

DEPARTMENT OF ECE
A HALF-YEARLY NEWSLETTER

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| AY: 2021-22 | July-December | Vol. 14 | Issue - 1 |
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ADITYA
Institute of Technology and Management
(An autonomous institution)

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ADVITYA 2K21

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI (AUTONOMOUS)

Department of Electronic and Communication Engineering

Vision of the Institute:

To evolve into a premier engineering institute in the country by continuously enhancing the range of our competencies, expanding the gamut of our activities and extending the frontiers of our operations.

Mission of the Institute:

Synergizing knowledge, technology and human resource, we impart the best quality education in Technology and Management. In the process, we make education more objective so that the efficiency for employability increases on a continued basis.

Vision of the Department:

Create high-quality engineering professionals through research, innovation and teamwork for a lasting technology development in the area of Electronics and Communication Engineering.

Mission of the Department:

1. To offer a well-balanced Program of instruction, lab practices, research & development activities, product incubation.
2. Develop accomplished technical personnel with a strong background on fundamental and advanced concepts, have excellent professional conduct.
3. Enhance overall personality development which includes innovative and group work exercises, entrepreneur skills, communication skills and employability.
4. Ensuring effective teaching–learning process to provide in-depth knowledge of principles and its applications pertaining to Electronics & Communication Engineering and interdisciplinary areas.
5. Providing industry and department interactions through consultancy and sponsored research.

Message from Dr. K. Someswara Rao, CHAIRMAN



At AITAM, we are committed to excellence in everything we do. We strive to mould the students in balancing intellectual and practical skills to become leaders in all the fields of Technical know-how and Management. We have created the finest facilities for the students to make the most of their scholastic pursuits. We are closely aligned with the corporate world which ensures exchange of ideas and experiences that keep our curricula focussed on current developments and challenges in the field of engineering. We are firmly committed to research and consulting activities to contribute to the development of the discipline of engineering. Our vitality lies in our spirit of innovation. Our strength lies in our pragmatic approach. Our success lies in our will to do.

Message Sri L.L. Naidu, SECRETARY



Aditya Institute of Technology and Management is founded to meet the increasing demand for competent engineering graduates. Within a short span of its inception, AITAM has grown to be a premier engineering college of its kind and has won laurels and kudos from the industry. The faculty and staff in AITAM are dedicated to providing first-class education that instils strong and potent basic knowledge for sound practice in science and engineering for the well-being of the society. The Institute offers curricula that nurtures creative thinking and prepares students for productive and rewarding careers. The Institute offers programmes that deepen learning experiences of our students and prepare them for successful careers as engineers.

Message from Prof. V.V. Nageswara Rao, DIRECTOR



Engineering education at AITAM is indeed a rewarding intellectual experience. The Institute prepares the engineering professionals of tomorrow imbued with insight, imagination and ingenuity to flourish as successful engineers. Our programs are attuned to the needs of the changing times. The classrooms are ultra-modern; the library and labs are cutting-edge; and all the members of the faculty are workaholic professionals and masters in their fields. Not surprisingly, our students are recruited by such renowned organizations as HCL, Satyam, WIPRO, INFOSYS, TCS, Visual Soft, Innova-Solutions and InfoTech. The exceptional dedication of our students, faculty and staff, and our collaborations with Industry and other institutions ensure that the Institute is well-poised to create a unique niche in the horizons of engineering education.

Message from Dr. A. S. Srinivasa Rao, PRINCIPAL



It is only through knowledge that man attains Prosperity. Prosperity has to expand or grow to become excellence. The road to excellence is toughest, roughest and steepest in the universe. The world requires and honours only excellence. Excellence has to be acquired from wisdom and intelligence to establish innovation. Promotion of innovation is the new role of education. It is only through innovative thinking the present and the future challenges can be addressed to find dynamic solutions. Technology, a part of excellence, is helpful in removing poverty from the world. According to the statistics 40% of the world's poor are in India. Solution to this challenge relies on Technocrats with confidence and self-reliance. AITAM is the pioneering platform for this expected output. The institution mends the students in building character, strengthening mind, expanding intellect and establishing the vision with a new perspective. The student of AITAM is prepared through rigorous training that makes him to stand on his own feet to lead a prosperous career and life.

