

NEWSLETTER

Department Of Electronics and
Instrumentation, SHRI G. S. INSTITUTE OF
TECHNOLOGY & SCIENCE, INDORE

Year - 2021-22



Cheif Editor

Dr. R. S. Gamad

Editors

Mr. Rajesh Khatri

Mr. R. C. Gurjar

Agrani Patel

Institute Vision & Mission

Vision

A front line institute in science and technology making significant contributions to human resources development envisaging dynamic needs of society

Mission

To generate expert in science and technology akin to society for its accelerated socioeconomic growth in professional and challenging environment imparting human values

Department Vision Mission

Vision

The department is committed to provide a holistic education that transforms the students into responsible engineers and facilitates them to build successful careers and excel in the field of Electronics and Instrumentation with social and ethical standards.

Mission

To prepare emerging Electronics and Instrumentation engineers to possess good communication skills with the ability to work in multi-disciplinary groups, lead teams and understand their professional and ethical responsibilities for serving the needs of the society.

DEPARTMENTAL ACTIVITY IN SESSION 2021-22

1.PATENT DETAILS:

Year	Applicant Name	Title of Invention	Date of Filing Patent	Publication Date
2021-22	1. Dr. R.S. Gamad 2. Mr. Virendra Kumar Verma 3. Ms. Neha Pande 4. Mr. Rashmi Ranjan Maharana 5. Mr. Arun Rayakwar 6. Ms. Harshita Kushwaha 7. Ms. Vineeta Vishwakarma	A NEW DESIGN AND TESTING OF A PIPELINE A/D CONVERTER (ADC) SYSTEM FOR HIGH SPEED DATA CONVERTING APPLICATION	18.09.2021	12.11.2021
2021-22	1. Dr. Rakesh Saxena 2. Dr. Radheshyam Gamad 3. Shri G.S. Institute of Technology & Science	AGRICULTURE DRONE FOR MONITORING AND SPRAYING PESTICIDES	11.10.2021	02.12.2021

2.LIST OF PAPER PUBLISHED BY THE FACULTIES AND STUDENTS IN ACADEMIC YEAR 2021-22

1. R.C.Gurjar and D.K.Mishra “Design and performance analysis of CMOS Tunable Active inductor” International journal of electronics (Taylor & Francis), 13 July 2021.
2. Shailesh Jakodiya, R C Gurjar and R.S.Gamad “Design of OTA Based Band Pass Filter Using 180 nm Technology” Proceeding of Fifth International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, sep-2021,Vol-748, Pp 711-719, ISSN 1876-1119 (electronic),<https://doi.org/10.1007/978-981-16-0275-7>.
3. Dipika Simariya, R. C. Gurjar, and D. K. Mishra “Pulse Start-up Technique Based Class C VCO Using 180 nm CMOS Technology” Proceeding of Fifth International Conference

on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, sep- 2021, Vol-748, Pp 755-765, ISSN 1876-1119 (electronic), https://doi.org/10.1007/978-981-16-0275-7_62.

