Dr. DEEPAK CHATRABHUJ KARIA

Associate Professor and Head of Electronics Department,
Sardar Patel Institute of Technology

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S.No	Degree	Institute	Year of passing	Class/CGPI/percentage
1.	PhD (Electronics)	V.J.T.I., Mumbai University	May 2012	---
2.	M.E.(Electronics)	Sardar Patel College of Engineering/ Mumbai University	2008	70.2 %
3.	B.E. (EXTC)	Mumbai University	2001	66.67%

- **Date of joining the present institute: 11th July 2006**

- **Date of joining the present department: 27-07-2013**

- **Teaching experience in totality:** 21 years

- **Academic merit record and achievements:** *(only in graduation and post-graduation years)*

   1. Topper in B.E. EXTC in 2001.
   2. Topper in M.E. Electronics in 2008.

- **Awards:**

Able to secure a position amongst the 253 participants declared as top performers (SAP Award of excellence of Rs: 5000/-) of IITBombayX Use of ICT in Education for Online and Blended Learning course conducted by IITB from May-July 2016. A total of 2180 participants out of approximately 4051 participants were found to be eligible for certificate and 253 participants were found to be eligible for SAP Award of excellence.

- **Membership of professional bodies:**

   1. Life Member of Institution of Electronics and Telecommunication Engineers (**IETE**).
   2. Life Member of Indian Society of Technical Education **(ISTE)**.

- **Domain expertise and areas of interest:**
   - Communication

- Networking

■ **Workshops/Refresher courses/Training programs/Seminars attended:**

1. Two days Workshop on **"Wireless Networking"** organized by I.I.T, Mumbai, March 2004.

2. Two days seminar on **"Challenges Ahead in Telecommunication",** organized by D.J.S.C.E, Mumbai, October 2005.

3. Two weeks S.T.T.P on **"Wireless Technologies and Networking",** organized by D.J.S.C.E, Mumbai, October 2005.

4. One day Course on **"Matlab and its Applications"** Conducted by SPIT, Mumbai, 2006.

5. One week S.T.T.P on **"Electromagnetic Spectrum and its Applications"**, conducted by SPIT, Mumbai, 2009.

6. One week S.T.T.P on **"Emerging Areas of Signal Processing and Communication"**, conducted by Watumull, Mumbai, 2010.

7. Two week ISTE Workshop on **"Research Methodology"**, conducted by **I.I.T.B. and ICT (MHRD).,** Mumbai, July 2012.

8. One Week NBA workshop on **"Outcome Based Accreditation for Stakeholders"**, conducted NBA in association with NMIMS , Mumbai, Feb-2014.

9. Two week ISTE Workshop on **"Communication Networking"**, conducted by **I.I.T.B. and ICT (MHRD).,** Mumbai, July 2014.

10. One Week ISTE approved STTP on " **Microwave Antennas for Wireless Communication**", conducted by SPIT, Mumbai, Nov-2015.

11. Four weeks workshop on **Use of ICT in Education for Online and Blended Learning course** conducted by IITB from May-July 2016.

12. Four weeks CDEEP on-line graded course on **Financial Literacy** conducted by IITB, 2017- 18.

13. AICTE Sponsored Two Weeks FDP on

    "**Consumer Electronic Product Design, Testing, Reliability and Patenting",** conducted by Electronics Department, S.P.I.T., Mumbai, (1st July 2019 to 13th July 2019)

14. One Week Online Technical Training Program on **Cyber Security,** conducted by IETE, September 2020.

15. AICTE Sponsored One week Online FDP on **Biomedical Engineering Systems and Technologies,** conducted by SPIT, Mumbai.

■ **Workshops/Refresher courses/Training programs/Seminars conducted as a resource person:**

1. A two days seminar on "**LASERS AND ITS APPLICATIONS"** sponsored by B.A.R.C., for Shah and Anchor Kutchhi Engineering College, Mumbai, May 2006.

2. A five days training program on **"Cisco Certified Network Associate"** for students of Sardar Patel Institute of Technology, Mumbai, 2008.

