# **CURRICULUM VITAE**

# **Dr. Govind Singh Patel**

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## **TEACHING EXPERIENCE**:

- Worked as Professor in Department of Electronics and Communication Engineering Department at Lovely Professional University, Jalandhar, PB, India, from 08/01/2018 to 24/11/2020.
- Worked as Associate Professor in Department of Electronics and Communication Engineering Department at RIET, Faridabad, India, from 08/12/2011 to 24/12/2017.
- Worked as Assistant Professor in Department of Electronics and Communication Engineering Department at Lingayas University, Faridabad, India, from 19/09/2005 to 28/12/2011
- Worked as Lecturer in Department of Electronics and Communication Engineering Department at MIT, Aurangabad, India, from 05/12/2001 to 18/09/202005.

## **INDUSTRAIL EXPERIENCE**:

• Worked as Software developer at Zedcom Infotech, Aurangabad, India, from 10/01/1999 to 04/12/2001.

# EDUCATIONAL QUALIFICATION

- Ph.D. in Electronics and Communication Engineering from Thapar University, Patiala, PB, in 2016.
- M. Tech. in Instrumentation and Control Engineering from APEEJAY College of Engineering, Sohna, Gurgoan, under M.D. University, Rohtak, HR, in 2008 with 1<sup>st</sup> division.
- B.E. in Electronics and Communication Engineering from B.D.C.O.E. Sewagram, Wardha, under Nagpur University, Nagpur, MS, in 1998 with 1<sup>st</sup> division.

# Ph.D. Students Enrolled : 07

# M.Tech. Students Guided : 12

# Workshop/Orientation/Symposium/Seminar Attended:

Sr.No.	Name of Course/Workshop/	Place	Duration	Sponsored/Organized by
	Seminar/Symposium			
1	Emerging trends in signal	LIMAT,	3 to14 July 2006	LIMAT, FBD
	processing and industrial	FBD		
	drives			
2	Faculty development	LIMAT,	16 to 21 July 2007	LIMAT, FBD
	programme	FBD		
3	Enhancing awareness and	CITM, FBD	19 to 23 March	ISTE-AICTE STTP & CITM,
	teaching skills		2007	FBD
4	Audiotronics	LIMAT,	16 to 20 July 2008	AICTE-ISTE & LIMAT, FBD
		FBD		
5	Faculty development	LU, FBD	08 to 10 July 2009	LU, FBD
	programme			
6	PLC, SCADA	RIET, FBD	13 Sept. 2012	SOFCON, Noida
7	Embedded system & VLSI	RIET, FBD	4 Sept. 2012	CETPA, Noida
	technology			
8	FPGA signal processing for	Thapar	11 to 15 June 2012	Thapar University, Patiala
	cognitive radios	University		
9	Training on VLSI and	RIET, FBD	13-15 Sept 2017	APTRON Sulution Pvt Lid,
	Embedded system design			Gurgoan
10	Workshop on Matlab and	RIET, FBD	14-16 March 2016	DUCAT, Noida
	Verilog			
11	Workshop on VLSI and	RIET, FBD	25-27 Oct 2015	APTRON Sulution Pvt Lid,
	Embedded system design			Gurgoan
12	Training on Matlab and	RIET, FBD	8-10 March 2017	DUCAT, Noida
	Verilog			
13	Workshop on VLSI and	RIET, FBD	9-11 Nov 2016	APTRON Sulution Pvt Lid,
	Embedded system design			Gurgoan
14	Workshop at Startup and IPR	LPU	29 <sup>th</sup> Aug 2019, 1	LPU
			Day	
15	Symposium on Professional	IIMT	9 <sup>th</sup> May 2020, 1	IIMT, Noida
	Development & Opportunities		Day	
	in Electronics			
16	Accreditation and outcome	NITTR	8 <sup>th</sup> March to 12 <sup>th</sup>	NITTR Chandigarh
	based curriculum design	Chandigarh	March 2021, 5	
			Days	
17	Low power VLSI Design	NITTR	5 <sup>th</sup> April to 9 <sup>th</sup>	NITTR Chandigarh
		Chandigarh	April 2021, 5 Days	

#### Patents: 04

- 1. Govind Singh Patel, et al. "Intelligent Railway track detection system using FPGA", (Application no. IN201911049486), 2019.
- 2. Govind Singh Patel, et al., "A smart trolley bag.(Application no. IN201911049487), 2019,
- **3.** Govind Singh Patel, et al., "A customized universal CPLD based various IoT based applications, (Application no. IN201911053044), 2020.