4. Sarthak Jain, R.S. Gamad and R.C.Gurjar “Schmitt- Trigger-Based Single-Ended Low Power 8T SRAM Cell” ICTACT JOURNAL ON MICROELECTRONICS, OCTOBER 2021, VOLUME: 07, ISSUE: 03, Pp 1178-1188, SSN: 2395-1680 (ONLINE), DOI: 10.21917/ijme.2021.0203.
5. Sarthak Jain, R.S. Gamad and R.C. Gurjar “Design of a Low-Power One-Sided Schmitt-Trigger Based 13T SRAM Bitcell” 12th International Conference on Computing Communication and Networking Technologies (ICCCNT), 6-8 July 2021, at IIT Kharagapur. DOI: 10.1109/ICCCNT51525.
6. R.C.Gurjar and D.K.Mishra “Design and Simulation of Body Bias MOS Varactor for CMOS Voltage Controlled Oscillator” International Conference on Artificial Intelligence: Theory & Applications (AITA-2021) organized by NIT Patna during 23-24 December 2021.
7. Sarthak Jain, R S Gamad and R.C.Gurjar “ Design of a Low-Power Schmitt-Trigger-Based Read-Decoupled 10T SRAM Bitcell” International Conference on Artificial Intelligence: Theory & Applications (AITA-2021) organized by NIT Patna during 23-24 December 2021.
8. Dinesh Kumar Sanodiya, R. C. Gurjar and D. K. Mishra “Design of Low Pass Filter using Passive Inductor” Journal of Telecommunication Study, Vol-6, No.3, Dec-2021.
9. Lalit Kumar Bhawsar. R.C.Gurjar and Dr.R.S.Gamad “Design and Implementation of Low Power Active-RC 4th order Butterworth Low Pass Filter” AICTE Sponsored First online International Conference on Recent Trends in Electrical Electronics Communication and Instrumentation (ICRTEECI 2021) held at CVR College of Engineering, Ibrahim patnam, Hyderabad, India during 27 - 28, December 2021.
10. Puja Tomar, P.P. Bansod, R.C. Gurjar and Rupali Jarwal “Design of Low Power Reversible Logic Based Counter with Efficient Quantum Cost” 5th International Conference on Information Systems and Computer Networks (ISCON) GLA University, Mathura, India. Oct 22-23, 2021, DOI:10.1109/ISCON52037.2021.9702499.
11. Shailesh Jakodiya and R. S. Gamad Active inductor based low phase noise voltage-controlled oscillator Int. Jr. Electronics and Energetics March 2022, Vol. 35, No 1, pp. 107-120 <https://doi.org/10.2298/FUEE 2201107J> .
12. Vaishali Naik, R.S. Gamad, P. P. Bansod Effect of Dispeckling filters on the segmentation of ultrasound common carotid artery images Bio-medical journal, Published by Elsevier Science Direct, 19 July 2021 PP 01-14 <https://www.journals.elsevier.com/biomedical-journal>.
13. Sarthak Jain and R.S. Gamad , “Schmitt- Trigger-Based Single- Ended Low Power 8T SRAM Cell” ICTACT journal on microelectronics, OCT. 2021 Vol. 07, ISSUE: 03, PP 1178-1188,ISSN: 2395-1680 (ONLINE).
14. Shubham Kumar Sharma, R S Gamad and P P Bansod , “Design & Analysis of Low Power, High Speed, Leakage Control Comparator using 180nm Technology for A/D Convertors” IEEE Madras Section International Conference (IEEE MASCON 2021) 27-28 August 2021, Chennai, Tamilnadu, India.
15. Mahima Chourasia, P P Bansod and Rajesh Khatri “Design of a Power Optimized Multiplexer Circuit Suitable for Barrel Shifter Design” 2nd International Conference on Microelectronics, Communication System, Machine Learning and Internet of Things (MCMI-2021), Date of conference: 23-24th Oct 2021.
16. Mahima Chourasia, P P Bansod and Rajesh Khatri, “Implementation of 4-Bit Barrel Shifter using Diode Connected DC Biased Positive Feedback Adiabatic Logic (DC-DB PFAL)” 7th International Conference on Nanoelectronics Circuits & Communication System, (NCCS-2021) Date of conference: 29-30th Jan 2022.

17. Vibha Tiwari, P.P. Bansod and Abhay Kumar, “CT image reconstruction from sparse projections using adaptive total generalized variation with soft thresholding” International Journal Biomedical Engineering and Technology. Vol. 36, No. 1, 2021, pp: 79 10.1504/IJBET.2021.115942.
18. YOGITA TIWARI, D. S. AJNAR and R.S. GAMAD, “ Design of 4th-order Low Pass Filter through Op-Amp using Nulling Resistor based Compensation Technique” NATIONAL CENTRE FOR CELL SCIENCE An Autonomous Institute of Dept. of Biotechnology, Govt of India, Aug 2021.

3. BOOKS/BOOK CHAPTERS PUBLISHED BOOKS/BOOK CHAPTERS PUBLISHED

S.No.	Title of Paper/ Book/ Book Chapter	Name of Author	Name of Publisher/ Journal/ Conference	Year
1.	Modern Hybrid Electric Vehicle Technology	Dr. Radheshyam Gamad, E. Kannapiran, Er. Hemavathi	Scientific International Publisher House (SIPH), Mannargudi, Tamilnadu, India ISBN: 978-93-92992-58-2	2021

4. No. of Ph. D. No. awarded

S.No.	Name of student	Guided by	Co-Guide
1.	Manish Shahejwani	Dr. R.S. Gamad	Dr. D.K. Mishra
2.	Shivram Mansore	Dr. R.S. Gamad	Dr. D.K. Mishra

5. Student achievement

- The Team " Thinker" led by final year student Nandni Joshi and Avisia Bagdiya secured the position of National finalist position in Myntra HackerRamp cometetion in April-21.
- Second year student Rashi Singhai Participant and winner of BAHA SAEINDIA

6. Events coordinated by Department of Electronics and Instrumentation as following-

- आज़ादी के अमृत महोत्सव के उपलक्ष में संस्कृति मंत्रालय भारत सरकार ने २२-२८ फरवरी २०२२ को राष्ट्रीय विज्ञान सप्ताह "विज्ञान सर्वत्र पुज्यते" का आयोजन भारत के ७५ शहरों में किया। मध्य प्रदेश में इंदौर, भोपाल एवं जबलपुर में इसका आयोजन हुआ। मध्य प्रदेश विज्ञान एवं प्रौद्योगिकी परिषद, भोपाल एवं मध्य प्रदेश विज्ञानं भारती के सहयोग से इंदौर में एसजीएसआईटीएस में नेटवर्किंग के माध्यम से यह कार्यक्रम अयोजित किया गया। इंदौर के सभी कार्यक्रमों के समन्वकय प्रो. आर एस गामड़ थे. नेटवर्किंग में

