MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC-AUTONOMOUS)

Affiliated to JNTUA, Ananthapuramu & Approved by AICTE, New Delhi
Recognized Research Center, Accredited by NBA, NAAC for CSE, ECE, EEE, ME & MBA
World Bank Funded Institute, Recognized by UGC under the sections 2(f) and 12(B) of the UGC act1956
Recognized as Scientific & Industrial Research Organization by DSIR of DST

Department of Electronics and Communication Engineering

Faculty Achievements (Academic Year 2019- 2020)

List of Patents Published:

S.No	Name of the Patenter	Application Number	Title of the Patent	Year of award of Patent
1.	Dr. K. R. Kashwan	201941048028	Artificial Intelligence Inspired Smart Embedded system for monitoring Hand Hygiene compliance in Healthcare places	Status : Filed Date of Filing: 25/11/2019
2.	Dr. K. R. Kashwan	201941017470	Smart and Intelligent Embedded system for Brake energy Harvesting of moving vehicles for automatic Tire Inflation and Thrust Generation	Status : Published Date of Publishing: 06/11/2020

List of Funded Research Project Grants Received:

S.No	Name of the Principal Investigator	Sanctioned Letter Number with date	Funding Agency	Project Title	Duration of the Project	Total Sanctioned Amount	Status of Project
1.	Dr. Shanidul Hoque	File Number: SRG/2019/001744 dated:29.10.2019	DST Scheme-SRG	Mobility Aware Spectrum Handoff Schemes under Heterogeneous Spectrum Environment (HetSE) in Cognitive Radio (CR) Cellular Network: Modeling and Simulation	2 years	Rs.13,72,590/-	Ongoing
2.	Dr. Shanmuga Kumar M	TEQIP-II/Seed Grant/MITS/Dec 2020	Institute Funded	Agri-Hackathon-2020		Rs.39,000/-	

List of Paper Publications:

The faculties who have published paper in various International journals during the academic year 2019-2020 are listed below:

S. No.	Title of paper	Name of the author/s	Name of journal	Year of publication	ISSN number	Link of the recognition in UGC enlistment of the Journal, DOI:	Impact factor	Citations
1.	Adaptive hybrid intelligent MPPT controller to approximate effectual wind speed and optimal rotor speed of variable speed wind turbine	R. Sitharthan a, Madurakavi Karthikeyan a, D. Shanmuga Sundar b, S. Rajasekaran a	ISA Transactions	Jun-2019	0019-0578	https://doi.org/10.1016/j.isatra.2019.05.029	4.305	70
2.	Proximity-coupled two-port multi-input- multi-output graphene antenna with pattern diversity for THz applications	Gaurav V arshneya Shailza GotrabV.S.Pandeyc R.S.Yaduvanshid	Nano Communicatio n Networks	Jun-2019	1878-7789	https://doi.org/10.1016/j.nancom.2019.05.003	SNIP 1.04	10
3.	Obtaining the circular polarization in a nano-dielectric resonator antenna for photonics applications	Gaurav Varshney1, Shailza Gotra2, Jasleen Kaur3, V S Pandey4 and R S Yaduvanshi5	Semiconductor Science and Technology	Jun-2019	0268-1242	10.1088/1361-6641/ab1fd1	2.65	12
4.	Pairwise error probability analysis of dual hop relaying network over time selective Nakagami- m fading channel with imperfect CSI and node mobility	Shankar, R., Kumar, I., Mishra, R.K		Sep-2019	0765-0019	https://doi.org/10.18280/ts.360312	1.541	7

