS-2013", 6th & 7th Apr 2013, Kurukshethra, India.
42. Mahesh KC, Radhika S, Shriharsha S, Seema GS, Smitha PV, **A. Appaji**, G Mishra, "Wearable Wireless Intelligent Multi-Parameter Health Monitoring Watch", IEEE Texas Instruments India Educators' Conference (TIIEC 2013), 4th & 5th Apr 2013, Bangalore, India.
43. **A. Appaji**, R Hegde, DM Rao, "Vector Quantization (VQ) based Speech Recognition System on TMS32C6713DSK", IEEE Texas Instruments India Educators' Conference (TIIEC 2013), 4th & 5th Apr 2013, Bangalore, India.
44. HN Suma, **A. Appaji**, 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), 13th to 15th Dec 2012.
45. **A. Appaji**, "ECG Acquisition and Wireless Transmission with Abnormal Heart Rate Alarm", International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), 17th & 18th Dec 2010, Jalandhar, India.
46. **A. Appaji**, "Wearable Wireless Bio-Signal Monitoring Device ", 6th International Conference of Telemedicine Society of India (Telemedicon'10), 14th to 16th Nov 2010, Bhubhaneswar, India.

Prizes and Awards

1. IEEE VICS Young Professional Laureate, Apr 2025.
2. Volunteer Leadership Training Award 2023, Jan 2024
3. IEEE CS Chief of Disruption Award by IEEE CS Bangalore Chapter Jan 2024.
4. IEEE SPS Bangalore Outstanding volunteer Award by IEEE SPS Bangalore Chapter Jan 2024
5. IUCEE Teaching Learning Centre Award Jan 2024
6. IEEE Bangalore Section Chair's Recognition Dec, 2023
7. IEEE India council Award Outstanding YP Volunteer of the year, 15 Dec 2023 at Hyderabad.
8. IEEE STEM Champion 2023 during May 2023 by Try Engineering powered by IEEE.
9. Nethealth Workshop Best Paper Award for paper titled "Micro-Vibration based Health Monitoring: Effect Of External Factors on Ballistocardiogram Signals", 15th International Conference on COMMunication Systems & NETworkS (COMSNETS) NetHealth, January 3 - 8, 2023, Bengaluru.
10. Consolation prize for the product demo titled COVIDSPECT web application and COVIDSPECT Mobile application during Region 10 Humanitarian technology conference held from 30 Sept to 2 Oct 2021
11. DST Inspire Award 23 Aug 2021
12. Best PhD Thesis Award from Maastricht University, NL on 3 March 2021
13. Winner of MIT COVID19 Challenge organised during April 3-5, 2020.
14. Outstanding service to 12th IEEE COMSNETS International Conference 2020 during 7th to 11th January 2020.
15. IEEE Bangalore Section Outstanding Volunteer Award on 5 Jan 2020 at AGM, Bangalore.

16. Best Poster Award at IEEE SPS Winter School on Biomedical Signal and Image Processing held at RIT during 12 to 14 Nov 2019.
17. IEEE R10 (Asia Pacific) Young Professionals Outstanding Volunteer in Academic Award in recognition for outstanding contributions & services to YP academic program and to the IEEE Bangalore Section in Sept 2019.
18. Outstanding service to 11th IEEE COMSNETS International Conference 2019 during 7th to 11th January 2019.
19. Best Poster Award at 16th REV Conference held from 03–06 February 2019 at BMSCE Bangalore.
20. IEEE MGA Young Professionals Achievement Award 2018(Award Citation: For exemplary contribution to student and young professionals activities).
21. Best poster award during IEEE Students Young Professionals WIE and Life Members Congress at Bali, Indonesia from August 30 – September 2, 2018.
22. Winner of Massachusetts Institute of Technology (MIT) Global Entrepreneurship Bootcamp during March 26 to 31st 2017.
23. Winner of Elderly Care Hackathon organized by the Municipality of The Hague, the Netherlands from 2nd to 7th October 2016.
24. Winner of MED4DEV India-Israel affordable healthcare hackathon held from 22nd to 24th July 2016 with Cash prize of 1500USD.
25. Best Nodal Coordinator Award at National Nodal Center Conference of Virtual labs organized by Virtual Amrita Laboratories Universalizing Education on 6th May 2016 at Amrita Vishwa Vidyapeetham University.
26. Gandhian Young Technological Innovation Awards (GYTI) 2016 for the Innovative Idea "Device For Intrapartum Materno-fetal Care", 13th March 2016, at Rastrapathy Bhavan (President House), New Delhi (Grant Amount: Rs. 15,00,000/-)
27. Featured Innovator, by CAMTech (Consortium for Affordable Medical Technology), Massachusetts General Hospital, Boston and published in CAMTech Pulse Magazine for February 2016.
28. Second Runner up Prize at the CAMTech Diabetes Innovation Hack-a-thon held at the Indian School of Business, Hyderabad on 10th & 11th October 2015.
29. 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.
30. New Initiative Program Award at IEEE Region 10 Student, Young Professional, Women in Engineering Congress 2015 held from 9th to 12th July 2015 at Colombo, Sri Lanka
31. Winner of CAMTech GE Challenge Jugaad-a-Thon held during the 28th and 29th June 2015 organized by CAMTech India.
32. Winner of CAMTech India Jugaad-a-thon held during 19th & 20th July 2014, organized by CAMTech India
33. 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, 5th June 2014.
34. Visvesvaraya Technological University Third Rank in Medical Electronics Specialization, Bachelors of Engineering.
35. 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.
36. Second best paper presentation award for the paper titled "Electrocardiogram (ECG) Acquisition & Wireless Transmission (Frequency Modulation) with Analysis" in Aavishkaar-2010, Bangalore held on 17th April 2010, organized by The *Institution of Engineering and Technology* - The *IET*, Bangalore chapter.
37. Second Best Paper presentation prize in Srishti-2010 conducted by Akhila Bharatha Vidhyarthi Parishath in collaboration with SSIT, Tumkur on 9th May 2010.
38. Recipient of Merit Scholarship Award from American Alumni Association and the Alumni Association, BMS College of Engineering for the year 2009.
39. Recipient of Best Library User Award-2006, Awarded by Vijaya Composite P U College, Bangalore.

Reviewer for research/startup Proposal

- Elevate 100, Dept of IT & BT, Govt of Karnataka in 2019 onwards.
- Science and Engineering Research Board (SERB) and DST, Govt of India.
- GovTechthon, Govt of India.
- Medical Research Council (MRC), UK Research and Innovation (UKRI), UK
- Rosetrees Trust, UK

Traveled across 45 countries for various events, Meetings and conferences.

Delivered many talks across the world

Conducted many events, workshops, etc.

Dr. Abhishek Appaji