3. A four days training program on **"Mobile Repairing"** for students of Sardar Patel Institute of Technology, Mumbai, Feb 2009 & Sept2010.

4. A four days training program on **"Mobile Repairing"** for students of Sardar Patel Institute of Technology, Mumbai, Sept2010.

5. One Day Training program on "WLAN **and its Security**" for students of PGDMIT, NITIE, Powai, 2013 and 2014.

6. Guest Lectures on "Communication Networks", SPCE, Electrical Department, January- April 2016.

7. Resource Person for One week ISTE-S.T.T.P on "Networking and Cyber Security with hands-on labs", SPIT, July 2015.

8. Invited expert for talk on Communication Networks at Sardar Patel College of Engg., Mumbai on 6th February 2017 for BE students.

9. Invited Speaker for Workshop on Wireless & Communication Networking at Atharva College of Engineering., Mumbai on 23rd August 2017 for TE and BE students.

10. Invited Speaker for Workshop on Wireless & Communication Networking at **VIT**., Mumbai on 18th January 2019 for TE and BE students.

11. Speaker for STTP on Recent Trends in Wireless Networks, organized by DJSCE, November 2018.

12. Speaker for Research Methodology Course for PhD Research candidates, S.P.I.T., AY2018-2021.

13. Program Evaluation Committee Member for Virtual Online 06 STTP's and FDP's, ETRX Department, October- December2020.

14. Research Methodology Coursework for PhD Research candidates, S.P.I.T.

15. Activity Based Learning courses for Third Year S.P.I.T. students on Review process of International Journals and conferences.

▪ **Patents:**

1. **Patent Name :SYSTEM AND METHOD FOR DETECTION AND DETERRENCE OF INTRUSION,** Inventor : Trivedi Jay, Vartak Mugdha, Tripathi Aditi, Karia Deepak,Application No. 4487/MUM/2015, Date of filing of Application : 30/11/2015, **Publication Date : 02/06/2017.**

2. **Patent Title : SYSTEMS AND METHODS FOR TRANSMITTING AND RECEIVING AUDIO DATA USING LIGHT ,** Inventor : More Devashish, Khandkar Divya, Kumar Tushar,

Bansode Manisha, Karia Deepak, Application No. 201921023087, Date of filing of Application : 11/06/2019, **Publication Date : 19/07/2019**

- **Publications:**

International Conferences

S.No	Publisher	Title of International conference	Title of paper/article/poster presentation	Schedule and venue of conference
1.	IEEE	3rd International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV 2021)"	E spam mail classification via Machine Learning and Natural Language Processing	4th-6th February 2021
2.	IEEE	Proceedings of the International Conference on Computing Communication and Automation	Reducing Overfitting in Diabetic Retinopathy Detection using Transfer Learning	30th October 2020
3.	IEEE	Proceedings of the International Conference on Engineering in 4th Industrial Revolution (EI4.0)	Medicine Delivering Smart Autonomous Vehicle	12th September 2020
4.	IEEE	Proceedings of the the International Conference on Convergence to Digital World-Quo Vadis (ICCDW)	Low Isolation Based Dual Band MIMO Antenna for WiMAX and X-band Applications	18th February 2020
5.	IEEE	Proceedings of the the 2nd IEEE International Conference on Intelligent Sustainable Systems [ICISS 2019]	Low Isolation Based Dual Band MIMO Antenna for WiMAX and X-band Applications	India, February 21-22, 2019
6.	IEEE	Proceedings of the 3rd International Conference on Communication and Electronics Systems, ICCES 2018	Prediction of Sudden Cardiac Death using Classification and Regression Tree Model with Coalesced based ECG and Clinical Data	India, DOI:10.1109/CESYS.2018.8723979
7.	IEEE	Proceedings of the 3rd International Conference on Communication and Electronics Systems,	AI Use Cases in Operational Support System and Business Support System	India, DOI:10.1109/CESYS.2018.8724092