5.	Super-wideband multi-input–multi- output dielectric resonator antenna	Gotra, S., Varshney, G., Pandey, V.S., Yaduvanshi, R.S.	IET Microwaves, Antennas and Propagation	Sep-19	1751-8733	10.1049/iet-map.2018.6112	1.969	8
6.	Compact multiband CPW fed monopole antenna with square ring and T-shaped strips	Karthikeyan M,Sitharthan R, Ali T, Roy B	Microw Opt Technol Lett.	Oct-2019	0895-2477	10.1002/mop.32106	0.948	51
7.	Investigations on an extremely compact MIMO antenna with enhanced isolation and bandwidth	Ankan Bhattacharya, Bappadittya Roy	Microw Opt Technol Lett	Oct-2019	0895-2477	10.1002/mop.32084	0.948	1
8.	Characterization of single-ended 9T SRAM cell	Roy, C., & Islam, A.	Microsystem Technologies	Dec-2019	0946-7076	10.1007/s00542-019-04700-z	1.737	1
9.	A Deep Analysis of Google Net and AlexNet for Lung Cancer Detection	B.Almas , K.Sathesh , S.Rajasekaran	International Journal of Engineering and Advanced Technology (IJEAT)	Dec-2019	2249 – 8958	10.35940/ijeat.B3226.129219	1	0
10.	Sliding Mode Control of Coupled Tank Systems Using Conditional Integrators	Sankata Bhanjan Prusty, Sridhar Seshagiri, Umesh Chandra Pati, Kamala Kanta Mahapatra	IEEE/CAA Journal of Automatica Sinica	Jan-2020	2329-9266	10.1109/JAS.2019.1911831	5.1	2

11.	Improved Signal Detection Techniques for QOSTBC System in Fast Fading Channel	Jyoti P. Patra and Poonam Singh	Journal of Telecommunic ation and Information Technology	Jan-202 0	1899-8852	https://doi.org/10.26636/jtit.2020.138019	0.61	1
12.	Dielectric Modulated Schottky Barrier TFET for the Application as Label- Free Biosensor	N. K. Hema Latha1 & Sumit Kale	Silicon	Jan-202 0	1876-9918	https://doi.org/10.1007/s12633-019-00363-7	1.246	2
13.	Reconfigurable graphene antenna for THz applications: a mode conversion approach	Gaurav Varshney	Nanotechnolo gy	Jan-202 0	1361-6528	https://doi.org/10.1088/1361-6528/ab60cc	3.551	13
14.	Analysis of Selective-Decode and Forward Relaying Protocol over κ-μ Fading Channel Distribution	Ravi Shankar, Lokesh Bhardwaj, Ritesh Kumar Mishra	Journal of Telecommunic ations and Information Technology	Jan-202 0	1899-8852	https://doi.org/10.26636/jtit.2020.135919	0.61	1
15.	Wideband circular cavity-backed slot antenna with conical radiation patterns	Arvind Kumar	Microw Opt Technol Lett.	Feb-202 0	0895-2477	https://doi.org/10.1002/mop.32316	0.948	10
16.	Least Mean Square (LMS) based neural design and metric evaluation for auscultation signal separation	K. Sathesh , S. Rajkumar , Neeraj Kumar Goyal	Biomedical Signal Processing and Control	Feb-202 0	ISSN: 1746-8094	https://doi.org/10.1016/j.bspc.2019.101784	3.137	1
17.	Design of a meandered line micro strip antenna with a slotted ground plane for RFID applications	Tanmaya Kumar Das a, Biswajit Dwivedy b, Santanu Kumar Behera	International Journal of Electronics and Communicatio ns	Feb-202	1434-8411	https://doi.org/10.1016/j.aeue.2020.153130	2.924	1