Message from Dr. B. RAMA RAO, HOD of ECE



Aditya Institute of technology and management (AITAM) is one among the reputed engineering colleges imparting finest quality education. The department of Electronics and Communication Engineering was established in the year 2001. The department has experienced and well qualified faculty members, well equipped laboratories such as Digital Signal Processing Laboratory, Communication and Microwave Engineering Laboratory, VLSI Design Laboratory, Microprocessor Laboratory and Antenna Design/ Simulation Laboratory etc. Our aim is to produce graduates capable of effectively using professional skills with values for betterment of society and to meet the varying demands of industry and research environment. Our department has a fine blend of a team of qualified and experienced faculty. We are committed to give our students an outcome based education through outcome based teaching and learning process which provides them an environment to develop critical thinking and problem-solving skills as they advance through the programme. The faculty and students are associated with memberships of professional bodies such as Institution of Electronics and Telecommunications Engineering (India), Institution of Engineers (India), Indian Society for Technical Education. Our students earned name and fame all over the globe and rendering best of their services to topmost companies. We as a team resolve to take the department to heights of success and prepare our students for future challenges. The activities like Expert Lectures, Site Visits, Technical Events, Sports and Cultural Events, Soft Skills etc widens their horizon and avert them from being monotonous with academics. To conclude, the department catalyzes and assures a very healthy, amicable but a competitive ambience for our future engineers.

Faculty Achievements

1. Dr. P. Sirish Kumar published a paper on "Ambiguities in GNSS Receiver Position Estimation: A Comparative Statistical Error Characterization", Computational Intelligence in Pattern Recognition, SPRINGER Vol. 1349, pp. 161-189, September 2021
2. Dr. P. Sirish Kumar, "Investigation of Navigation Solutions for Better Accuracy in Position Estimations", Computational Intelligence in Pattern Recognition, SPRINGER, Vol. 1349, pp. 365-377, September 2021
3. Dr. P. Sirish Kumar, "Statistical Distribution of GPS Uncertainties Over Low Latitude Regions of India", Computational Intelligence in Pattern Recognition, SPRINGER, Vol. 1349, pp. 143-155, September 2021
4. Dr. P. Sirish Kumar, Design of Sigmoid Architecture for Deep Learning Hardware Accelerators Design Engineering (Toronto), Rogers Media Publishing Ltd, Issue: 8 , Pages: 12413 - 12419, OCTOBER 2021
5. A .Rajesh, Dr.B.Ramarao, Performance Analysis of Rectangular Microstrip Wearable Textile antenna with series of slots, journal of communications, vol17, issue 5
6. Dr. G. Sateesh Kumar, Internet of things-based deeply proficient monitoring and protection system for crop field, Wiley Online Library- Expert systems
7. Dr. Kiran Kumar Patro, Smartphone-Based Human Sitting Behaviors Recognition Using Inertial Sensor, MDPI Sensors, vol. 21, no.9
8. Dr. Kiran Kumar Patro, Design of Sigmoid Architecture for Deep Learning Hardware Accelerators, Design Engineering (Toronto) Journal, Vol.2021, no.9, pp.12413-12419
9. Dr.K.Chitambara Rao, A Compact Rectangular Dual Patch Antenna for Multiple Satellite Communication Applications, Wireless Personal Communications & Springer, 9th August 2021
10. Dr.K.Chitambara Rao, Dr. M. LAKSHMU NAIDU, A Compact Rectangular Dual Patch Antenna for Multiple Satellite Communication Applications, SCI and Wireless Personal Communications, Aug-21
11. P.Kameswara Rao, Segmentation of Brain Tumor on Contrast Enhanced MR And CT Images for Surgical Applications Design Engineering", Year 2021, Issue: 9 | Pages: 5705 - 5721"
12. P.Kameswara Rao Modified UNet Design for Semantic Segmentation for Brain Tumour Detection, AMA, Volume 52, Issue 03, December, 2021
13. Dr.B.Rama Rao, "IMPACT OF SRR ON DEFECTED METALLIC ANTENNA FOR BIOMEDICAL AND WIRELESS APPLICATIONS", Advances and Applications in Mathematical Sciences, Volume 20, Issue 12, October 2021, Pages 2987-2994 © 2021 Mili Publications"

