

BIO - DATA



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- 3. Contact phone numbers** : 9841982250
- 4. E-mail ID** : bagyarajs@ssn.edu.in
- 5. Date of Birth** : 25.05.1981
- 6. Academic Qualifications** :

Degree	Specialization	College / University	Month & Year of passing	Class & Percentage of marks obtained	Remarks, Distinction / No. of attempts
Ph.D.	Biomedical Engineering	Anna university/ College of Engg. Guindy	January 2016		
M.E.	Medical Electronics	Anna university/ College of Engg. Guindy	2005	8.182 CGPA	First class with Distinction
B.E.	Electronics and Instrumentation Engg.	Periyar university/ Sapthagiri College of Engineering	2002	75.49	First class
Plus Two	Maths, Physics, Chemistry, Biology	State Board /Jawahar Matriculation Higher Secondary School, Neyveli.	1998	81.83	First class
SSLC	-	Matriculation / Jawahar Matriculation Higher Secondary School, Neyveli.	1996	84.27	First class

Qualified in GATE with **93.98 Percentile** in Instrumentation Engineering,
All India Rank: **279**

7. Teaching Experience (starting with the latest post)

College/ University	Designation	Period of working		Subjects handled
		From DD/MM/YY	To DD/MM/YY	
SSN College of Engineering, Kalavakkam	Associate Professor	01/06/2017	Till date	Given in Below Table
Dept. of ECE, CEG Campus, Anna University, Chennai-25	Teaching Fellow	08/08/2008	31/05/2017	
Dept. of ECE, CEG Campus, Anna University, Chennai-25	Research Scholar (Full Time)	21/02/2008	07/08/2008	
Valliammai Engineering College, Kattankulathur Pin-603 203	Lecturer	17/06/2005	20/02/2008	

SUBJECTS HANDLED:

UG Subjects Handled	PG Subjects Handled
UG Theory Courses: Medical Electronics, Sensors and Measurement, Biomedical Instrumentation, Diagnostic and Therapeutic Equipment I & II, Rehabilitation Engg, BioMEMS. UG Lab Courses: Sensors and Measurement Lab, Biomedical Instrumentation Lab, Diagnostic and Therapeutic Equipment Lab	PG Theory Courses: Medical Equipments, Biomedical Instrumentation, Biomedical Sensors and Instrumentation, Rehabilitation Engineering, BioMEMS, Advanced Neural Computing, Pattern Recognition Techniques and Applications, Advances in Electronics Applied to Hospital Engineering, Human Assist Devices PG Lab Courses: Biomedical Instrumentation Lab, Data Acquisition and Processing Lab, Clinical Instrumentation Lab

8. Industrial Experience (starting with the latest post): Nil

9. Publications:

Papers published in refereed Journals:

Sl. No.	Title of papers	Author(s)	Name, volume number of Journal, and year of publication.	Page No.	
				From	To
1	Analysis of Electromyography and Near Infrared Spectroscopy Signals in Flexor Digitorum Superficialis During Isometric Contraction	S. Bagyaraj , S. Sindhuja Mary, S. Arun Karthick, M. Murugappan, & D. Vaithiyanathan	Journal of Medical Imaging and Health Informatics	Accepted for Publication	
2	Brain wave classification for divergent hand movements	Bagyaraj S , Apurva S, Asha R, Sangeetha B & D Vaithiyanathan	Indian Journal of Pure & Applied Physics, Vol. 58, October 2020	765	773
3	Role of 24 Hr Blood Pressure Variability as a Target Therapeutic Risk Factor for Poor Functional Outcome of Acute Ischemic Stroke	Dinesh Bhatia, S. Bagyaraj , S. Arun Karthick	Annals of Indian Academy of Neurology, Vol. 23, No.1, Jan/Feb 2020	9	9
4	Design and development of command prompt assist device for locked in syndrome patients	K. Arun Kumar, P.G. Pavithran and S. Bagyaraj	Book Chapter, Smart healthcare for disease diagnosis and prevention, Elsevier Publications	7	13
5	Acquisition of Jugular Venous Pulse Waveform by a Non-invasive Technique	S. Bagyaraj , M. Ragumathulla and D. Vaithiyanathan	Recent Advances in Mechanical Engineering Select Proceedings of NCAME 2019	343	353
6	Mental task classification based on EEG non-linear parameters	S. Bagyaraj , G. Ravindran, S. Shenbaga Devi, R. Revathi	Perspectivas em Ciencia da Informacao, v.22, sp.5, 2017	150	168
7	Measurement and analysis of gait parameters using wearable sensors	S. Bagyaraj , Tharani. V, Kanamail Vigneshkumar	Perspectivas em Ciencia da Informacao, v.22, sp.5, 2017	134	150

