

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

Curriculum Vitae

1. Name: **B.REBEKKA**
2. Designation: Associate Professor
3. Office Address: Department of ECE
4. Telephone (Direct) (Optional):0431-2503316
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(Optional):
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5. Email (Primary):**rebekka@nitt.edu**

Email (Secondary)
:b.rebekka@gmail.com

6. Field(s) of Specialization:
Wireless communication and networks

7. Employment Profile

Job Title	Employer	From	To
Associate Professor	National Institute of Technology, Tiruchirappalli, Tamil Nadu.	21.09.2022	Till Date
Assistant Professor(Grade I)	National Institute of Technology, Tiruchirappalli Tamil Nadu.	March 2018	20.09.2022
Assistant Professor	National Institute of Technology, Tiruchirappalli, Tamil Nadu	01.05.2006	February 2018
Lecturer	Karunya Institute of Technology, Coimbatore.	10.06.2005	12.04.2006

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	National Institute of Technology, Tiruchirappalli	17.03.2017		Investigations on Radio Resource allocation schemes for LTE network

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M.Tech.	SASTRA University	2005	First class	Electronics and Communication Engineering
B.E	Bharathiar University	2003	First class with Distinction	Advanced Communication Systems
12 th	Sri Vijay Vidhyalaya Girls Matriculation Higher Secondary school, Dharmapuri	1999	87.50	
10 th	Avvaiyar Government Girls Higher Secondary School, Dharmapuri	1997	91.60	

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Core committee Member	Centre of Excellence in Emergency Response Support System	June 2022	Till Date
Lab in Charge	Wireless Communication Networks Research Laboratory	2018	Till Date
Core Committee Member	Emergency Response Support System	July 2022	Till Date
Coordianator Academic Audit	UG Courses	July 2021	June 2022
Hospital advisory Committee Member	NITT Hospital	December 2020	Till Date
PAC	ECE II year	Jan 2021 Jan 2022 Jan 2023	
PAC	PG Communication systems	Jan 2019 Jan 2020	
Faculty Advisor	ECE Association	February 2014	June 2018
Committee member	PG (Communication systems) Project evaluation committee	June 2016	May 2022
Committee member	BOS department level UG committee member	May 2017	May 2020
Committee member	Department level convocation work	June 2014	Till date
Committee member	Institute day Institutional level committee member (Stage and Hall	2008	2012

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	arrangements)		
Committee member	Physical stock verification	2016	
Lab In charge	Digital laboratory	July 2012	May 2015
Class coordinator	ECE VII semester	July 2012	Till date
Class coordinator	ECE V-Semester	July 2017	Till date
Coordination Committee	Finishing School	May 2007	June 2008

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Doctoral Committee member	Karunya University, Coimbatore VIT, Vellore Anna University, Tiruchirappalli	July 2018	Till Date

11. Details of Academic Work

(i) Curriculum Development

1. Involved in procuring equipments for developing Electronic circuits laboratory
2. Involved in revising the syllabus for Networks and Protocols Course
3. Involved in revising the syllabus for Communication switching systems course
4. Involved in the Curriculum Development of Next Generation Wireless Network

(ii) Courses taught at Postgraduate and Undergraduate levels

Under Graduate and Post Graduate levels:

1. Networks and Protocols
2. Wireless Communication
3. Principles of Communication Engineering.
4. Analog Communication
5. Communication Switching Systems
6. Branch Specific Course (ECE)
7. Energy and Environmental Engineering
8. Designing with ASICs
9. Electronic Circuits laboratory
10. Microwave Laboratory
11. Devices and Networks Lab
12. Microprocessors and Microcontrollers lab

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13. Communication Engineering Laboratory
14. High Speed Communication Networks

(iii) Projects guided at Postgraduate level

Year	Number of students Guided
2006-2022	M.Tech – 42
2006-2022	B.Tech -25

12. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Identity Management in Distributed NFV Marketplace Using Blockchain Technology Sponsoring Agency Role : Co-Investigator	INTEL, Ireland	October 2018	May 2019	Completed

13. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Mr. N.Deepan	A Unified Performance Evaluation Framework for Wireless Powered Communication Networks over Generalized Fading Channels	Supervisor	March 2022
Mrs. Janani Natarajan	Investigations on Strategic Small Cell Sleep Control Mechanisms for Energy Efficiency Enhancement in 5G Heterogeneous Cellular Networks	Supervisor	February 2022

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

Title of Activity (Short Term Course)	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
The International Conference on	International	09.01.2023- 11.01.2023	Technical Chair	NIT, Trichy

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Intelligent Solutions for Emergency Support and Disaster Management				
Artificial Intelligence Techniques for Antenna Design and Wireless Communication	National	12.04.2021 To 16.09.2021	Coordinator	NIT, Trichy
Machine Learning, Deep Learning and Computational Intelligence for Wireless Communications	National	16.09.2019 To 20.09.2019	Coordinator	NIT, Trichy
Modern Techniques for Wireless Communication Networks and Signal Processing	National	19.08.2019 To 23.08.2019	Coordinator	NIT, Trichy
Analog and Digital Communication Techniques	National	08.11.2017- 12.11.2017-	Coordinator	NIT, Trichy
Evolution of Mobile Communication	National	15.11.2017- 19.11.2017	Coordinator	NIT, Trichy
Computer Networks and Protocols	National	04.12.2017- 08.12.2017	Coordinator	NIT, Trichy

15. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Year
Janani Natarajan, B. Rebekka	Machine Learning based Small cell On/Off for Energy Efficiency in 5G Heterogeneous Networks	Wireless personal Communications, Springer	March 2023
Janani Natarajan, B. Rebekka	An Energy Efficient Dynamic Small cell On/Off switching with Enhanced k-means algorithm for 5G Hetnets	International Journal of Communication Networks and Distributed systems, Inderscience	Jan 2023
Jeevanantham S, Rebekka. B	Energy-aware neuro-fuzzy routing model for based-IoT	Telecommunication Systems, Springer	2022
S.Jeevanantham, B.Rebekka	Hierarchical stable election protocol for WSN-based IoT inhabitant and environmental monitoring applications	International Journal of Communication Systems, Wiley	July 2022
Janani Natarajan, B. Rebekka	Stochastic Geometry Analysis of Coverage Probability in Energy Efficient Dense Heterogeneous Network with Sleep Control	Physical Communication, Elsevier	June 2022

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	Mechanism		
Janani Natarajan, B. Rebekka Issac	An Energy Efficient Dynamic Small Cell On/Off Switching with Enhanced k-means Clustering Algorithm for 5G Hetnet	International Journal of Communication Networks and Distributed Systems, Inderscience Publishers	2023
Janani Natarajan, Rebekka B	Cell throughput contribution rate based sleep control algorithm for energy efficiency in 5G heterogeneous networks	International Journal of Communication Systems (IJCS), Wiley	May 2022
Deepan N., Rebekka B.,	Performance analysis of wireless powered sensor network with opportunistic scheduling over generalized $\kappa - \mu$ shadowed fading channels,	Physical Communication, Elsevier	August 2022
Deepan Nagarajan, Rebekka Balakrishnan	Error Probability and Throughput Analysis of IRS-Assisted Wireless System Over Generalized – Fading Channels	Wireless personal Communications, Springer	2021
Deepan N., Rebekka B.,	On the performance of wireless powered communication networks over generalized $\kappa - \mu$ fading channels	Physical Communication, Elsevier	2019
B.Rebekka, S.Sudheep, B.Malarkodi	Priority-based quality of service guaranteed radio resource allocation in long term evolution network	Int. J. Information and Communication Technology, Inderscience publishers	2016
B. Rebekka and B. Malarkodi	Multiple Input Multiple Output detection using roulette wheel based ant colony optimization technique	International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering, WASET	2016
B.Rebekka, S.Sudheep, B.Malarkodi	An Optimal and Priority Based Rate Guaranteed Radio Resource Allocation Scheme for LTE Downlink	Wireless Personal Communication, Springer	2015
N.Gunavathi, B.Rebekka, D. Sriram Kumar	CPW – fed 5GHZ WLAN Band Notched UWB Antenna	International Journal of Image Processing and Network Techniques	2011

