

# DR. V. SURESH BABU

ASSOCIATE PROFESSOR



## Contact Information

Official Address : Associate Professor, Department of Electronics & Communication Engineering, Government Engineering College Barton hill, Trivandrum-695035

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## Professional Qualifications

<b>B-Tech</b>	Specialization	Electronics and Communication Engineering
	Institute/University	TKMCE, Kerala University
	Year	1988
<b>M-Tech</b>	Specialization	Integrated Electronic Devices and Circuits
	Institute/University	IIT, Madras
	Year	1996
<b>PhD</b>	Specialization	Electronics and Communication
	Institute/University	CET, Kerala University
	Year	2013

## Area/Research Interests

- Microelectronics

## Professional Experience

- Assistant Professor in CET (1991-2000)
- Associate Professor in GEC, Kannur (2000-2004)
- Associate Professor in CET (2004-2013)
- Associate Professor in GEC, Idukki (2013-2014)
- Professor in CET (2014-2016)
- Associate Professor in GEC, Barton Hill (2016-Till date)

## Responsibilities/Position (Department, College and University)

- Member Academic Council, University of Kerala, Dec 2012 onwards
- Chairman Board of Studies Electronics, University of Kerala 2008-2012
- Research guide, Kerala University
- Research Guide , APJ Abdul Kalam, Technological university, Kerala
- IEEE Student Branch Counselor, CET, from July 2014 to May 2016
- Coordinator, TEQIP, GEC, Idukki, up to 14-06-2014
- Nodal Officer, IIIC, TEQIP, GEC, Idukki, June 13 to Jan 14
- PG coordinator, GEC, Idukki, 2013-14.
- Organizing Secretary, National Conference on Communication and Signal processing, GEC, Idukki, March2014
- Organizing Secretary, National Conference on Energy Power Electronics and Control, GEC, Idukki, March2014
- Organizing Secretary, National Conference on Computing and Communication, GEC, Idukki, March2014
- Organizing Secretary, National Conference on Information Security and Network Engineering, GEC, Idukki, March2014
- Coordinator, Sponsorship Committee, MSO9, AMSE Conference, 2009
- Coordinator, Publication Committee, ICCS, 2009
- Member, Organizing committee, CETEX 2015
- Department Coordinator, RUSA, 2014
- Member Organizing Committee of ICTT, 2010
- Chairman Board of Valuation, University of Kerala, 2013,15,16
- Coordinator General Arrangement Committee, NCTT, 2013
- Technical Programme Committee Co chair ICCS, 2013
- Nodal Officer Faculty and Staff Development TEQIP III, GEC, Barton Hill.
- Member Anti ragging, Committee, GEC, Barton Hill.
- Member discipline committee, GEC, Barton Hill.

## Publications (Journals/ International Conferences)

### International Journals

1. Reshma P. G, Varun P. Gopi, V. Sursh Babu, Khan A. Wahid, "Analog CMOS Implementation of FFT using Cascode Current Mirror", *Elsevier Journal of Microelectronics*, December 2016.
2. Remya P, Varun P Gopi, V. Suresh Babu, "A High Gain Low Cost Microstrip Patch Antenna for GPS Applications", *Springer journal of wireless personal communications*(under review)

- 3 V. Suresh Babu, Dilna C, Varun P. Gopi, "Image Resolution Enhancement Using Undecimated Double Density Wavelet Transform", *International Journal of Signal Processing, (SPIJ)*, Volume 8, Issue 4, October 2014.
- 4 Varun P. Gopi, V. Suresh Babu, Haseena P. S., M. R. Baiju., "A Floating Gate MOSFET Based Novel Programmable Current Reference", *World Academy of Science, Engineering and Technology International Journal of Electrical, Robotics, Electronics and Communications Engineering*, Vol:8 No:6, 2014.
- 5 Deepa M Raju, Abraham C G, V. Suresh Babu, "VHDL Design of PWM Generator Module using MAX II CPLD for DC – DC Converter", *International Journal of Engineering and Advanced Technology*, Volume 3, Issue 6, August 2014.
- 6 V. Suresh Babu, M. R. Baiju "Novel Circuit Realizations of Neuron Activation Function and its Derivative with Continuously Programmable Characteristics and Low Power Consumption" , *International Journal of Advanced Research in Engineering and Technology* , Volume 5, Issue 10, (October 2014).