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18.	A Linear to Circular Polarization Conversion Meta surface Based Wideband Aperture Coupled Antenna	Rajanikanta Swain · Ayan Chatterjee · Sambhudutta Nanda · Rabindra Kishore Mishra1	Journal of Electrical Engineering & Technology	Mar - 2020	2093-7423	https://doi.org/10.1007/s42835-020-00402-z	0.681	2
19.	Innovative Localization Algorithm Using the Line of Intersection Technique in Wireless Sensor Networks	T. Mythili, J. Ramesh, P. Ramanathan	Journal of Internet Technology	Mar - 2020	2079-4029	10.3966/160792642020032102011	0.786	1
20.	Smart Real Time Garbage Management System	K.S. Mamatha, Dr.S.A.K. Jilani	International Journal of Scientific & Technology	Mar - 2020	2277-8616	NA	0.787	0
21.	Investigation of multiple hop cooperative communication system over time- selective Nakagami- m fading channel	Shankar, R., Mishra, R.K	Iran Journal Computer Science	Mar -20	1682-0053	https://doi.org/10.1007/s42044-020-00054-2	0.66	0
22.	Performance analysis of secondary users under heterogeneous licensed spectrum environment in cognitive radio ad hoc networks	Anand Jee, Shanidul Hoque, & Wasim Arif	Annals of Telecommunications	Mar -20	1958-9395	https://doi.org/10.1007/s12243-020-00761-8	1.412	1

23.	New bipolar spectral amplitude code for cardinality enhancement in OCDMA network	Sumit Gupta, Aditya Goel	Journal of Optics	Mar-2020	1741-3567	https://doi.org/10.1007/s12596-020-00589-4	2.96	1
24.	Structure tensor- based SIFT algorithm for SAR image registration	Divya S V, Sourabh Paul, Umesh Chandra Pati	IET Image Processing	Apr-2020	929-938	: 10.1049/iet-ipr.2019.0568	1.955	2
25.	Neural network- based design and evaluation of performance metrics using adaptive line enhancer with adaptive algorithms for auscultation analysis	S. Rajkumar K. Sathesh Neeraj Kumar Goyal	Neural Computing and Applications	Apr-2020	0941-0643	https://doi.org/10.1007/s00521-020-04864-0	2.505	0
26.	Assessment of Spectrum Handoff Performance in Cognitive Radio Cellular Networks	S. Hoque , W. Arif, and D. Sen	IEEE Wireless Communicatio n Letters	May-20	2162-2345	10.1109/LWC.2020.3001477	4.66	0
27.	Analysis of Spectrum Handoff delay using Finite Queuing model in Cognitive Radio Networks	S. Shekhar, S. Hoque and W. Arif	International Journal of Communicatio n Networks and Distributed Systems, Inderscience	May-20	1754-3924	10.1504/IJCNDS.2020.109552	1.475	2
28.	Comparative study on structural, electronic, optical and mechanical properties of normal and high pressure phases titanium dioxide using DFT	Dharmale, N Chaudhury, S Mahamune, R Dash, D	Materials Research Express	May-20	2053-1591	10.1088/2053-1591/ab8d5c	1.4	0

List of Faculties who have successfully completed Mooc's Courses (FDPs):

The faculties who have successfully completed Swayam NPTEL courses as faculty development programmme during the academic year 2019-2020 are listed below:

S.No.	Session	Name of the Faculty Member	Name of the NPTEL Course	Duration in No. of Weeks	Equivalence of NPTEL course with regular FDP
1	July - Dec 2019	Dr. SANKATA BHANJAN PRUSTY	Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink	08 Weeks	1
2	July - Dec 2019	Dr. P RAMANATHAN	C Programming and Assembly Language	04 Weeks	0.5
3	July - Dec 2019	Dr. P RAMANATHAN	Advanced Computer Architecture	08 Weeks	1
4	July - Dec 2019	Dr. REMASHAN KARIYADAN	Sensors and Actuators - Online	12 Weeks	1.5
5	July - Dec 2019	Dr. REMASHAN KARIYADAN	Microelectronics: Devices to Circuits	08 Weeks	1
6	July - Dec 2019	Dr. PRASHANT UPADHYAY	Digital Circuits	12 Weeks	1.5
7	July - Dec 2019	Dr. GAJENDRA SHARMA	Accreditation and Outcome Based Learning	08 Weeks	1
8	July - Dec 2019	Dr. P RAMANATHAN	Computer Architecture and Organization	08 Weeks	1
9	July - Dec 2019	Dr. SUMIT GUPTA	Introduction to Wireless and Cellular Communications	12 Weeks	1.5
10	July - Dec 2019	Dr. JYOTI PRASANNA PATRA	Principles of Signals and Systems	08 Weeks	1
11	July - Dec 2019	Dr. SANKATA BHANJAN PRUSTY	Control Engineering	08 Weeks	1
12	July - Dec 2019	Dr. SOURABH PAUL	Principles of Signals and Systems	08 Weeks	1
13	July - Dec 2019	Dr. K. SATHESH	Introduction to Research	08 Weeks	1

