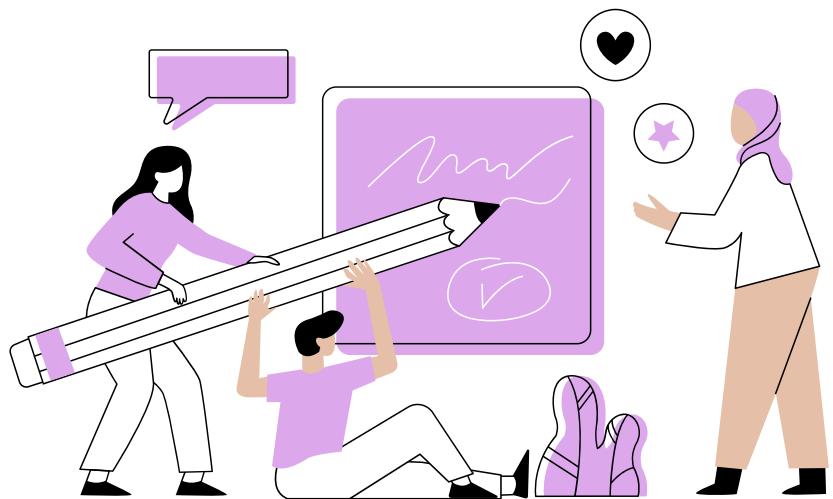


RESEARCH NEWSLETTER

2023 | Vol. 1



TABLE OF CONTENTS



01

RESEARCH PUBLICATIONS

02

**RESEARCH SEMINARS /
SYMPOSIUM 2023**

03

RESEARCH WORKSHOPS 2023

04