#### International Conferences

1. Fatima Rasheed, V. Suresh Babu, "Simulation on the performance series and parallel connected tandem solar cells-a comparison study" 2017 IEEE regioin 10 symposium, TENSYP17, Cochin, July 2017
- 2 V. Suresh Babu, Rose Katherine AA, M.R Baiju, "Adaptive Neuron Activation Function with FGMOS Based operational Transconductance Amplifier" *Proceedings of IEEE Computer Society, Annual Symposium on VLSI, April 2008.*
- 3 V. Suresh Babu, Varun P. Gopi, Salini Thankachan, M. R. Baiju, " a Novel programmable Current Reference with FGMOSFETs", *proceedings of the 2014 International Conference on Circuits, Systems and Control, Interlaken, Switzerland, Feb 2014*
- 4 V. Suresh Babu, Divya N. Nadar, M.R Baiju, "Low Power 1VCMOS Oscillating Neuron", *Proceedings of MIPRO, MEET, Croatia May 2008.*
- 5 V. Suresh Babu, Rose Katherine AA, M.R Baiju, "Floating gate MOSFETs Based Neuron Activation Function and its Derivative with Continuously Programmable Characteristics and Increased linear Range", *Proceedings of MIPRO, MEET Croatia, May 2008.*
- 6 V. Suresh Babu, Salini Devi, Ambika Sekhar, M.R Baiju, "FGMOSFET Circuit for Neuron Activation Function and its Derivative", *Proceedings of IEEE ICIEA (DATICS) November 2009.*
- 7 V. Suresh Babu, Ambika Sekhar, Salini Devi, M.R Baiju, "A Floating Gate MOSFET Based Operational transconductance
- 8 Amplifier and Study of Mismatch", *Proceedings of IEEE ICIEA(DATICS) November 2009.*
- 9 V. Suresh Babu, Haseena P.S, M.R Baiju. "A Floating gate MOSFET Based Current Reference with Subtraction technique", *Proceedings of IEEE Computer Society Annual Symposium on VLSI, ISVLSI 2010.*
- 10 Shihabudeen A, V. Suresh Babu, M. R. Baiju, "A Low Power Sub 1V 3.5 ppm/<sup>0</sup>C Voltage Reference Featuring sub threshold MOSFETS", *Proceedings of international conference ISCES, Malta, Aug 31<sup>st</sup> to Sept 3<sup>rd</sup> 2008.*
- 11 Arun. S, V. Suresh Babu, "Implementation of Radix 2 and split Radix FFT Algorithm using Current Mirrors", *IEEE International Conference on Power and Computing Technologies, ICCPCT 2013.*
- 12 Varun P. Gopi, V. Suresh Babu, M. R. Baiju, " Scaling Issues in IDDG FinFET at Small Gate Length", 3<sup>rd</sup> IEEE International Conference on Information Science and Interaction Science, 23-25 June 2010, pp683-687, Chendu, China.
- 13 V. Suresh Babu, Salini Thankachan, M. R. Baiju, "A Floating Gate MOSFET based Current reference Circuit", *International Conference on Control Systems and Electronics, Interlaken, Switzerland, Feb 2014*

- 14 Haseena P.S, V. Suresh Babu, M.R Baiju. "A Floating gate MOSFET Based Current Reference", *Proceedings of International Conference on Control, Communication and Computing, ICC2010, February 2010.*
- 15 Aiswariya Raj, V. Suresh Babu, "Programmable Temperature insensitive Voltage and Current Reference using Floating Gate MOSFETs", *International Conference on Technological Trends, Nov 2010.*
- 16 [S. Hema](#) V., Suresh Babu, [P. Ramesh](#), "FPGA implementation of Viterbi decoder", EHAC'07 Proceedings of the 6th WSEAS International Conference on Electronics, Hardware, Wireless and Optical Communication, Pages 162-167, Corfu Island, Greece, 16-19 Feb 2007.
- 17 V. Suresh Babu, Varun P. Gopi, Salini Thankachan, M. R. Baiju, " A Novel programmable Current Reference with FGMOSFETs", *Proceedings of the 2014 International Conference on Circuits, Systems and Control, Interlaken, Switzerland, Feb 2014*
- 18 Arun. S, V. Suresh Babu, "Implementation of Radix 2 and split Radix FFT Algorithm using Current Mirrors", *IEEE International Conference on Power and Computing Technologies, ICCPCT 2013.*
- 19 Arun. S, V. Suresh Babu, "Analog implementation of FFT Algorithm using Current Mirror Circuits", *National Conference on Technological Trends, Nov 2011.*