8	Frontal lobe activity studies using the spectral features of EEG during Tangram task	Bagyaraj, S & Kannika, M	International Journal of Applied Engineering Research, vol. 10, No. 55, 2015	593	598
9	Analysis of Spectral Features of EEG during four different Cognitive Tasks	Bagyaraj, S , Ravindran,G & Shenbaga Devi, S	International Journal of Engineering and Technology, vol.6,No.2, 2014	725	734
10	Design and development of two channel portable Near Infrared Spectroscopy system for studies of cerebral oxygenation in prefrontal cortex of human brain	Bagyaraj, S , Ravindran,G & Shenbaga Devi, S	Applied Mechanics and Materials, vol. 573	814	818
11	EEG-Based Epilepsy Detection and Prediction	Kavya Devarajan, Bagyaraj,S , Vinitha Balasampath, Jyostna,E& Jayasri, K	International Journal of Engineering and Technology, vol.6, No.3, 2014	212	216

Papers Published in International Conferences:

1. Bagyaraj, S and Sindhuja Mary, S 2020. 'Study of EMG and fNIRS Signals for various Muscle Activities', Indo-US International Conference on Bioengineering and Regenerative Medicine (ICBR-2020).
2. Bagyaraj.S et al 2019. 'Development of a Wearable Device for Monitoring Hypertension', Proc. of International Conference on Engineering in Medicine and Life Sciences (ICEMLS-2019)
3. Bagyaraj.S et al 2019. 'Non-Invasive Device for Extraction of Jugular Venous Pulse', Proc. of International Conference on Engineering in Medicine and Life Sciences (ICEMLS-2019)
4. Bagyaraj, S & Joys Clara, A 2012, 'Alpha Power Based Analysis of EEG Signal at Different Mental State', Proc. of International Conference on Electronics & Communication Engineering (ICECE-2012).
5. Bagyaraj, S & Gopikannan, M 2012 'NIRS For Analyzing of Oxy and De-Oxy Contents of Blood', Proc. of International Conference on Electronics & Communication Engineering (ICECE-2012).
6. Bagyaraj, S & Noshma, M 2010 'Detection of Evoked Potential Using Visual Stimulus, Proc. of International Conference on System Dynamics and Control, (ICSDC-2010)

Papers Published in National Conferences:

1. Mohan Raj, V & Bagyaraj, S, 2014, 'Analysis of Cognitive load in prefrontal cortex using two channel Near Infra Spectroscopy System, Proc. of 4th National conference on Information and Communication Engineering (NCICE-2014), pp17-21.
2. Bagyaraj, S & Kalaiselvan, P 2014, 'Spectral Analysis of EEG Signal during Verbal Tasks, Proc. of the National Conference on Emerging Electronics (NCEE-2014).
3. Bagyaraj, S & Kaviyapriya, S 2014, 'Cognitive task analysis using EEG', Proc. of the National Conference on Emerging Electronics (NCEE-2014).
4. Bagyaraj, S & Saranya, N 2014, 'Analysis of Brain Activity using NIRS', Proc. of the National Conference on Emerging Electronics (NCEE-2014).
5. Bagyaraj, S & Nithya, S 2014, 'Study the Effect of music on Cognitive task performance', Proc. of the 2nd National Level Conference in Biomed Revolution (NCBR-2014).
6. Deepak, K, V & Bagyaraj, S 2013, 'Frontal Lobe Activity Studies Using EEG', Proc. of National Conference on Methods Enriching Power and Energy Developments (MPED-2013)
7. Bagyaraj, S & Vignesh Kumar, K 2013, 'Multi Channel NIRS System for Brain Function Analysis, Proc. of National Conference on Proceeding of National Conference on Advance Computing and Information Technology (NACIT-2013).
8. Ramakrishnan, G & Bagyaraj, S 2013, 'Design of portable near infrared spectroscopy system', Proc. of National conference on Communication Technologies (NCCT-2013), pp108-110.
9. Seshadri Kiran, C, Bagyaraj, S & Shenbaga Devi, S 2011, 'Analysis of EEG Signals during a mental activity', Proc. of 4th National conference on Digital Convergence (FNCDC-2011), pp. 478-480.
10. Dhanush, R, Bagyaraj, S & Shenbaga Devi, S 2011, 'Design and Fabrication of Hardware for Near Infra Red Spectroscopy (NIRS)', Proc. of National Conference on Communication Networks and Sensor Technology (NCCNS-2011).
11. Bagyaraj, S & Muthukumaraswamy, P 2010, 'Tremor Analysis based on Image Processing', Proc. of National Conference on Embedded, Microwave & Integrated Technologies (NCEMIT-2010).
12. Bagyaraj, S 2005, 'Automatic Foot Pressure correction For Patients With Foot Deformities', Proc. of National Conference On "Emerging Trends in Industrial Automation & Control" (NCETIAC-2005), Adhiyamaan College of Engineering on August 25th 2005, pp.23-27.

Books Published: Nil

11. Membership in Professional Organizations:

IEEE Member

IEEE EMBS Member

Life Member in ISTE

Life Member in Biomedical Engineering Society of India

12. Sponsored Projects completed / ongoing as Principal Investigator / Investigator / Co-ordinator:**List of Completed and Ongoing Projects:**

Sl. No	Title of the Project	File No.	Funding Agency	Status (whether ongoing/completed)	Amount (in Rs)
1	Design and Development of Biosignal Controlled Hand Exoskeleton (CoPI)	LSRB-331/LS&BD/2018	DRDO-LSRB	2018-2020 Ongoing	23.71 Lakhs
2	Development of an Integrated Continuous Wave Near Infrared Spectroscopy and Surface Electromyography System for Studying the Muscles during Different Activities. (PI)	IFP order 2017-2018 dated 24.10.2017	SSN Trust	2017-2019 Ongoing	3.1 Lakhs

12. Responsibilities held:

- Assisted Head of the department, ECE, CEG Campus, Anna University, Chennai-25 in preparing DST project proposal and FIST proposals.
- Assisted Head of the department, ECE, CEG Campus, Anna University, Chennai-25 in conducting Curriculum and Syllabus subcommittee meetings for B.E. and M.E. Biomedical Engineering and M.E Medical Electronics.

13. Academic projects guided:**PG projects:** 28**UG Projects:** 20

14. Additional information, if any:

S.No	Nature of Service	Institution/ University	Duration		Total years of experience
			From	To	
1.	Member Question Paper setting Board	Anna University, Bharath University, VIT University	08.08.08	Till date	11 years and 1 Month
2.	Member Experts Committee	National Skill Development Mission (Health Sector)/ NITTTR Chennai	Expert member in framing the curriculum for skill development: 1. Bedside Assistant 2. ECG Technician 3. Hospital Waste Management Technician 4. Operation Theatre Management Technician 5. X-Ray Technician Level -I 6. X-Ray Technician Level - II 7. Dialyzer Technician 8. Medical Lab Technician 9. Ophthalmic Technician		

- Board of Studies Member for Department of ECE, SRM Valliammai Engineering College SRM Nagar, Kattankulathur - 603203, Kancheepuram Dt, Tamil Nadu.



S.Bagyaraj