4. Govind Singh Patel, et al., "A Device of smart guide system for indoor navigation", (Application no. IN201911050730), 2020.

#### **Book authored:** 01

1. Govind Singh Patel, Smart Agriculture, Emerging Pedagogies of Deep Learning, Machine Learning and Internet of Things, CRC Press, Jan 2021.

#### Book Chapter published: 04

1. Govind Singh Patel, "IOT in Agriculture: Survey on Technology, Challenges and Future Scope", Emerging Pedagogies of Deep Learning, Machine Learning and Internet of Things, CRC Press, ISSN no. 9780367535803, Jan 2021.

2.Govind Singh Patel, "Classification of segmented image using increased global contrast for paddy plant disease" Emerging Pedagogies of Deep Learning, Machine Learning and Internet of Things, CRC Press, ISSN no. 9780367535803, Jan 2021.

3. Govind Singh Patel and Ashish A. Mulajkar, "A single cycle low latency bypass router based on network on chip", ICICS Proceeding, CRC press (Taylor & Francis), ISBN: 978-1-00-312910-3, DOI: 10.1201/9781003129103.

4. .Govind Singh Patel, Frequency synthesizer and their application in signal processing, book title " Intelligent Communication and Automation Systems", upcoming book.

#### List of publications:

#### **International Journals:**

- 1. Govind Singh Patel and Sanjay Sharma, "Parametric analysis of a novel architecture of Phase Locked Loop for communication system, International Journal of Wireless Personal Communication, Springer, Vol. 77(2), pp. 1271-1285, 2014 (SCI Indexed by Thomson Reuters; Impact Factor: 0.979).
- 2. Govind Singh Patel and Sanjay Sharma, "Parametric analysis to reduce phase noise of frequency synthesizers for wireless communication system, International Journal of Wireless Personal Communication, Springer, vol. 75(2), pp. 1295–1306 (SCI Indexed by Thomson Reuters; Impact Factor: 0.979).
- 3. Govind Singh Patel and Sanjay Sharma, "FPGA-based Direct Digital Synthesis Analysis and Implementation," Journal of Computational and Theoretical Nano-Sciences, American Scientific Publishers, United States of America, vol.10(10), pp. 2458-2461 (2013). (SCI Indexed by Thomson Reuters; Impact Factor: 0.91).
- 4. Govind Singh Patel and Sanjay Sharma, "Predicting the Jitter of Phase Locked Loop-DLL based Frequency synthesizers", International Journal of Wavelets, Multiresolution and Information Processing, World scientific Publication, Vol. 12(2), (2014),pp. 1-10. (SCI Indexed by Thomson Reuters; Impact Factor: 0.50).

5. Govind Singh Patel and Sanjay Sharma, "The Optimization of Direct Digital Frequency

Synthesizer Performance by New Approximation Technique," Research Journal of Applied Sciences, Engineering and Technology, Maxwell Scientific Organization, 5(11): 3134-3139, 2013. (Thomson Reuters Zoological Records).

Govind Singh Patel and Sanjay Sharma, "Frequency synthesis techniques for high speed communication system," International Journal of the Physical Sciences, Academic Research publication, 6(11), pp. 2618 -2632, 4 June, 2011. (Formerly SCI Indexed when published by Thomson Reuters; Impact Factor: 0.40).

