# **Brief Profile**

	I		
Professor & Principal			
21-04-2022			
principal@bldeacet.ac.in			
U.G	P.G	Ph.D	
B.E (Instrumentation (Electronics Stream) Mysore University,	M. Tech (Bio-Medical Instrumentation) VTU, Belagavi	Instrumentation Engineering, Swami Ramanand Teerth University, Nanded, Maharastra	
First Class	First Class		
Thesis Topic : "Biosensors-Analysis and Automation"			
-	"Theoretical and Experimental Studies of an Amperometric Biosensor using PC based Instrumentation System."		
Teaching	Industry	Research	
30 Years			
1. Accredited Trainer of Bosch-Rexroth Germany in the areas of Sensorics, and Cartesian Motion System.      2. NPTEL – IIT Madras, completed course on "Regulatory requirements for medical devices including in vitro diagnostics in India", Feb 2020 scored 97%.      3. Medtronic, Health Care USA- Undergone customized Training on			
	principal@bldeacet  U.G  B.E (Instrumentation (Electronics Stream) Mysore University, First Class  Thesis Topic : "Biose "Theoretical and Exp Biosensor using PC  Teaching 30 Years  1. Accredited Trainer and Cartesian Motion  2. NPTEL – IIT Made medical devices inclue 97%.  3. Medtronic, Health	principal@bldeacet.ac.in  U.G P.G  B.E (Instrumentation (Electronics Stream) Mysore University,  First Class First Class  Thesis Topic: "Biosensors-Analysis and Aur"  "Theoretical and Experimental Studies of an Biosensor using PC based Instrumentation Streaching Industry  30 Years  1. Accredited Trainer of Bosch-Rexroth Germand Cartesian Motion System.  2. NPTEL – IIT Madras, completed course of medical devices including in vitro diagnostics 97%.	

National	Trainings	/Workshop
attended		

- 1. Undergone 14 days training on "Product Design and Technology" during Oct 7 to 19, 1992, at C E D T, **Indian Institute of Science, Bangalore.**
- 2. Undergone 12 days training on "Product Design and Technology" during Jan 4 to 15, 1993, at **Indian Institute of Science, Bangalore.**
- 3. Undergone 12 days short term course on "PCB Fabrication" during Jan 18 to 30, 1993, at **Indian Institute of Science, Bangalore.**
- 4. Undergone 2 days short term course on "Surface Mount Technology" at Electronics Test Development Corporation (ETDC) Bangalore.
- 5. Undergone 15 days short-term course on "Laser Based Instrumentation" during Dece, 4 to 15, 1995 at Indian Institute of Technology, Chennai (Madras).
- 6. Attended 4 days short course on "PCB design and fabrication" during Dece 20 to 24,1994, at CED T Aurangabad-India
- 7.Undergone Induction Programme sponsored by A.I.C.T.E. for Engineering College teachers for 15 days conducted by Karnataka University, Dharwad-India during Aug 8 to 28, 1995.

- 8.Attended Five days short term course on "Biosensor and Elisa Techniques for Food Analysis" during March 29 to 02, 2004, organized by Central Food Technological Research Institute (CFTRI) Mysore at CFTRI Mysore-India.
- 9.Attended twenty days National Workshop on "Sensors and Instrumentation for Food Processing" during January 9 to 21, 2006 organized by Central Food Technological Research Institute (CFTRI) Mysore, jointly with Department of Science and Technology, Government of India, at CFTRI Mysore-India.
- Attended Workshop on "National Entrepreneurship Network", 25 27 July 2016, at DSCE Bangalore India
- 11. Attended workshop on "Design and Thinking Workshop using AI and Machine Learning in Health Care" BIOINNOVATION center Bangalore, 16 May 2019
- 12. Faculty Development program on "Artificial Intelligence and Machine Learning" organized by Kaushalya Tech Bangalore, 6-8 Aug 2019
- 13. Attended National Training programme on "Management and Ensuring Safety of Medical Devices" organized by Indian Pharmacopeia Commission, Ministry of Health and Family welfare Government of India, Chennai, 2-3 May 2019.