List of Faculties who are among top 1%/2%/5% in Swayam NPTEL courses (FDPs)

The faculties who are among top 1%/2%/5% in Swayam NPTEL courses (Faculty Development Programme) during the academic year 2019-2020 are listed below:

Academic Year (2019 – 2020)

S.No.	Academic Year	Name of the Faculty Member	Name of the NPTEL Course	Topper (1 % / 2% / 5 %)
1	July - Dec 2019	Dr. P RAMANATHAN	C Programming and Assembly Language	Topper of 2% in this course
2	July - Dec 2019	Dr. P RAMANATHAN	Advanced Computer Architecture	Topper of 1% in this course
3	July - Dec 2019	Dr. SANKATA BHANJAN PRUSTY	Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink	Topper of 1% in this course
4	July - Dec 2019	Dr. REMASHAN KARIYADAN	Sensors and Actuators - Online	Topper of 1% in this course
5	July - Dec 2019	Dr. SOURABH PAUL	Digital Image Processing - Online	Topper of 1% in this course

List of FDPs organized:

S. No	Date	Topic	Resource Person Name and Address	Organizer Name
1.	2nd to 14th December 2019.	AICTE sponsored two-week faculty development program on "Embedded with Wireless for IoT (EW-IoT-2019)"	Dr. K.P. Naveen, Asst. Professor, IIT Tirupati, Dr. Bhupendra Reniwal, Asst. Professor, IIITDM Kancheepuram, etc.	Department of ECE

List of Workshops organized

S. No	Date	Topic	Resource Person Name and Address	Organizer Name
1.	4th & 5th September 2019	A Two Day Workshop on "IoT Research Challenges-Best Practices".	Department of ECE & CSE	Department of ECE & CSE

List of Guest Lectures and Webinars:

Date	Topic	Resource Person Name and Address	Organizer Name
17th August 2019	Alumni Guest Lecture Expert Talk on “Student to Start-Up: A Motivational Talk”	Mr. Naveen Kumar Reddy, Founder of Reddy’s Research Lab and Co-founder of Medue.com, Bangalore.	Department of ECE
9th January 2020	One-day Guest lecture on "Nano-materials for Energy	Dr. S.V.N. Pammi, Research Professor & Principal Investigator in Chungnam National University, South Korea.	Department of ECE

	harvesting, Environmental and biomedical applications"		
29th, June 2020	One day webinar on “The Art of Learning Semiconductor Devices: P-N Junctions, MOSFETs and memristors!”	Dr. Rupam Goswami, Assistant Professor, Department of Electronics and Communication Engineering, Tezpur University.	Department of ECE
30th June, 2020	One day webinar on “Evolution of Wireless Communication”	Dr. Wasim Arif, Assistant Professor in the dept. of Electronics and Communication Engineering National Institute of Technology Silchar	Department of ECE

Details of Industrial Visits:

The list of industrial visits during the academic year 2019-2020 are mentioned below:

1) 60 students and 2 staff members had visited Door darshan Kendra, Tirupati from 4th-6th March and from 11th -12th March, 2020 in order to get hands on experience in the field of Digital Signal Processing and Electromagnetic field theory.
2) 60 students along with some faculty members in ECE, MITS visited National Atmospheric Research Laboratory (NARL) on 28th of February, 2020.