14. S.Umamaheswararao, Improvement of Spectral and Energy Efficiency of Underwater Channel Communication, AMA-AMA, Volume 52, Issue 01, October, 2021
15. P.V.Muralidhar , Dr.G.Sateesh kumar, FPGA Implementation of Linear Phase IIR Filter Parks-McClellan Methodology, IJARESM, Volume 9, Issue 10, October-2021
16. Jayalaxmi Anem, G.Satessh kumar, "EEG signal artefact removal using flower pollination fractional calculus optimisation", International Journal of Intelligent Computing and Cybernetics © Emerald Publishing Limited, 31-Aug-21

CONFERENCES

1. Dr. P. Sirish Kumar presented a paper on "The Correntropy Kalman Filter: A Robust Estimator for GPS Applications", International Conference on Smart Energy and Advancement in Power Technologies (ICSEAPT-21), National Institute of Technology, Jamshedpur, 6th- 8th September, 2021
2. Dr. P. Sirish Kumar, "Absolute Point Positioning Algorithm for Navigation Applications", International Conference on Smart Energy and Advancement in Power Technologies (ICSEAPT-21), National Institute of Technology, Jamshedpur, 6th- 8th September, 2022
3. Dr. P. Sirish Kumar, Navigation Solutions Statistical Analysis of GPS Position Errors in 3-dimensional Surface Recent Advances in Technology and Engineering, VEMU Institute of Technology, Chittor, 13-14 August 2021
4. Dr. P. Sirish Kumar, "A NEW EXTENSION OF THE KALMAN FILTER FOR FREQUENCY DISTRIBUTION OF GNSS/GPS DATA" Industry 4.0: Recent Perspectives and Future Trends KONGU ENGINEERING COLLEGE (Autonomous), Tamilnadu, 30th and 31st July, 2021.
5. P.V.Muralidhar, Novel reversable logic gate based half and full adder circuit designs, ISPEC, Sept-2021, Turkey

TEXT BOOK:

1. Dr.K.Chitambara Rao published a text book on "Digital Electronics", Aug-21, SHREE PUBLISHING HOUSE

FDP Attended by the faculty

1. A.Jayalaxmi attended a FDP on "Physical layer technologies for 5G Technologies", Narayana Engg.College, Gudur, 1-7-21 to 6-7-21
2. M.Bala Krishna, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21

3. Dr.B.Rama Rao, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
4. M.Chaitanya Kumar, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
5. Dr.Ch.Raja sekhara Rao, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
6. P.Kameswara Rao, Recent Trends in Nanotechnology & Signal Processing, GMRIT,Rajam, 23-8-21 to 29-8-21
7. Dr.Kiran kumar patro, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
- 8.Dr.M.V.H.B.Murthy, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
9. Dr.D.Yugandhar, Advanced Optimization Techniques and hands-on with MATLAB/SCILAB, IIT-Guwahati, 6-9-21 to 17-9-21
10. D.V.L.N.Sastry, Introduction to wireless and cellular communications, IIT-Madras, July-Oct-21
11. D.V.L.N.Sastry, System Designing with Embedded Processors, NITTTR-Chandigarh, 26-7-21 to 30-7-21
12. Dr.G.S.S.S.K.Mohan, System Designing with Embedded Processors NITTTR-Chandigarh, 26-7-21 to 30-7-21
13. P.Kameswara Rao, System Designing with Embedded Processors, NITTTR-Chandigarh, 26-7-21 to 30-7-21
14. P.Kameswara Rao, Digital Filter Design with MATLAB, NITTTR-Chandigarh, 2-8-21 to 6-8-21
15. P.Kameswara Rao, Digital and Analog VLSI Design, NITTTR-Chandigarh, 13-9-21 to 17-9-21
16. J.Swathi, Emerging Wireless Communication Technologies, NITTTR-Chandigarh, 2-8-21 to 6-8-21
17. Dr.Kiran kumar patro, Introduction to IOT, IIT-Madras, July-Oct-21
18. A.Jayalaxmi, Engineering Applications of Artificial Intelligence and Machine Learning, NITTTR-Chandigarh, 13-9-21 to 17-9-21
19. Dr.M.S.R.Naidu, System Designing with Embedded Processors, NITTTR-Chandigarh, 26-7-21 to 30-7-21
20. K.Krishnam Raju, Machine Learning using python, APSSDC, 16-8-21 to 4-9-21