GRANTS AND IPR

05

CONFERENCES AND SDG

06

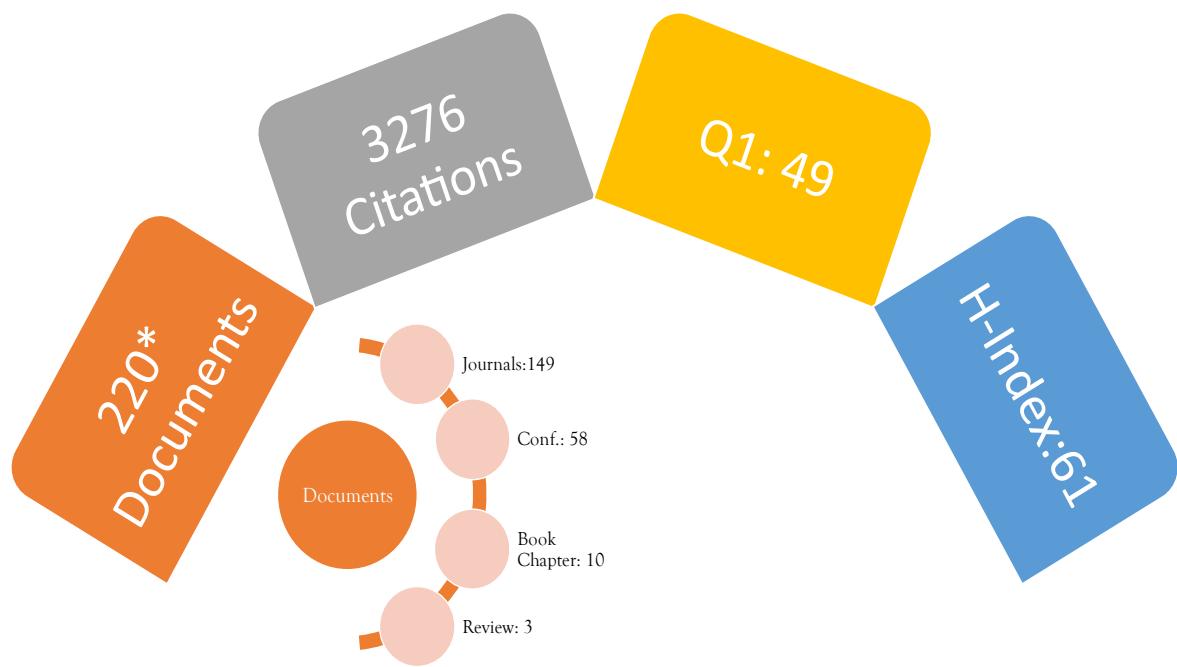
FEATURED RESEARCH

RESEARCH PUBLICATIONS

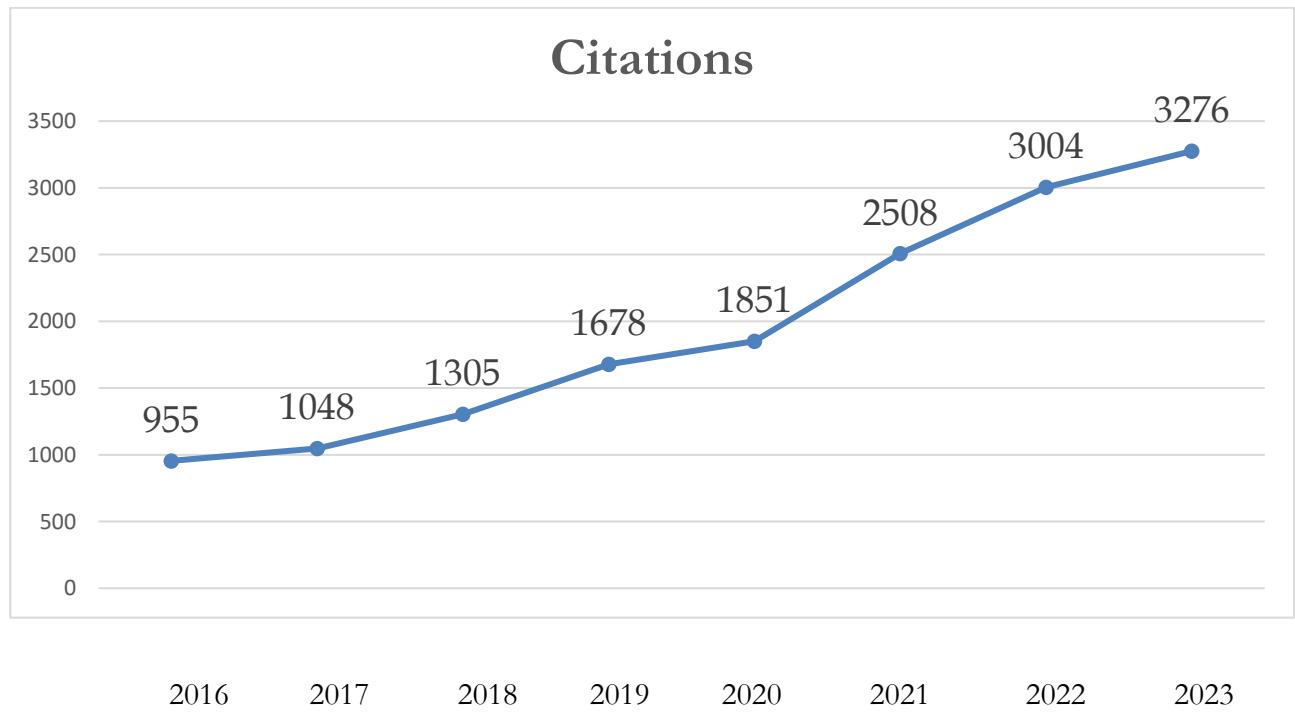
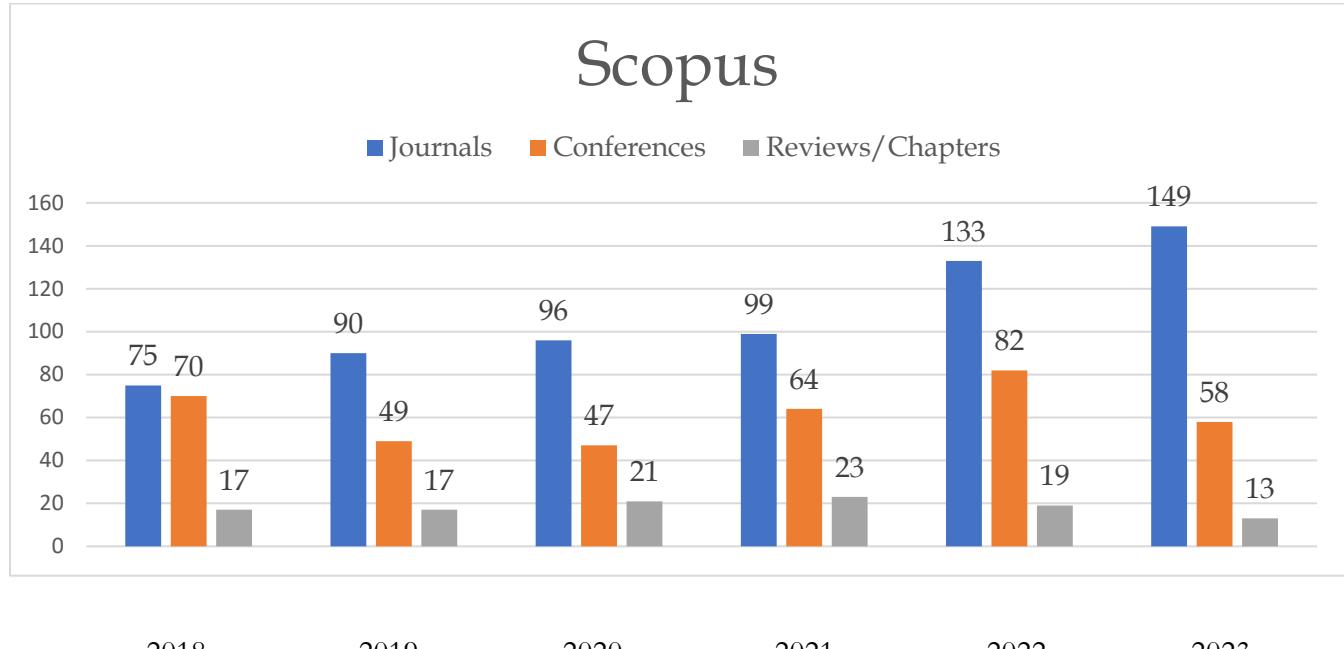
HIGHLIGHTS