#### Personality Development

- 14. Participated in two days training on "Human Resource Developmental Intervention-FEEL Teacher-Leader", on March 16-17, 2006, conducted by College for Leadership and Human Resource Development, AIM INSIGHTS, Mangalore, India
- 15. Attended two days training on "Leadership & Team Work Development Programme", on August 2-3, 2006, conducted by USHUS Bangalore, India.
- 16. Attended two days training on "Leadership & Team work development programme", on October 28-29, 2006, conducted by USHUS Bangalore, India.

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International Trainings/ Workshops	<ol> <li>Attended two days "International Workshop on Biosensors" during August 11 to 13, 2003 organized by Central Food Technological Research Institute (CFTRI) Mysore, at CFTRI Mysore-India.</li> <li>Attended Six days, 2nd IEEE-EMBS "International Summer School and Symposium on Medical Devises and Biosensors" during June 26-30, 2004, at Chinese University Hong Kong-Hong Kong.</li> <li>Selected and undergone training for 15 days, Train The Trainer course on "Sensorics, PLCs and CMS System" of Bosch- Rexroth Germany, during 18th Feb 2007 to 11th March 2007 at Bosch-Rexroth center Mysore, and accredited trainer of Bosch- Rexroth Germany</li> </ol>	
Academic Awards Won	Total awards :08	
	International: 02	1.IEEE-Hong Kong (Chinese University) for Research Paper  2. Society for Instrumentation & Control Engineering-SICE – Japan (Okayama University) - For Research Paper
	National: 01	Best Paper award: 01–ISOI, Hyderabad - National Conference
	Awards won by Student Guided: 06	At National and International conferences     At National Project Exhibitions
Publications	Refereed International Journals  1. V. G. Sangam and B. M. Patre., "Mathematical model of an Amperometric Biosensor for the Design of appropriate Instrumentation System". Journal of Medical Engineering and Technology-Taylors & Francis, Vol,31,(5), pp.350-360,2007  2. V. G. Sangam and B. M. Patre., "Performance Evaluation of an Amperometric Biosensor using simple Microcontroller based Data Acquisition System", International Journal of Biomedical Science, Vol 2, pp. 45-51, 2007	

- 3. V. G. Sangam and B. M. Patre., "Development of Amperometric Biosensor and performance studies with a minimum background current", *Journal of Instrumentation science, and Technology-Taylors & Francis*, Vol (35), (6), pp.659-674, 2007.
- 4. V. G. Sangam, M. Sandesh., S. Krishna., S. Mahadevanna "Design of Simple Instrumentation System for the Quality analysis of Milk (Casein analysis)", *Sensors and Transducers Journal, Vol* (119),(8), pp.65-71,2010.
- 5. V. G. Sangam and MigbarAssefa, "Optimized Instrumentation system design for better sensitivity of Shell and Tube Heat Exchanger", *International Journal of Electrical Electronics and communication Engineering*, Vol 5 (2) pp. 163-171, 2013.
- 6. V. G. Sangam, Subhas A. Metiand John Alwyn, "Liquid level measurement using He-Ne laser and microcontroller", *International Journal of Information Technology and Systems*, Vol (2) 2, pp.6-10, 2013.
- 7. V. G. Sangam, Endalew Aynew and Tebabal Kassaw, "Model based Controller tuning to compensate dead time in steam pressure reducing unit of Wonji sugar factory", *Journal of Ethiopian Society of Electrical Engineers Korenti, Vol* (8), pp. 43-47, 2014
- 8. Subhas A. Meti and V. G Sangam, "Enhancing The Performance of Biological Sensor Validation Using Fusion Technique", *International Journal of Electrical*, *Electronics and Data Communication* (*IJEEDC*), pp. 6-11, April 2015, (Special issue)
- 9. Mahes Aradhya and V.G.Sangam, "Performance Evaluation of Traction Motors using Artificial Neural Netwok", International Journal of Science, Engineering and technology research (IJSETR), Vol (5), 5. 6-11, 1681-1688, 2016
- 10. Siri Dayanand and V.G.Sangam, "Kalman filter beam former for speech processing and its applications", *International Journal of Advanced research in Electronics and Communication Engineering*, (IJARECE), Vol (5), 5. pp.1282-1286,2016
- 11. Amruta L Kabade and V.G.Sangam, "Canny edge detection algorithm", *International Journal of Advanced research in Electronics and Communication Engineering*, (*IJARECE*), Vol (5), 5. pp.1292-1295,2016
- 12. Mahesh Aradhya and V.G.Sangam, "Comparison of Levenberg-Marquad Algorithm with other training algorithms to obtain accurate results from Artificial Neural network", *Imperial Journal of interdisciplinary Research* (*IJIR*), Vol (2), 9. pp.364-369,2016
- 13. Siri Dayanand and V.G. "Kalman filter beamformer for speech processing and its application" SangamInternational Journal of Advanced Research in Electronics and Communication Engineering