21. Dr. P. Sirish Kumar, Physical Layer Techniques For 5G Technology, Narayana Engineering College, Gudur, 1st July-6th July, 2021
22. Dr. P. Sirish Kumar, Green Technology & Sustainable Engineering Bhilai Institute of Technology, Raipur, Chhattisgarh, 26th June – 01st July, 2021
23. Dr. P. Sirish Kumar, Global Navigation Satellite Systems, IIIT-DM, Kurnool, 26th July - 30th July, 2021
24. Dr. P. Sirish Kumar, Recent Advances in Signal Processing, JNTU, Kakinada, 2nd August - 6th August, 2021
25. Dr. P. Sirish Kumar, Millimeter Wave Frequencies, Gudlavalleru Engineering College, Gudlavalleru, 17th August - 24th August, 2021
26. Dr. P. Sirish Kumar, Recent Trends in Nanotechnology & Signal Processing, GMRIT, Rajam, 23rd August - 29th August, 2021
27. Dr. P. Sirish Kumar, Embedded Systems, APSSDC, 16th August - 9th September, 2021
28. Dr. P. Sirish Kumar, Global Navigation Satellite Systems and Applications, IIIT, Madras, July-August, 2021
29. Mr.Chiranjevulu Divvala, Physical layer techniques for 5G Technology, Narayana Engineering College-Guduru, 01-07-21 TO 06-07-21
30. Mr.Chiranjevulu Divvala, Essentials of academic research tools in paper writing PACE, Institute of Technology and Science, 08-07-21 TO 08-07-21
31. Mr.Chiranjevulu Divvala, Digital tools for writing, Authoring and Reviewing Manuscripts Electronics & ICT Academies-IIT Guwahati, NIT Patna, MNIT Jaipur, IIT Kanpur, IIITDM Jabalpur & IIT Roorkee, 12-07-21 TO 23-07-21
32. Mr.Chiranjevulu Divvala, Recent advances in Antennas for Wireless Communication Bapatla Engineering College, Autonomous, 27-07-21 TO 31-07-21
33. Mr.Chiranjevulu Divvala, Advance technologies in wireless communication networks(ATWCN)-2021, GMR Institute of Technology, Rajam, 02-08-21 TO 06-08-21.
34. Mr.Chiranjevulu Divvala, “Millimeter Wave Frequencies”, Gudlavalleru Engineering College, 17-08-21 TO 24-08-21
35. Mr.Chiranjevulu Divvala, “Role of Teacher in Creating Effective Learning Environment for Students”, North Eastern Regional Institute of Science and Technology, Arunachal Pradesh, 25-10-21 TO 30-10-21
36. Mr.Chiranjevulu Divvala, Recent Trends in Nanotechnology & Signal Processing, GMR Institute of Technology, Rajam, 23-08-21 TO 29-08-21

37. Dr.G.S.S.S.V.Krishna Mohan, One week online FDP Physical Layer Techniques for 5G Technology organized by ECE Dept, Narayana Engineering College, Gudur, 1st to 6th July, 2021
38. Dr.G.S.S.S.V.Krishna Mohan, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on Recent Advances in Signal Processing, JNTU Kakinada, 2nd to 6th Aug, 2021
39. Dr.G.S.S.S.V.Krishna Mohan, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on Signal Processing for 5G – Algorithms and Implementation, IIT, Goa, 9th to 13th Aug, 2021
40. Dr.M.S.R.NAIDU, VLSI & Embedded Systems Design for Aerospace & Defence Applications, LENDI Institute of Engineering and Technology, 25th Oct-5th Nov,2021
41. Smt. Eppili Jaya, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Recent Advances in Signal Processing", "JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA", 2nd August to 6th August 2021
42. G. Sateesh Kumar, "Global Navigation Satellite Systems (GNSS)", NPTEL, july to aug 2021
43. Dr. V ASHOK KUMAR, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur,1-6-21 to 6-7-21
44. Dr. V ASHOK KUMAR, PYTHON PROGRAMMING, APSSDC, 16-8-21 TO 4-9-21
45. Dr Kiran Kumar Patro, AI and Deep learning, APSSDC, 1st July to 28th July 2021
46. Dr Kiran Kumar Patro, Recent Advances in Signal Processing, AICTE, ATAL, 02nd Aug to 06 Aug 2021
47. Dr Kiran Kumar Patro, Internet of Things (IoT), APSSDC, 16 Aug to 4th Sept 2021
48. M.Balakrishna, RECENT ADVANCES IN SIGNAL PROCESSING, JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA 02-08-2021 to 06-08-2021
49. M.Balakrishna, "Signal Processing for 5G - Algorithms and Implementation", Indian Institute of Technology, Goa, 09-08-2021 to 13-08-2021
50. M.Balakrishna, "Nano-materials & Nanomechanics and their application in devices and sensors", Indian Institute of Technology Hyderabad, 28-06-2021 to 02-07-2021
51. M.Balakrishna, Global Navigation Satellite Systems, Indian Institute of Information Technology Design and Manufacturing Kurnool, 26-07-2021 to 30-07-2021
52. V.Lokesh Raju, Assessment and Utilization of Renewable Energy Resources GOVERNMENT ENGINEERING COLLEGE, PALANPUR, 13/09/2021 to 17/09/2021
53. Dr. M. LAKSHMU NAIDU, Role of teacher in creating effective learning Environment for students North Eastern regional Institute of Science and Technology (NERIST), Arunachal Pradesh, 25th - 30th October, 2021