			ICCES 2018		
8.	IEEE	Proceedings of 2018 International Conference on Computing, Communication and Networking Technologies, ICCCNT 2018	Comparative Study of Roger and FR-4 Based Circularly Polarized Microstrip Patch Antenna with Injecting a Single Set of Shorting Pins ,	India, DOI:10.1109/ICC CNT.2018.849411 6	
9.	IEEE	Proceedings of the International Conference on Inventive Communication and Computational Technologies	Design of Circularly Polarized Microstrip Patch Antenna with Inserting of Shorting Pin	India, DOI:10.1109/ICIC CT.2018.8472983	
10.	IEEE	Proceedings of the International Conference on Inventive Communication and Computational Technologies, ICICCT 2018	Cloud Based Smart Parking System	India, DOI: 10.1109/ICI CCT.2018.847308 4	
11.	IEEE	International Conference on Energy, Communication, Data Analytics and Soft Computing	Design and development of farm automation system using NI myRIO	India, DOI:10.1109/ICE CDS.2017.838953 7	
12.	IEEE	International Conference on Energy, Communication Data Analytics and Soft Computing, ICECDS 2017	Agriculture monitoring system AMS	India, DOI:10.1109/ICE CDS.2017.838953 5	
13.	IEEE	International Conference on Intelligent Computing and Control	Network recovery using IP fast rerouting for multi-link failures	India, 2017	
14.	IEEE	2nd International Conference for Convergence in Technology (I2CT)	High Gain Ultra Wide band MIMO Antenna	Mumbai, India, DOI: 10.1109/I2C T.2017.8226224	
15.	IEEE	International Conference on Communication and Signal Processing	LabVIEW Based Real Time Bio-Telemetry System for Healthcare	April 6-8, 2017, India, DOI: 10.1109/ICC	

				SP.2017.8286788
16.	IEEE	International Conference on Inventive Systems and Control (ICISC-Jan2017)	Certificate Pinning for Android Applications	Coimbatore, India, DOI: 10.1109/ICISC.2017.8068748
17.	IEEE	IEEE WiSPNET 2017 conference	Tunable Microstrip Antenna using Reactive Impedance Surface	Chennai, India, DOI: 10.1109/WiSPNET.2017.8299932
18.	IEEE	International Conference on Global Trends in Signal Processing, Information Computing and Communication	Design of Apollonian Gasket Bow Tie Antenna for Satellite Application	Jalgaon, India, DOI:10.1109/ICGTSPICC.2016.7955314
19.	IEEE	International Conference on Global Trends in Signal Processing, Information Computing and Communication	MMC: Multiple metric cost routing metric for wireless mesh networks	Jalgaon, India, DOI:10.1109/ICGTSPICC.2016.7955314
20.	IEEE	International Conference on Global Trends in Signal Processing, Information Computing and Communication	MMC: Multiple Metric Cost Routing Metric for Wireless Mesh Networks	Dec 2016, Jalgaon
21.	IEEE	International Conference on Global Trends in Signal Processing, Information Computing and Communication	Design of Apollonian Gasket Bow Tie Antenna for Satellite Application	Dec 206, Jalgaon
22.	IEEE	International Conference on Recent Trends in Electronics, Information & Communication Technology	Multiband Circular Bow Tie Antenna Design using Apollonian Gasket of Fractals	September 2016
23.	IEEE	Computer and Communication Network (CoCoNet)	A 1*2 array circularly polarised Microstrip antenna with a high gain for RFID applications	Kerala, Dec 2015
24.	IEEE	Next Generation Computing Technologies (NGCT)	A compact wideband antenna for wireless applications using rectangular ring	Dehradun, Sept2015
25.	IEEE	Next Generation Computing Technologies (NGCT)	A mapping-based model for preventing Cross site scripting and sql injection attacks on web application and its impact analysis	Dehradun, Sept2015
26.	IEEE	IEEE Bombay Section Symposium (IBSS)	Impact Analysis of Preventing Cross Site Scripting and SQL Injection	Mumbai, Sept2015