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(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proce edings	Conference Theme	Venue	Year
Deepan Nagarajan, Dushantha Nalin K. Jayakody, and Rebekka Balakrishnan	Performance Analysis of UAV-enabled Backscatter Wireless Communication Network		International Conference on Mobile Computing and Networking	London	2020
Deepan N.and Rebekka B	Backscatter- assisted Wireless Powered Communication Networks with Multiple Antennas	IEEE	International Conference on Wireless Communications, Signal Processing and Networking	Tamil Nadu	2020
V. Santosh Babu, N. Deepan, and B. Rebekka	Performance Analysis of Cooperative Full Duplex NOMA system in Cognitive Radio Networks	IEEE	International Conference on Wireless Communications, Signal Processing and Networking	Tamil Nadu	2020
Satish Ganta, Rebekka B, Gunavathi N, Malarkodi B	Unique Identity Management Scheme for Distributed NFV Market Place using Ethereum	IEEE	TEQIP Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks	Tamil Nadu	2019
Pitta Vineel Anvith, N.Gunavathi, B. Malarkodi, B. Rebekka	A Survey on Network Functions Virtualization for Telecom Paradigm	IEEE	TEQIP Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless	Tamil Nadu	2019

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			Networks		
Rathina Vel S, Rebekka B, Gunavathi N, Malarkodi B	Novel NFV entities managing scheme for telecom providers using Proof of Concept Blockchain	IEEE	TEQIP Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks	Tamil Nadu	2019
N.Deepan, B.Rebekka	Outage Performance of Full duplex Cooperative NOMA with Energy harvesting over Nakagami-m fading channels	IEEE	TEQIP Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks	Tamil Nadu	2019
Arpit Banker, B.Rebekka	Efficient Optimization of Wake up delay and Power saving of Adjustable DRX Mechanism in LTE Network	IEEE	International Conference on Trends in Electronics and Informatics	Tamil Nadu	2018
Harish Reddy, B.Rebekka	Power allocation policies for QoS satisfaction in IoT using NOMA	IEEE	International Conference on Trends in Electronics and Informatics	Tamil Nadu	2018
Rebekka B, Vinay Kumar B, Malarkodi B	Radio Resource Allocation with Energy efficiency- Throughput Balancing for LTE Downlink	IEEE	International conference on Electronics and Communication Systems	Tamil Nadu	2015
Sudheep. S. Rebekka. B	Proportional Equal Throughput Scheduler- A Very Fair Scheduling approach in LTE	IEEE	International Conference on Information Communication and Embedded Systems	Chennai	2014

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	Downlink				
Rebekka. B, B.Malarkodi	Performance Evaluation of Resource Allocation Schemes in LTE Downlink	IEEE	International conference on Electronics and Communication System	Tamil Nadu	2014
Gaurav Verma, B.Rebekka, N.Gunavathi	Design of New spreading Sequences based on MC CDMA for WIMAX		International Conference on Science, Engineering and Management	Tamil Nadu	2013
N. Gunavathi, B. Rebekka, R. Pandeeswari, S. Raghavan	A Compact CPW- fed Band Notched UWB antenna		International Conference on Microwaves, Antenna, Propagation and Remote Sensing	Jodhpur	2009

I, **B. Rebekka** is currently working as Associate Professor in the Department of ECE at National Institute of Technology, Tiruchirappalli, Tamilnadu, India. I Obtained Ph.D. degree from National Institute of Technology, Tiruchirappalli in the year 2017 March in the area of Wireless Communication. I obtained the M.Tech. degree in Advanced Communication Systems from SASTRA Deemed University, Thanjavur, Tamilnadu, India in the year 2005 and B.E. degree in Electronics and Communication Engineering from Bharathiar University, Coimbatore, Tamilnadu, India in the year 2003. My research interests include Quality of Service scheduling in wireless networks and Energy efficient communication.