



## National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

	Calicut		distinction	
B.E.	Anna University	2010	1 <sup>st</sup> with distinction	ECE

### 9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Member	Library Advisory Council, NITT	2020	
Faculty Advisor	Taskforce	2021	
Convener	ECE BTech Project Evaluation Committee	Jan-July 2021 and 2022	

### 10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2019	Samsung Citizen Award	Samsung R and D
2021	Best Performing Faculty	NITT
2020	Best Paper Award CICT 2020	IITDM Kancheepuram
2007	Best Science Student Award	Pondicherry Govt

### 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

### 13. Details of Academic Work

Course Taught:

UG: Computer Networks and Protocols, Signals and Systems, Speech Processing, Wireless Local Area Network, Semiconductor Devices and Physics, DSP Lab

PG:Cognitive Radio

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PG projects:

1. Implementation of image enhancement algorithm Retinex on FPGA, Rakesh Kumar, 2020-2021

2. FPGA Implementation of advanced encryption standard, 2020-2021, Rathod Venkatesh

3. VLSI IMPLEMENTATION OF VEHICLE NUMBER PLATE RECOGNITION USING DEEP LEARNING, Arghya P Saikia, 2021-2022

4. Analytical Analysis of SIMO Wireless Communication systems using IRS, Guntha Sai Kumar, 2021-2022

5. Coverage Analysis of HAPS network using Poisson Point Process for generalized  $\kappa$ - $\mu$  shadowed fading, M.V. Vinod, 2021-2022

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Analysis of aerial intelligent reflecting surfaces in 6G wireless systems	Shastri Indo Canadian Institute	Nov 2020	Nov 2022	Ongoing

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

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### 17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

### 18. Invited Talks delivered

1. "Stochastic Geometry Analysis of SG Networks", CIT, March 19,2021
2. "AI/ML in 5G Communication Technology", RAIT Pune, June 21, 2021.
3. "Applications of Machine Learning in 5G/6G Communications", NIT Andhra Pradesh, December 16,2021
4. "Enabling Technologies for 5G and Beyond 5G Wireless Communication Systems", NIT Trichy, April 19, 2021
5. "Artificial Intelligence and 5G Communication Technology", Poornima College of Engineering, Jaipur, April 28,2021
6. "Ethics in Research" , FDP, NIT Trichy, June 16, 2021
7. "From 1G to 6G. Where we were, are and heading to ?", Amrita College of Engineering, Chennai, July 12,2021.
8. "Application of Stochastic Geometry for 5G Network", FDP on Signal Processing for 5G, IIT Goa, August 11, 2021
9. "Scope of Machine Learning in Wireless Communication", MDCWC 2021, Srilanka, Aug 12, 2021
10. "Application of Machine Learning in Wireless", SSN Chennai

### 19. Membership of Learned Societies

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Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

J1. ``Coverage analysis of intelligent reflecting surface systems in Rayleigh fading'', Dahlia, \textbf{Sudharsan} , C.Tellambura, IET Electronic Letters, vol. 58, No.2, Jan 2022, pp.86-88.

J2. ``Interference prediction in partially loaded cellular networks using asymmetric cost functions'',\textbf{Sudharsan P},SaiShanker,S.Kalyani,R.K.Ganti,\textbf{IEEE Comm. Letters},June 2018.

J3. ``Error vector magnitude analysis in generalized fading with co-channel interference'', \textbf{Sudharsan P},S.Kumar,R.K.Ganti,S.Kalyani,K.Giridhar,\textbf{IEEE Trans. on Comm.},Jan 2018.

J4. ``Coverage probability in downlink Poisson cellular network with  $\kappa$ - $\mu$  shadowed fading'',\textbf{Sudharsan P},R.K.Ganti,\textbf{IEEE Wireless Comm. Letters},vol.6,no.1,Feb 2017

(B) Conferences/Workshops/Symposia Proceedings

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C1. Guntha Sai Kumar, R. Dahlia Devapriya, Sudharsan P, ``Analysis of intelligent reflecting surfaces in SIMO wireless communication systems", ICSDP 2022, VIT Bhopal, June 10-11, 2022.

C2. Sudharsan, R K Ganti, "Power and rate adaptation in the presence of Bernoulli-Gaussian modeled impulsive interference," IEEE CICT 2020, IITDM Kancheepuram, \textbf{Best Paper Award.}

C3. Sudharsan et al., "Analysis of downlink NOMA in full duplex-half duplex mixed cell PPP system with interference," 2020 IEEE ANTS IIT Delhi

C4. ``Impact of shadowing in D2D communication", \textbf{Sudharsan P}, R.K.Ganti, \textbf{IEEE Wireless Communication Networking Conference, San Francisco, March 2017.}.

C5. ``An Automated Multi Scale Retinex with Color Restoration for Image Enhancement", \textbf{Sudharsan P}, P. Sankaran, \textbf{National Conference on Communications, 2012, IIT Kharagpur}.

C6. ``A RETINEX based Haze removal method", \textbf{Sudharsan P}, P. Sankaran, \textbf{International Conference on Industrial and Information Systems, August 2012, IIT Madras. }

C7. ``Fusion based multi scale RETINEX with color restoration for image enhancement", \textbf{Sudharsan P}, P. Sankaran, International Conference on Computer Communication and Informatics, 2012.

C8. ``Application of quad tree for low bit rate compression", K. Varma, \textbf{Sudharsan P}, P. Sankaran, 2nd National Conference on Computational Intelligence and Signal Processing, 2012.

### (C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number

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