			Attacks on Web Application	
27.	IEEE	Advances in Computing, Communications and Informatics (ICACCI)	A high gain 2-element Microstrip array antenna with Circular Polarisation for RFID Applications	Kochi, August 2015
28.	IEEE	Nascent Technologies in the Engineering Field (ICNTE), 2015	Performance measurement of WEP and WPA2 on WLAN using OpenVPN Authors	Vashi, New-Mumbai, India, 2015.
29.	IEEE	Nascent Technologies in the Engineering Field (ICNTE), 2015	A 5.8 GHz ISM band microstrip antenna for RFID applications	Vashi, New-Mumbai, India, 2015.
30.	Springer	Recent cognizance in wireless communication & image processing	Multiband and Wideband Antenna for Wi-Fi, WLAN, X-Band and Space Research Applications	16-17 January 2015, Jaipur ,India
31.	IEEE	Advances in Computing, Communications and Informatics (ICACCI, 2014)	Wideband printed dipole antenna with embedded loops and coupling patches for digital TV signal reception	Noida, India, September 2014.
32.	IEEE	Advances in Communication and Computing Technologies (ICACACT)	Patch antenna for communication devices	Mumbai, Aug-2014
33.	IEEE	Advances in Communication and Computing Technologies (ICACACT)	Planar Dipole Antenna Design for DTV Broadcasting Application	Mumbai, August 2014
34.	IEEE	*Machine Intelligence Research and Advancement*	Review of Routing Metrics for Wireless Mesh Network	Jammu, India Dec 2013

35.	IEEE	*Energy Efficient Technologies for Sustainability*	Wireless Based Load Control and Power Monitoring System	Tamil Nadu, India April 2013
36.	IEEE	*Signal Processing, Communication, Computing and Networking Technologies*	Interference Mitigation In Multiuser OFDM Systems Using Network MIMO	Kanyakumari, India, July 2011
37.	IEEE	*Signal Processing, Communication, Computing and Networking Technologies*	Optimization of Power Control Algorithms for Mobile Cellular Networks	Kanyakumari, India, July 2011
38.	IEEE	*Signal Processing, Communication, Computing and Networking Technologies*	Game Theory Based Spectrum Load Balancing in Cognitive Radio	Kanyakumari, India, July 2011
39.	IEEE	*Signal Processing, Communication, Computing and Networking Technologies*	Embedded Web Server Application Based. Automation and Monitoring System	Kanyakumari, India, July 2011
40.	IEEE	*Electronics Computer Technology*	Cooperation based multihop relaying for IEEE 802.16	India, 2011
41.	IEEE	*Intelligent Systems, Modelling and Simulation*	Radio Channel Characterization for IEEE 802.11	Liverpool, United Kingdom, Jan 2010
42.	IET	*Next Generation Networks*	Modeling of Indoor Radio Propagation Channel for IEEE 802.11b/g	India, 2010
43.	IEEE	*Mathematical/Analytical Modeling and Computer Simulation*	Statistical Tuning of Walfisch-Ikegami Model in Urban and Suburban Environments	Malaysia, May 2010
44.	IEEE	European Modeling symposium	A QoS Provisioning for Real and Non Real Traffic Over WLAN Using Connection Admission Policy	Liverpool, United Kingdom, Jan 2008
45.	IEEE	SPIT-IEEE Colloquium	Performance Analysis using Call Threshold CAC Scheme for MANET in Wireless MAN	India, 2008

 *List of Paper(s) accepted in AY 2021-2022 and to be published:

1.   Siddhant Kamlaskar, Param Mehta, Dr. Deepak Karia, Prof. Najib Ghatte, "Automatic Room Sanitization using UV-C Tubes" in Proceedings of 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON), Pune, India. Oct 29-30, 2021 pp. 1-5.

2.	Gaurav Patil, Harshada Patil, Sanika Sankhe, Deepak Karia, Najib Ghatte, "Thermal Sensing Alert System", proceedings of The 3rd IEEE Bombay Section Signature Conference (IBSSC-2021) Gwalior , India, Nov 18-20, 2021.

3.	Netra Trivedi, Isha Naik, Navya Fadia, Najib Ghatte, Deepak Karia, "Universal Remote using EMG based Gesture Recognition", proceedings of The 3rd IEEE Bombay Section Signature Conference (IBSSC-2021) Gwalior , India, Nov 18-20, 2021.