Vol.5, Issue 5, May 2016

- 14. Amruta Kabede and V.G.Sangam "Canny edge detection algorithm using DWT for PCB Laminates" *International journal of advanced Research in Electrical electronics & Instrumentation Engineering(IJAREEIE)* Vol.5 Issue 7 ISSN:2320-3765 pp.6388-6393, 2016
- 15. Subhash Meti and V.G.Sangam International Journal of Advance Computer Sceince& Applications IJACSA "PCA Based Optimization using Conjugate Gradient Descent Algorithms" Vol.8, Issue 8, September 2017, Scopus, Thomson Reuters Indexed
- 16. Siri Dayanand and V.G. Sangam, International journal of adavanced Research in Electrical electronics & Instrumentation Engineering (IJAREEIE) "Comparisons of Detection Algorithms for Speech Processing" Vol.5 Issue 7 ISSN:2320-3765 pp..6380-6387, 2017
- 17.2016 Dhanush and V.G.Sangam International Journal of Advance Research in science and Engineering IJARSE "Neural Network based PEM fuel Cell Modeling for Electric Vehicular application" Vol.6, Issue 8, August 2017 UGC Approved
- 18. Dhanush and V.G. Sangam IJIREEICE" Modelling& Performance Analysis of Neural Network Based PEM Fuel Cell "Vol.5, Special Issue 3, ISSN 2278-1021, 2017
- 19. P.Kulkarni, and V.G.Sangam, "Smart Helmet for Hazardous event Detection and Evaluation in mining industries using wireless communication" Journal of Communication Engineering Innovation, Vol 3, Issue 1, pp 11-16, 2017
- 20. B.G.Sangeetha, C.M.Joseph V.G.Sangam, K.Suresh "Preparation and switching characterization of Ge<sub>1</sub>Sb<sub>2</sub>Te<sub>4</sub> thin film devices for NVRAM applications, "Materials Today Proceedings, Volume 5, Issue 4, pp. 10629-10634, 2018, Scopus (Elsevier) SCImago rated:
- 21. V.G.Sangam, SubhasMeti "Enhanced auto associative neural network using feed forward neural network: an approach to improve performance of fault detection and analysis", International Journal of Data Analysis Techniques and Strategies, (Inderscience) Vol. 11, No. 4, pp. 291-309, 2019. Indexing: Scopus (Elsevier) Scimago rated
- 22. Sushrutha Bharadwaj M, V.G. Sangam, Yashodhara Bora, Devaki Menon "Cognitive Rehabilitation and EEG Analysis: A Review" International Journal of Recent Technology and Engineering (IJRTE), Vol 9 No.2 pp.1146-1152, 2020. Scopus (Elsevier)

- 23. V G Sangam, Sushrutha Bharadwaj M, Sahana Sundar Raman, Lakshmi A S, Prerana Ananda Murthy Mohammed Faizan, "Electroencephalogram (EEG), its Processing and Feature Extraction", International Journal of Engineering Research & Technology, Vo.9 No.6, pp 1030-1034, 2020
- 24. V G Sangam, Sushrutha Bharadwaj M, Lakshmi A S, Mohammed Faizan, Prerana Ananda Murthy, SahanaSundar Raman "A Study on the Effect of a person when subjected to Designed Cognitive tasks" International Journal of Emerging Technologies and Innovative Research, Vol.7, No.6, pp.597-602, 2020. UGC approved
- 25. Book Chapter: Sushrutha Bharadwaj, V G Sangam, Shantala Hegde ,Anand PremRajan "Cross Recurrence Quantification Analysis for distinguishing emotions induced by Indian Classical Music" "PARADIGMS IN COMPUTATIONAL INTELLIGENCE AND DATA SCIENCES" published by CRC, Taylor & Francis Group, U.K. July 2021

#### **Refereed National Journal**

26. V. G. Sangam and B. M. Patre., "Microprocessor based Data Acquisition System for an Amperometric Biosensor for the analysis of glucose concentration", *Journal of Instrument Society of India Vol. 39*, (1), pp. 30-35, 2009.