54. Jayalaxmi Anem, Deep Learning ATAL, Indian Institute of Information Technology Vadodara, 13-12-21 to 17-12-21
55. Dr.B.Rama Rao, Global Navigation Satellite Systems, Indian Institute of Information Technology Design and Manufacturing Kurnool, 26-7-21 to 30-7-21
56. Dr.B.Rama Rao, Signal Processing for 5G - Algorithms and Implementation, IIT-Goa, 9-8-21 to 13-8-21
57. Dr.B.Rama Rao, "RECENT ADVANCES IN SIGNAL PROCESSING", JNTUK, 2-8-21 to 6-8-21
58. Dr. Harihara Santosh Dadi, "Role of Teacher in Creating Effective Learning Environment for Students", North Eastern Regional Institute of Science and Technology, Arunachal Pradesh, 25-10-21 TO 30-10-21
- 59.Dr. Harihara Santosh Dadi, Physical layer technologies for 5G Technologies, Narayana Engg.College, Gudur, 1-6-21 to 6-7-21
60. S.Umamaheswararao, Recent Trends in Nanotechnology & Signal Processing, GMRIT, 23-8-2021 to 29-8-21
61. M.Chaitanya Kumar, Recent trends in Nano technology and signal processing, GMRIT, 23-8-21 to 29-8-21
62. M.Chaitanya Kumar, Recent advances in signal processing, JNTUK, 2-8-21 to 6-8-21

Student Achievements:

| A.Y 2021-22 | | | | | | |
|-------------|------------------------|---|---------------------|---------------------------------|-----------|-----------------------|
| S. NO | NAME OF ACTIVITY | STUDENT NAME & REGISTRATION NUMBER | CLASS | NAME OF EVENT & VENUE | DATE'S | AWARDS |
| 1 | Prototype Presentation | Arangi Saranya& 18A51A0401 | 4 th ECE | Chhatra Vishwakarma Awards 2020 | 18-Sep-21 | 2 nd Prize |
| 2 | Prototype Presentation | Badram Naveen Kumar& 18A51A0403 | 4 th ECE | Chhatra Vishwakarma Awards 2020 | 18-Sep-21 | 2 nd Prize |
| 3 | Prototype Presentation | Narayanasetti Anjali& 18A51A0437 | 4 th ECE | Chhatra Vishwakarma Awards 2020 | 18-Sep-21 | 2 nd Prize |
| 4 | Prototype Presentation | Sai Kishan Kranthi Kumar Vuriti& 18A51A0447 | 4 th ECE | Chhatra Vishwakarma Awards 2020 | 18-Sep-21 | 2 nd Prize |

**Guest lecture on Speech Processing on 24.7.2021 by R.Sasi,
Asst.Professor of ECE ,BRAU,Srikakulam**



**Guest lecture on Data Structure and Object Oriented Programming on
04.9.2021 by D.Srinivasa Rao, Asst.Professor, Dept. of CSE, GMRIT,
Rajam**



Guest lecture on Wireless Sensor Network based health care system on 13.11.2021 by Sudhansu Sekhar Behara, Asst.Professor of ECE,MVGR,Vizianagaram



Editorial Board

STAFF

P. Kameswara Rao

STUDENTS

Batchala Sruthi, IV- ECE-A

Kinjarapu Akhil, III-ECE-B

Chinthu Sai Santhoshi, II-ECE-C



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