4.	Archis Gune, Vivek Kumar Mandal, Ayush Asawa, Vivek Shetty, Deepak Karia, "Threat Assessment Industrial Robot", proceedings of the 2021 International Conference on Assessment Industrial Robot", proceedings of the 2021 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT) Karnataka, India, 27-28 August 2021.

- **Details of Chapters contributed to edited knowledge based volumes published by International Publishers:**

S.No	Publisher	Title of Book	Title of Book Chapter	Schedule and venue of conference
1.	Springer Nature	Signal Innovative Data Communication Technologies and Application	Smart Medicine Distributing Tray	17th October 2019, India
2.	Springer Nature	Signal Innovative Data Communication Technologies and Application	Reliable Machine to Machine Communication Using MQTT Protocol and Mean Stack	17th October 2019, India
3.	Springer	Signal Processing and Intelligent Recognition Systems	Inbuilt Multiband Microstrip Antenna for Portable Devices	Trivandrum, India, 13-14 March 2014
4.	Springer	Security in Computer Networks and Distributed Systems	Clustering Based Routing Strategies for Energy Management in Ad-hoc Networks	Trivandrum, India, 13-14 March 2014
5.	Springer	Security in Computer Networks and Distributed Systems	MM-SOAR: Modified SOAR Protocol Using Multiple Metrics for Wireless Mesh Network	Trivandrum, India, 13-14 March 2014
6.	Springer	Security in Computing and Communications	Privacy Issues in Single and Multi–hop Wireless Mesh Network	Mysore, India, August 2013
7.	Springer	Energy efficient wireless communications and networking	Performance Analysis of ZigBee based on Load Control and Power Monitoring System	Mysore, India, August 2013

▪ Details of National and International Journal publications:

S.No	Title of Journal	Title of paper	authors
1.	Engineering Reports, Wiley publications, https://doi.org/10.1002/eng2.12251	A metamaterial-inspired circularly polarized antenna for implantable applications	S.Goswami, D..C.Karia
2.	International Journal of Electronics and Communications, Elsevier journal of Electronics and communication, *2017 - Vol. 72, pp.33-39*	A compact monopole antenna for wireless applications with enhanced bandwidth	S.Goswami, D..C.Karia
3.	*International Journal of Wireless Mobile Computing, Inderscience Publishing House,* England, *2012 - Vol. 5, No.2 pp. 161 - 167*	QoS Provisioning in Cellular Networks Using Environment Based Interference Alleviation Model	D.C.Karia, B.K.Lande and R.D.Daruwala
4.	*International Journal of Intelligent Engineering Informatics, Inderscience Publishing House,* England, *2011 - Vol. 1, No.3/4 pp. 246 - 260*	Back Propagation Neural Network Based Energy Efficient Routing Protocols for Mobile Ad-hoc Networks	D.C.Karia, B.K.Lande and R.D.Daruwala
5.	*International Journal of Intelligent Engineering Informatics, Inderscience Publishing House,* England, *2013 - Vol. 2, No.1 pp. 21 - 29*	Improving Spectral Efficiency in Cooperative Cellular Networks Via Convex Optimization	D.C.Karia, B.K.Lande and R.D.Daruwala
6.	*International Journal of Ad-hoc Ubiquitous Computing, Inderscience Publishing House,* England, *2012 - Vol. 11, No.4 pp. 206 - 213*	Performance Analysis of HMM and ANN based Spectrum Vacancy Predictor Behaviour for Cognitive Radios	D.C.Karia, B.K.Lande and R.D.Daruwala
7.	*International Journal of Intelligent Engineering Informatics, Inderscience Publishing House,* England, *2013 - Vol. 2, No.1 pp. 30 - 46*	Mobility Models and Traffic Pattern Generation Based Optimization of Reactive Protocols (In Press)	V. Godbole, D.C.Karia
8.	*International Journal of Ultra Wideband Communications and Systems, Inderscience Publishing House,* England, *2012 - Vol. 2, No.3 pp. 133 - 140*	Genetic Algorithm-Based Energy-Efficient Protocol For Wireless Sensor Networks (In Press)	V. Godbole, D.C.Karia
9.	*IET journal of Networks, England,2013, Volume:2 , Issue 3, pp.171-180*	A New Approach For Routing In Mobile Ad-Hoc Networks Based On Ant Colony Optimization With GPS	V. Godbole, D.C.Karia
10.	*International Journal of*	Dynamic Clustering Scheme for	P. Joshi, D.C.Karia, P.