## Conference Papers:-

- V.G. Sangam, "Development of amperometric biosensor and the analysis of glucose contents including blood", *International Conference on Biomedical Engineering* Dec 21<sup>st</sup> to 24<sup>th</sup> -2001, *Indian Institute of Science, Bangalore*.
- 2. V.G. Sangam, "Development of Flow injection analysis system for the on-line monitoring of glucose", *National symposium on instrumentation-* 31st to 2nd Nov 2001, *IRDE,DRDO*, *Deharadun*, *India*
- 3. V.G. Sangam, "Amperometric biosensor for the analysis of blood"

  National conference on sensors & Instrumentation— Jan 5th & 6th—

  2002, ISS College, Hyderabad. (This paper has Received Best Paper award)
- 4. V.G. Sangam, "Computer based pressure-measuring system using He-Ne laser and optical fiber", *National seminar on emerging trends in Mechatronics for automation* – at 18<sup>th</sup> National Convention of Mechanical Engineers – Nov 9<sup>th</sup> & 10<sup>th</sup> – 2002, Roorkela, India.
- 5. V.G. Sangam, and B.M. Patre, "Instrumentation for amperometric

- biosensor": *National symposium on Instrumentation* at Bharthier University, Coimbatore, India, 27<sup>th</sup> 29<sup>th</sup> Nov 2002.
- V. G. Sangam., Vidya S., and Deepti, Veena., "Remote Heart Beat monitoring system": *National symposium on instrumentation*, *Pant University of Agriculture & Technology*, *Pantanagar* 3<sup>rd</sup> to 5<sup>th</sup> Nov 2003.
- 7. V. G. Sangam., and B.M. Patre., "Instrumentation and performance analysis of a biosensor using Biobench" *National symposium on instrumentation*, *Pant University of Agriculture & Technology*, *Pantanagar* 3rd to 5<sup>th</sup> Nov 2003.
- 8. V. G. Sangam, and B.M. Patre., "Instrumentation for amperometric Biosensor using Biobench" 2<sup>nd</sup> IEEE International Summer School and Symposium on Medical Devices and Biosensors, Chinese University, Hong Kong, July 1-2 2004.

(This paper has received high appreciation from IEEE and received International Award in the form of Free travel grant, complementary accommodation and free registration.)

9. V. G. Sangam, and B. M. Patre., "Development of Computer Based Amperometric Biosensor for the analysis of Glucose Concentration" *International Conference of SICE-Japan, Okayama University, Okayama, Japan, August* 8-10, 2005

# (This paper was selected as one of the best paper and was short listed for International award)

- 10. V. G. Sangam and Migbar Assefa., "A State of art on dynamic modeling of underwater robot", 4th Scientific Conference on Electrical Engineering, Ethiopian Society of Electrical Engineers, August 28-29, 2010.
- 11. V. G. Sangam, Endalew Aynew and Tebabal Kassaw, "Model based Controller tuning to compensate delay time for Steam Pressure Reducing unit of Wonji Sugar Factory" 8<sup>th</sup> Scientific conference in Electrical Engineering, Aug 30-31, 2014, East Africa
- 12. Subhas Meti and V.G. Sangam "Biological Sensor Performance Validation using Fusion Technique", **IEEE-International Conference on industrial Instrumentation and Control-ICIC**, at college of Engineering Pune, May 28-30, 2015 India
- 13. Dilip J, J. Satishkumar and Dr.V.G Sangam., **National Conference SEITCON** 2016 "Solar Power Generation for DC and AC Applications". DSCE, Bangalore 22nd -23rd Feb 2016.