- Govind Singh Patel and Sanjay Sharma, "Field Programmable Gate Array- based Analysis, Design and Implementation of ADPLL," Journal of Computational and Theoretical Nano-sciences, American Scientific Publishers, United States of America, Vol. 11(7), pp. 1-7, 2014. (SCI Indexed by Thomson Reuters; Impact Factor: 0.91).
- 8. Govind Singh patel & Sanjay sharma,"Design of an All Digital PLL(ADPLL) IP core using FPGA", International e-Journal of Communication and Electronic, vol. 3, page-11-21, March 2009.
- 9. Govind Singh patel, Amrita Rai,"Multiple Traffic Control Using Wireless Sensor and Density Measuring Camera", International Frequency Sensor Association, Vol. 94, page-126-132, July 2008.
- Govind Singh Patel, S V A V prasad & Amrita Rai, "Artificially Controlling the Limb Movement of Robotic Arm Using Machine Interface With EMG Sensor", International Frequency Sensor Association, Vol. 89, page-39-51, March 2008.
- 11. Govind Singh patel & Sanjay sharma, "Comparative study of DDS, PLL and DDS based PLL .,"comparative analysis of different pll synthesis techniques for communication system", 13IEEMS, Volume (5), September 2010, pp. 38-49.
- Govind Patel and Sanjay Sharma, "Comparative analysis of different pll synthesis techniques for communication system", International Electronic Engineering Mathematical Society IEEMS, Volume (5), September 2010, pp. 38-49.
- 13. Govind Singh Patel, Sarita Zutasi & Arvind pathak, "Reduction of Settling time in frequency synthesizers using Bandpass filters", International Journal of new Innovations, MVN, vol. 1, pp. 101-103, Feb 2012.
- 14. Govind Singh Patel, Sanjeet Kumar Sinha & Suman Lata Tripathi, "Mole-Fraction Engineering in Germanium Source Pocket Based Tunnel Field Effect Transistor", Sensor letters International Journal, American Scientific Publishers, Vol. 17(6), pp. 470–473, June 2019. (Scopus Index Journal).
- 15. Govind Singh Patel and Nripendra Narayan Das, Privacy and Security in Online Social Media-a Big Challenge, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-6, April 2019.(Scopus Index Journal).
- Govind Singh Patel and Suman Lata Tripathi, "Design Low Power Pocket Si0.7Ge0.3 Junction-less Tunnel FET using below 5nm Technology," International Journal of Wireless Personal Communication, Springer, Nov 2019 (SCI Indexed by Thomson Reuters; Impact Factor: 0.979). (DOI: 10.1007/s11277-019-06978-8).
- 17. Govind Singh Patel, Nripendra Narayan Das, Sanjeet Kumar Sinha, "Optimization of Frequency Settling Time of Pll using 3 Rd Mash Sigma Delta Modulator," International Journal of Innovative Technology and Exploring Engineering (Scopus Journal), Volume-9 Issue-3, January 2020.
- 18. Ashish A Mulajkar, Govind S Patel, "3D Torus Router Architecture For Efficient Network on Chip Design", Think India Journal, Vol-22-Issue-16-August-2019.
- 19. Govind S Patel, Suman L Tripathi, Sanjeet K Sinha and Sobhit Saxena," Design and Analysis of Power an Efficient Hybrid PLL For Communication System", T. India Journal, Vol-22-Issue-16-August-2019.
- 20. Sanjeet K. Sinha, Sweta Chander, Govind S. Patel," Application of Graphene as Carbon Nanotube For Future CNTFET Devices," T. India Journal, Vol-22-Issue-16-August-2019.
- 21. Sobhit Saxena, Suman L. Tripathi, Sanjeet K. Sinha, Govind S. Patel and Chepuri Pravalika, "Review on Performance Evaluation of Tfet Structures & Its Applications," T. India Journal, Vol-22-Issue-16-August-2019.
- 22. Suman Lata Tripathi , Arti Singh, Sajeet Kumar Sinha, Sobhit saxena and Govind Singh Patel," Performance Evaluation of Advance LED Structures and Applications," T. India Journal, Vol-22-Issue-16-August-2019,