	Communication Networks and Distributed Systems, Inderscience Publishing House, England, *2014 - Vol. 12, No.3 2, pp. 1*69-182	Distributed Spectrum Sensing in Cognitive Radio Networks	Rawat and M.Thakur
11.	*International Journal on Advanced Computer Theory and Engineering*	Wireless Electronic Notice Board	A. Gaikwad, T. Kapadia, M. Lakhani, D.C.Karia
12.	*International Journal of Swarm Intelligence, Inderscience Publishing House,* England, *2015 – Vol.1, Issue 4, pp. 299-320.*	ACO based Biology Inspired Routing Protocol for Ad-hoc Networks	V. Godbole, D.C.Karia

*List of Paper(s) accepted in AY 2021-2022 and to be published:

Sr. No	Title of Journal	Title of paper	authors
1.	Progress in Electromagnetics Research (PIER, PIER B,C,M, PIER Letters)-PIER, USA(Accepted)	An Metamaterial Inspired Antenna With CSRR And Rectangular SRR Based Flexible Antenna With Jeans Gap Filled For Wireless Body Area Network	S.Goswami, D.C.Karia

▪ **Funded Major/Minor Projects:**
1. AICTE fund of Rs. 1,41,176 Lac/ -under MODROB to purchase DSP Boards.
2. Dr. Rahul D., Dr. Deepak C.Karia and Mr. Rohit S., " Medicine Delivering Smart Autonomous Vehicle", Minor Research Proposal Grant of Rs: 15,000/- under TEQIP-III, November 2021 SPCE, Mumbai- 58.
3. Dr. Rahul D., Dr. Deepak C.Karia and Mr. Rahul Khandare, " Metamaterial based Dual band MIMO antenna with high isolation", Minor Research Proposal Grant of Rs: 50,000/- under TEQIP-III, November 2019 SPCE, Mumbai-58.
4. Dr.Deepak C.Karia, "Internal UWB Planar Microstrip Patch Antenna for portable devices ", Minor Research Proposal Grant of Rs: 25,000/- , UoM, AY 2013-14 Mumbai.

▪ **Contribution to and role played in the administrative affairs of the institute:**

1. Head of Electronics Engineering Department, SPIT, Since September 2019.

2. IQAC Member and NAAC Criteria 2 Institute level coordinator 2017-August 2019

3. Controller of examination section, SPIT, from May 2014-May 2016.

4. Program Coordinator, ETRX Department, SPIT, since Feb-2014.

5. Chief Coordinator of MH-DTE-MCA Counseling Round-III for the academic years 2010-11, 2011-12, 2012-13 and 2013-14.

6. In-Charge of Institute Level F.E. Admission Rounds for the academic years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14.

7. Faculty In-Charge SPIT, IETE and ISF Students' forum from 2008-2013.

8. Member of college level Student Welfare committee since January 2012.

9. FE Admissions: Website/Meet link arrangement, authentication and verification of the entry of each eligible candidate forFirst Year Admission to S.P.I.T.
10. Curriculum: Syllabus Setting (SE, TE and BE courses as per revised scheme)
11. Juno: Active participation in SoPs for OBE module

- **Outside SPIT Connect:**

1.External Examiner for Final Year Projects at other colleges such as RGIT, SFIT. 2.Academic Auditor at VIT.

2. SP-TBI's Prayas – Faculty Monitoring and Mentoring Committee.

- **Other Contributions:**

  Invited Reviewer for IEEE Transactions on Wireless Communications, IEEE Journal on Vehicular Technology, IET Journals of Sensor Systems & Networks, IEEE Communication