- 14. Mahesh Aradhya and Dr.V.GSangam, **National Conference SEITCON** 2016 "Monitoring System for the Utilities Using PLC". DSCE, Bangalore 22nd -23rd Feb 2016
- 15. Sangeetha, Joseph, Suresh and Dr. V. GSangam, **National Conference SEITCON-**2016 "Electrical Switching studies of GeTe thin Film Devices". DSCE, Bangalore 22nd -23rd Feb 2016
- 16. V.G.Sangam, Veeneth. P.V., SwathiRao, Madhukiran, M and Akshay,2nd National **Conference SEITCON 2017** A novel method for disabled people OrthoHover", DSCE, Bangalore, 26th -28th May 2017.
- 17. Praveen Kulkarani and Dr. V.G. Sangam, 2nd **National Conference SEITCONN -2017** "Hazardous Event Detection And Evaluation In The Under Ground Mining Industries", DSCE, Bangalore, 26th -28th May 2017.
- 18. V.G. Sangam, 2nd **National Conference SEITCON- 2017**" Neural Network Based PEM Fuel Cell Modeling For Electric Vehicular Application", DSCE, Bangalore, 26th -28th May 2017.
- 19. Sandeep and V.G. Sangam, 2nd National Conference **SEITCON-2017** "Non-Linear Modeling and Performance Analysis of Robotic Arm Using Fuzzy Based Control System", DSCE, Bangalore, 26th 28th May 2017
- 20. V. G. Sangam, S. Hema Priyadarshini, Nishita Anand, P. Prathibha, Payal Purohit, ReethNalamitha, "Sensing Technologies used for Diabetic Foot Ulcer Detection", 3-Day International Virtual Conference on "Recent Trends in Electrical, Electronics, Telecommunications, Instrumentation Engg., Medical Electronics Engg. & Physics" (IC RTEETIMP-2020), DayanandaSagar College of Engineering, Bangalore, 7th to 9th December 2020. (Note: Awarded "Best Paper Award")
- 21. V. G. Sangam, S. Hema Priyadarshini, Nishita Anand, P Prathibha, Payal Purohit, Reeth Nalamitha, "Early Detection of Diabetic Foot Ulcer", International Conference on "Novel Approaches and Developments in Biomedical Engineering" ICDNABE 2021 Organized by the Department of Biomedical Engineering of Karunya Institute of Technology and Sciences, Coimbatore during 22nd and 23rd April 2021. (Note: Awarded "Best Paper Award")

Academic Awards	<ol> <li>Best Paper Award for the paper-V.G.Sangam., "Amperometric biosensor for the analysis of blood" National Conference on sensors &amp; Instrumentation – Jan 5th &amp; 6th –2002, ISS College of Information Technology and Engineering, Hyderabad, India</li> <li>IEEE- International award (Cash award US \$ 400), Free registration, complementary accommodation, for the paper,-V. G. Sangam, and B. M. Patre., "Instrumentation for amperometric Biosensor using Biobench" 2nd IEEE International Summer School and Symposium on Medical Devices and Biosensors, Chinese University, Hong Kong, July 1-2 2004.</li> <li>International Conference of Society of Instrumentation and Control Engineering (SICE), Japan, International award (one of the five finalist),</li> <li>V. G. Sangam, and B. M. Patre, "Development of Computer Based Amperometric Biosensor for the analysis of Glucose Concentration", International Conference of SICE-Japan, Okayama University, Okayama, Japan, August 8-10, 2005.</li> </ol>
Awards won by Students- Guided/mentored/Supervised	<ol> <li>TheProject guided at BVB College of Engineering and Technology, Hubli, titled "E – Nose" was awarded as Best Project and won First Prize, at South India Project Exhibition (SRISHTI) held during the year 2005.</li> <li>The project guided at BVB College of Engineering and Technology, Hubli, titled "Quality Analysis of Milk using Optical Instrumentation System", was awarded Second Prize at State level Project competition held during the year 2007, India.</li> <li>Best project Award at open day at DSCE for guiding student project – Automatic Irrigation Alerting Via GSM Module, May 2016</li> <li>Students mentored group(DSCE-E &amp; IE Dept) received L &amp; T Techgium finalist award, 2016,</li> <li>Mentored students group (DSCE-E &amp; IE Dept) was one of the top 3 teams from south zone in the event 'Ideathon- National Knowledge Network 2017' and one of the top 12 team from all over India, idea presented at IIT - Delhi, 27th October 2017.</li> <li>Best Paper award for the paper "Sensing Technologies used for Diabetic Foot Ulcer Detection", 3-Day International Virtual Conference on "Recent Trends in Electrical, Electronics, Telecommunications, Instrumentation Engg., Medical Electronics Engg. &amp; Physics" (IC RTEETIMP-2020), Dayananda Sagar College of Engineering, Bangalore, 7th to 9th December 2020.</li> </ol>