- 23. Suman Lata Tripathi , Kadi Jaya Ramesh, Sobhit saxena, Sajeet Kumar Sinha and Govind Singh Patel," Review on Tunnel Field Effect Transistor For Biomedical Applications," T. India Journal, Vol-22-Issue-16-August-2019.
- 24. Sandeep K Shelke, Govind Singh Patel and Bhupinder Verma," Analysis of Complete Image Processing System and Design of Improved Image Compression System," T. India Journal, Vol-22-Issue-16, pp. 1161-1169,-August-2019.
- 25. Sandeep K Shelke and Govind Singh Patel, "Low Power High Frequency Implementation of Image Filtering using Improved Median Filtering", International Journal of Advanced Science and Technology Vol. 29, No. 4s, April 2020, pp. 1833-1843.(Scopus indexed)
- 26. Sheetal Nagar, Govind Singh Patel and Seema Nayak, "A Review paper on "IOT" & It's Applications," Journal of Information and Computational Science(UGC care journal), Volume 13 Issue 4, April 2020.
- Suman Lata Tripathi and Govind Singh Patel, "Low-Power Efficient p+ Si0.7Ge0.3 Pocket Junctionless SGTFET with Varying Operating Conditions," Journal of Electronic Materials, 49(7), pp.4291–4299 (2020).;SCI: IF=1.67,April 2020. (SCI Indexed by Thomson Reuters; Impact Factor: 1.67). .https://doi.org/10.1007/s11664-020-08145-3.
- 28. Ashish A Mulajkar, Govind S Patel, "Performance Analysis of various Parameters of Network-on-chip (NoC) for different Topologies", JETIR, Volume 6, Issue 1, January2019. (published in Non 2020, UGC care listed),
- 29. Ashish A Mulajkar, Govind S Patel, "VC Router Design For Power Efficient Network On Chips", JETIR, Volume 6, Issue, January 2019.
- 30. Ashish A Mulajkar and Govind Singh Patel, "Easy Pass Router Design for Power Efficient Network on Chips", international journal of research culture society", July 2020.
- 31. Govind singh patel, "FPGA implementation of the fractional frequency synthesizers", 2018 JETIR December 2018, Volume 5, Issue 12(published in Nov 2020). (UGC care listed journal).pp 371-377.
- 32. Sheetal Nagar1, Govind Singh Patel2, Seema Nayak, "Design Of Low Power Digital Multiplier", 2019 JETIR January 2019, Volume 6, Issue 1, pp. 1392-1399. Published in Nov 2020. UGC care listed.
- 33. Govind Singh Patel and Sandeep Shalke, "Study of End to End Image Processing System including Image De-noising, Image Compression & Image Security," International Journal of Wireless Personal Communication, Springer, June 2021 (SCI Indexed by Thomson Reuters; Impact Factor: 1.061).

#### [B]National Journals:

 Govind Singh Patel & Sanjay Sharma, "DDS-Based Hybrid PLL synthesis technique for communication", LINGAYAS Journal of Professional Studies, LINGAYAS UNIVERSITY, Vol. 5, No.1,pp-14-19 July-Dec, 2011.

## [C] International Conference:

- 1. Govind Singh patel & Amrita Rai, "Extended: Character Recognition using Java Object Oriented Neural Engine", International Conference, Ghaziabad, page-127-136, Feb. 2009.2
- 2. Govind Singh patel & Amit Garg, "Extended: Robotics- an integrated system controlled by Artificial Neural Network", International Conference, Ghaziabad, page-36-44, Feb. 2009.2
- 3. Govind Singh patel & Amrita Rai,""Extended: Global traffic control by wireless sensor and density measuring camera", International Conference, Ghaziabad, page-72-78, Feb. 2009.
- 4. Govind Singh patel "Extended: Robotics- An Intelligent System: An Overview", International

Conference on InnovativeTechnologies(ICIT-09),PDM, Bahadurgrah [HR], June 2009.