एसजीएसआईटीएस प्रमुख संसथान के रूप में था, इसके अतिरिक्त देवी अहिल्या विश्वविद्यालय इंदौर एवं होल्कर विज्ञान महाविद्यालय इंदौर में भी कार्यक्रम आयोजित हुए। हर दिन अलग अलग विषयों पर २-३ व्याख्यान एवं अन्य गतिविधियां जैसे क्विज, पेपर प्रेजेंटेशन, पेटेंट recognition, स्टार्टअप recognition आदि का आयोजन हुआ। एसजीएसआईटीएस के सिल्वेरिया ऑडिटोरियम में विज्ञान प्रदर्शनी लगाई गई, जिसमें इंदौर के विभिन्न स्कूल एवं कॉलेज के छात्रों ने उत्सुकतापूर्वक भाग लिया और भारत में विज्ञान एवं प्रौद्योगिकी के गौरवशाली इतिहास को जाना। यह विज्ञान प्रदर्शनी २३-२८ फरवरी को प्रातः १०:३० से शाम ५:३० तक छात्रों के लिए खुली रही।

१९-फ़रवरी-२०२२ विज्ञान यात्रा "विज्ञान ज्योति" का शुभारंभ देवी अहिल्या विश्वविद्यालय इंदौर की कुलपति डॉ रेनु जैन में मशाल प्रज्वलित कर के किया।

२२-फ़रवरी-२०२२ विज्ञान सर्वत्र पूज्यते का भव्य शुभारंभ

२३ -फ़रवरी-२०२२: एसजीएसआईटीएस इंदौर एसजीएसआईटीएस में विज्ञान सप्ताह का शुभारंभ हुआ, इसमें मुख्य अतिथि संसथान के निदेशक, विशिष्ट अतिथि मध्य प्रदेश विज्ञान भारती के संगठन मंत्री श्री प्रजातंत्र गंगेले, मध्य प्रदेश विज्ञान एवं प्रौद्योगिकी परिषद, भोपाल के संयुक्त परियोजना निदेशक श्री बी एस तंवर थे. कीनोट वक्त माधव विज्ञान महाविद्यालय के विभागाध्यक्ष प्रो. वी के गुप्ता थे।

२४-फ़रवरी-२०२२:आई इ टी , देवी अहिल्या विश्वविद्यालय इंदौरप्रथम वक्ता , डॉ राजनारायण तिवारी, निदेशक आईसीएम आर , भोपाल ने इतिहास में मॉडर्न साइंस एवं तकनीकी क क्षेत्र में भारतीय उप्लाब्धियों एवं भारतीय वैज्ञानिकों द्वारा स्थापित शोधो का विस्तृत उल्लेख किया।

२५ -फ़रवरी-२०२२: एसजीएसआईटीएस में व्याख्यानमाला का आयोजन किया गया।

२६-फ़रवरी-२०२२:पत्रकारिता विभाग देवी अहिल्या विश्वविद्यालय इंदौर में साहित्य उत्सव मनाया गया।

२७ -फ़रवरी-२०२२:होल्कर विज्ञान महाविद्यालय इंदौर

२८-फ़रवरी-२०२२: समापन समारोह में मुख्य अतिथि संस्थान के निदेशक प्रो राकेश सक्सेना ने कहा की प्रकृति को ध्यान में रख कर ही हम विज्ञान और तकनीकी का विस्तार करे और यह विस्तार सिर्फ हमारे संस्थान में न हो अपितु समाज और राष्ट्र निर्माण के लिए हो।

Photos of Event-





2 . Project – Satark, A bridge towards road Safety

The Memorandum of Understanding between TRAX S. society which is a Road safety NGO and Department of Electronics and Instrumentation Engg. was made on 26/10/2021.

Details of Road Safety club members of E & I Department.

	Name
Mentor(Professor)	Dr.R.S. Gamad
Student 1	Ansh Gupta
Student 2	Naman Sharma
Student 3	Avneesh Vijay

Following Activities were performed by Road safety club members-

1. Spreading awareness at Palasia Square
2. Conducting seminar/webinar at our College for students
3. Conducting seminar/webinar at our College for faculties and supporting staff
4. Traffic management and Audit at square
5. Build a traffic friendly behavior and competency in college

Photo of activities