7. **Best Paper award** for the paper "Early Detection of Diabetic Foot Ulcer", International Conference on "Novel Approaches and Developments in Biomedical Engineering" - ICDNABE 2021 Organized by the Department of Biomedical Engineering of Karunya Institute of Technology and Sciences, Coimbatore during 22nd and 23rd April 2021. (Note: Awarded "Best Paper Award") 8. Mentored students group (DSCE-E & IE Dept) was one of the top 3 teams from south zone in the event 'Ideathon- National Knowledge Network 2017' and one of the top 12 team from all over India, idea presented at IIT - Delhi, 27th October 2017. 1. Accredited Trainer of Bosch-Rexroth Germany in the areas of Sensorics, Programmable Logical Controllers (PLC) and Cartesian Motion System. 2. Governing body member-Instrument Society of India, Indian Institute of Science, Bangalore, India, 2009-2010. 3. Member - Board of Studies of Visveswaraya Technological University, Belgaum, India, for the Departments of Instrumentation, Medical Electronics and Biomedical Engineering. 4. Member-Board of Examiners of Visveswaraya Technological University, Academic and Professional Body Belgaum, India, for the Departments of Instrumentation, Medical Achievements/ Memberships Electronics and Biomedical Engineering. 5. Internal auditor Quality Management System (ISO 9001-2000) BVQI 6. Session Chair-for **IEEE-International conference** on Innovative mechanism for Industry Applications (ICIMIA-2017), 21-23 July 2017 at DSCE Bangalore, India 7. Life Member- Indian Society for Technical Education –ISTE, New Delhi 8. Life Member Instrument Society of India, Indian Institute of Science,

Bangalore

- 1. Organized and Convened the National Seminar on "Instrumentation for Biological science" for the faculty of Engineering Colleges of the country, during. November 26-27, 2004, with a sponsorship from All India Council for Technical Education (AICTE) New Delhi. This Program was jointly organized with Biosensor Society of India, Central Food Technological Research Institute (CFTRI), Mysore, India.
- 2. Organized and Convened the Workshop on "Biomedical Signal Processing" for the faculty of Engineering Colleges. March 28-29, 2003, with a sponsorship from Visveswaraya Technological University, Belgaum, India.
- 3. Organized and Convened the Workshop on "Instrumentation for Automation" for the faculty and students of Engineering Colleges on March 24-25, 2006, with a sponsorship from Visveswaraya Technological University, Belgaum, India. This Program was jointly organized with Biosensor Society of India, Central Food Technological Research Institute (CFTRI), Mysore, India
- 4. Organized and Convened the National Workshop on "Recent Trends in Sensors and Transducers for Biological Science", for the faculty of Engineering Colleges of the country, during. November 16-17, 2007, with a sponsorship from All India Council for Technical Education (AICTE-Govt of India)) New Delhi. This Program was jointly organized with Biosensor Society of India, Central Food Technological Research Institute (CFTRI), Mysore, India and Instrument Society of India, Indian Institute of Science, Bangalore, India.
- 5. Organizing committee member of 8th scientific conference on Electrical Engineering (CEE- 2014) in Adama University.
- 6. Organizing committee member **National Conference** on Sustainable Emerging Intelligent Technologies (SEITCON 2016), 22-23 Februray 2016, DSCE Bangalore, India
- 7. Convener for **National Conference** on Sustainable Emerging Intelligent Technologies (SEITCON 2017), 26-27 May 2017, DSCE Bangalore, India
- 8. Organized Workshop on IOT at DSCE March 21 22, 2018
- 9. Organized Faculty Development Program on Artificial Intelligence and Machine Learning at DSCE Bangalore August 6-8, 2019.
- 10. Convener for the International Conference on Recent Trends in

## Workshops/ Training Organized

Electrical, Electronics, Telecommunications, Instrumentation Engg.,
Medical Electronics Engg. & Physics" (IC RTEETIMP-2020),
Dayananda Sagar College of Engineering, Bangalore, 7th to 9th
December 2020.