- 5 Govind Singh patel, S V AV prasad & Amrita Rai,""Implementation and Design of FET Library using ASIC-VLSI",International Conference on Innovative Technologies (ICIT-09),PDM, Bahadurgrah[HR], June 2009.ST4 P-450.
- 6 Govind Singh patel & Ashish Siwach, "DDFS Implementation on VERILOG", International Conference on Advanced Computing and Communication Technologies (ACCT 2011), Rohtak, 2010, pp.-393-396.
- 7 Govind singh patel & Sanjay Sharma, "Analysis and Reduction of Noise in Fractional PLL ",IS3C 2012, Taiwan, June 2012.
- 8 Govind Singh Patel, Shelly B & Kritika, "Reduction of Phase Noise in PLL", International Conference on VLSI, MEMS, NEMS (VMN-2012), Jan 2012.
- 9 Govind Singh Patel, Kritika & Shelly B, "Implementation of low noise, wide Range ADPLL", International Conference on VLSI, MEMS, NEMS (VMN-2012) Jan 2012.
- 10 Rachna and Dr. Govind S Patel, "Compressed sensing: techniques for efficient acquiring and reconstructing a signal using reconstruction algorithm", International conf. on Innovations in Electronics and Communication design, Faridabad, May 2017.
- 11 Dr. Govind Singh Patel, Mathematical and Behaviors Approach to reduce Phase Noise of Frequency Synthesizer, IEEE, International Conference on "Intelligent Circuits and Systems ICICS 2018, LPU, Jalandhar, PB, April 2018.
- 12 Dr. Govind Singh Patel & Prasantha R. Mudimela, "Simulation of MOSFET with Different Dielectric Films", IEEE, International Conference on "Intelligent Circuits and Systems ICICS 2018, LPU, Jalandhar, PB, April 2018.
- 13 Dr. Govind Singh Patel & Dr. Suman Lata, "Performance Enhancement Unsymmetrical FinFET and its applications", IEEE conf. EDCON 2018, Kolkata, Nov 2018.
- 14 Dr. Govind Singh Patel & Dr. Suman Lata, "High performance low leakage pocket Six Ge1-x Junction less tunnel FET for 10ns technology", IEEE conf. EDCON 2018, Kolkata, Nov 2018.
- 15 Govind Singh Patel, "An information model for developing a smart city by IOT", Indian Science Congress Association, 06 Jan 2019.
- 16 Govind Singh Patel, Aditya Raj, Suman Late and N. N. Das, "A Novel Design of All Digital Phase Locked Loop for Wireless Applications", IEEE International Conference on Innovative Sustainable Computational Technologies, GEU Dehradun, March 2020.
- 17 Govind Singh Patel, Shekhar Verma and Suman L. Tripathi, "Subthreshold Performance Evaluation of JLDG-MOSFET," 5<sup>th</sup> IEEE International Conf. on Signal processing, computing and control, ISPCC 2019), JUIT, Solan, HP, India, Oct 2019.
- 18. Ashish A Mulajkar and Govind Singh Patel, " A single cycle low latency bypass router based on network on chip," ICICS2020, LPU, June 2020.
- Sandeep Shelke and Govind Singh Patel, "Improved image compression using lifting wavelet," ICICS2020, LPU, June 2020.
- 20. Govind Singh Patel and Kundan M. J., "Hardware Architecture of Digital Drum kit using FPGA",

IEEE International Conference on Advent Trends in Multidisciplinary Research and Innovation (ICATMRI-2020), Pankaj Laddhad Institute of Technology and Management Studies, Buldhana, Maharashtra, India, 30 Dec, 2020.

- 21. Ashish A Mulajkar and Govind Singh Patel, "TCMP and chipper router design for low power efficient NOC design", IEEE International conf. on computer communication and informatics 2021, Sri Shakthi Institute of Engineering and Technology, Coimbatore, 27-29 Jan 2021.
- 22. Sandeep Shelke and Govind Singh Patel, "Study of improved median filtering using adoptive window architecture", IEEE International conf. on computer communication and informatics 2021, Sri Shakthi Institute of Engineering and Technology, Coimbatore, 27-29 Jan 2021.