#### National Conferences

1. Theresa Mathew, V. Suresh Babu, Microstrip patch antenna design for low RCS, *National Conference on Technological Trends, September 2015.*
2. Remya. P., V. Suresh Babu, nMicrostrip patch antenna design for GPS systems, *National Conference on Technological Trends, September 2015.*
3. Soumya.R, V. Suresh Babu, Realization of Magnitude Comparator using Threshold Logic, NCTT 2016, College of engineering, Thiruvananthapuram, August 2016.
4. Titupriya.V, V. Suresh Babu, Current Reference for Energy Harvesting, NCTT 2016, College of engineering, Thiruvananthapuram, August 2016.
5. Shiju. P. P., V Suresh Babu, "Single transistor synapse for neural networks", *7<sup>th</sup> National Conference on Technological Trends, Nov 2006.*
6. *Divya N. Nadar, V. Suresh Babu, "OTA based Low Voltage Oscillating Neuron", 8<sup>th</sup> National Conference on Technological Trends, Nov 2007.*
7. Rose Katherine AA, V. Suresh Babu, M.R Baiju, "FGMOS Based Transconductance Amplifier with Programmable Characteristics ", *8<sup>th</sup> National Conference on Technological Trends, Nov 2007.*
8. Remya. G, V. Suresh Babu, "Tunable  $g_m$  -C Filter using Linearised Cross Coupled FGMOS OTA", *9<sup>th</sup> National Conference on Technological Trends, Nov 2008.*
9. Salini Devi, V. Suresh Babu, "A novel FGMOSFET circuit for neuron activation function and its derivative", *9<sup>th</sup> National Conference on Technological Trends, Nov 2008.*
10. Ambika Sekhar, V. Suresh Babu, "Floating gate MOSFET based operational transconductance amplifier and study of mismatch", *9<sup>th</sup> National Conference on Technological Trends, Nov 2008.*
11. Arun. S, V. Suresh Babu, "Analog implementation of FFT Algorithm using Current Mirror Circuits", *National Conference on Technological Trends, Nov 2011.*
12. Varun P. Gopi, V. Suresh Babu, "Independently driven Double Gate FinFET Scalable to 10 nm", *National Conference on Technological Trends, Nov 2009.*
13. Hema.S, V. Suresh Babu, "FPGA Implementation of Viterbi decoder", National Conference on Technological Trends, Nov 2006.
14. Vandana Ramankutty, V. Suresh Babu, "Carbon Nanotube based Digital VLSI Circuit", *National Conference on Communication and Signal Processing, GEC, Idukki, March 2014*
15. Salini Thankachan, V. Suresh Babu, "A Novel Programmable Current Reference with Temperature and Supply Voltage Compensation", National Conference on Technological Trends, Nov 2010.

16. Haseena P. S, V. Suresh Babu, “*A Floating Gate MOSFET Based Current Reference*”, 10<sup>th</sup> National Conference on Technological Trends, Nov 2009.
17. Sambasiva Rao V, V. Suresh Babu, “*FinFET based Voltage Reference*”, 10<sup>th</sup> National Conference on Technological Trends, Nov 2009.

### **FDPs, Workshops and Conferences attended**

- Instruction Enhancement Programme in Electronics Devices- IIT Delhi (From 25<sup>th</sup> May 1992- 8 weeks)
- Programming in C- College of Engineering, TVM (Feb 1993- March 1993)
- Simulation & Design of Electronic Devices- IIT Delhi (Feb 1997-2 weeks)
- Seminar on Motivation & Interpersonal Relations (Oct. 1998-2 days)
- VLSI Design & VHDL- IIT Delhi (Dec. 1998-3 weeks)
- Image Processing- IIT Delhi (May 2000-2 weeks)
- The applications of Transform Theory to Optics and Optical Communication- University of Kerala, Kariyavattom (10-19 April 2002)
- Advances in Electronic Communication & Systems- TKMCE, Kollam (15 to 27 March 2004)
- Research Orientation- College of Engineering, TVM (15-12-2004 to 19/12/04)
- VLSI: Design, Technology, Architecture- College of Engineering, TVM (30-11-2005 to 3-12-2005)
- Advances in Optical Communication- College of Engineering, TVM (23-4-2007 to 30-4-2007)
- Seminar on Stochastic Process- College of Engineering, TVM (15-11-2007)
- Workshop on Research Project Proposal- College of Engineering, TVM (28-11-2007 to 29-11-2007)
- Nanotechnology; Opportunity and Challenges- NITTTR, Chandigarh (4-5-2009 to 8-5-2009)
- SDP on VLSI Design and System on Chip- Adhiyamaan College of Engineering, Hosur (8-8-2011 to 22-8-2011)
- STC on Nanotechnology- Marian Engineering College, TVM (20-12-2011 to 22-12-2011)
- STC on Nanoelectronics- College of Engineering, TVM (30-1-2012 to 3-2-2012)
- Workshop on Advanced Research for High-tech Industry- Govt. Engineering College, Kozhikode (5-09-2013 to 7-09-2013)
- Effective Office Administration and Management- National Productivity Council, Goa (9-12-13 to 13-12-13)
- Strategic Planning and Good Governance- College of Engineering, TVM (17-3-14 to 18-3-14)
- Academic Leadership Programme for TEQIP Institutions- IIM, Kozhikode (23-6-2014 to 28-6-2014)
- Further Education Leadership Development Programme- UK – India Education and Research Initiative (3-12-2014 to 5-12-2014)
- Preparation of Institutional Development Plan for Quality Technical Education in the State- DTE,GEC, Barton Hill (10-02-2016 to 12-02-2016)
- Microelectronics : Fundamentals to Devices- IIT, Madras (11-07-2016 to 16-07-2016)
- Management Capacity Enhancement Programme- IIM, Indore (23-08-2016 to 29-08-2016)
- Work life balance and stress management- NPC, Gangtok (17-10-16 to 21-10-16)
- Residential Training Programme on e-Gov:Transforming Government Sector- NPC, Port Blair (21-11-2016 to 25-11-2016)
- Quality Initiatives in Technical and Higher Educational institutions- ESCI, Hyderabad (6-12-16 to 8-12-16)
- Inspirational Leadership for performance Excellence- DTE (13-2-17 to 17-2-17)
- Workshop on Strategic, Planning- GEC, Idukki (20-10-17 to 22-10-17)
- E- governance programme on change management-IMG, TVM (21-02-2018 to 23-02-2018)