# [D] National Conference:

- 1. Govind Singh patel & Sumit Gangoly,"RF Modern Robotics Car", National Conference on Application specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-44-47, Feb. 2009.
- 2. Govind Singh patel ,"Formation of recognizable regions using multiple Robots through merging occupancy of grid maps ", National conference on Applicaion specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-48-50 Feb. 2009.
- 3. Govind Singh Patel, "Robotics an Intelligent system: an overview", National conference on Application specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-51-54, Feb. 2009.
- 4. Govind Singh patel, Amrita Rai, Sanjay Sharma, Amit Garg, "Different techniques on character Recognition", National conference on Applicaion specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-59-63, Feb. 2009.
- 5. Govind Singh patel and Amit Garg,"System Indentification using artificial neural network", National conference on Applicaion specific trends of Electronics Devices & circuits & Faridabad, page-88-90, Feb. systems, Lingayas University, 2009.
- Govind Singh patel, Pragati K & Amrita Rai,""Evaluation of process parameter of multi-gate SOI MOSFETs", National conference on Application specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-162-164, Feb. 2009.
- 7. Govind Singh patel & Amrita Rai,""Study of next generation of MOS transistors ie FINFET", National conference, Lingayas University, Faridabad, page-168-169, Feb. 2009.
- 8. Govind Singh patel & Amrita Rai,""Electronics nose detects and recognizes gases to save lives", National conference on Application specific trends of Electronics Devices & circuits & systems, Lingayas University, Faridabad, page-222-223, Feb. 2009.
- 9. Govind Singh patel and Sanjay Sharma,"Character recognition using JOOONE", National Conference on Soft Computing & Artificial Intelligent, Lingayas University, Faridabad, page-8-13, Jan. 2009.
- 10. Govind Singh patel, Dr. S.V.A.V. Prasad, Amit Garg, Amrita Rai "Global traffic control using wireless sensor and density measuring camera", National Conference on Soft Computing & Artificial Intelligent, Lingayas University, Faridabad, page-18-21, Jan. 2009.
- 11. Govind Singh patel & Amrita Rai, Dr. S.V.A.V. Prasad Amit Garg,"Robotics- an intelligent system controlled by ANN", National Conference on Soft Computing & Artificial Intelligent, Lingayas University, Faridabad, page-237-240, Jan. 2009.
- 12. Govind Singh patel,"Intelligent Robots control by ANN", National Conference on Emerging trends in industrial automation, APEEJAY, Gurgaon, page-11-14, Sept. 2008.

- 13. Govind Singh patel, "Pattern recognition by ANN", National Conference on Emerging trends in industrial automation, APEEJAY, Gurgaon, page-15-18, Sept. 2008.
- 14. Govind Singh patel & Amrita Rai,""Analysis and Evaluation of Some perspectives on image compression techniques", National Conference on technological Innovations, BRCM, Bahal, Oct. 2008.
- 15. Govind Singh Patel, R Madan & Dr. Sanjay Sharma, "Simulation Technique for reducing Noise & Timing Jitter in Phase Locked Loop", NCPSEM(National conf. on Emerging Trends in Power System & Energy Management), 22nd & 23rd Feb. 2010. pp-315-319.
- 16. Govind Singh Patel & Dr. Sanjay Sharma, "Analysis and measurement of spurious emission and phase noise performance of RF", NCPSEM(National conf. on Emerging Trends in Power System & Energy Management), 22nd & 23rd Feb. 2010, pp-294-295.
- Govind Singh Patel & Dr. Sanjay Sharma, "Study of spark current in charge pump of Phase Locked Loop", NCPSEM(National conf. on Emerging Trends in Power System & Energy Management), 22nd & 23rd Feb. 2010, pp-87-91.
- 18. Govind singh patel & Sanjay Sharma, "High-Performance Oscillator Phase Lock Loop ", National conf. on VLSI, ITM, Gwalior, Dec. 2011.
- 19. Govind singh patel & Sanjay Sharma, "A Novel ROM Compressed DDFS for Wireless Communication System, ",National conf. on VLSI, ITM, Gwalior, Dec. 2011.

#### PERSONAL INFORMATION:

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Nationality: Indian

DL: MP49R-2021-0032340

Date : 28/09/2021

Place : Yadrav

Dr. Govind Singh Patel