The initiatives of research and development have made important contributions to enhancing the overall publications at JSS STU. The number of research articles in Journals under the Q1 category has seen an increase compared to the year 2022.

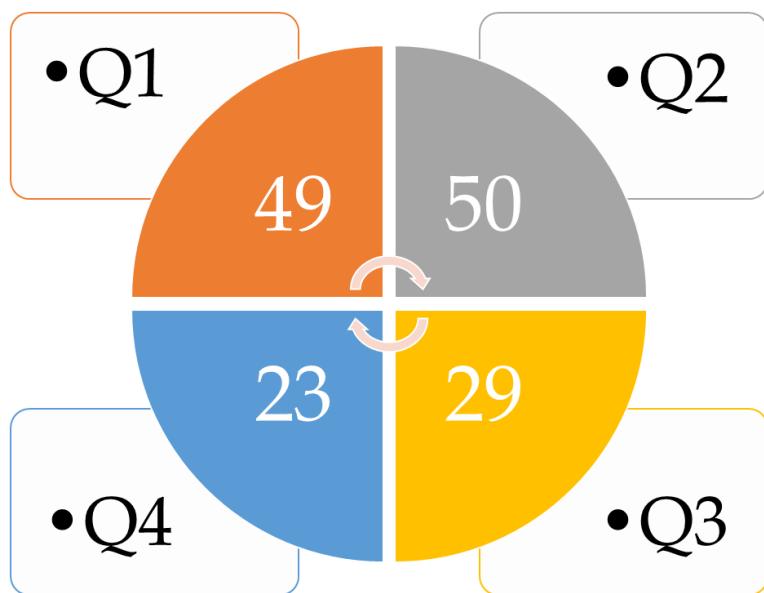
In 2023, the university has published 220 papers that are indexed in Scopus, out of which 149 are Journals, 58 are Conferences and Book Chapter / Reviews are 13. Over 32% of the Journals are in the Q1 category and 33% in the Q2. The total citations recorded is 3276.



JSSSTU RESEARCH TRENDS - AN OVERVIEW (2018 – 2023)



JOURNAL QUARTILES 2023



Publication Share is 65.5% (Q1&Q2)

RESEARCH SEMINARS / SYMPOSIUM 2023

SPEAKER	TOPIC	DATE
Dr. Sharan Kumar Goudar National Institute of Technology, Calicut	Tips and Tricks for Productive Research	07 th September 2023
Dr. Jothi Ramalingam R, King Saud University, Saudi Arabia.	International Symposium on Emerging Materials for Sustainable Energy and Environment	15 th July 2023
Dr. Dinesh Shetty, P, Khalifa University, Abu Dhabi.		
Prof. Yeruva Thirupathaiah, CSRTI. Mr. Hemanth Kumar, Syngene-BBRC, Bengaluru.		

Dr. B Siddabasavegowda, Hokkaido University, Japan	Cross talks between lipids and diseases	09 th October 2023
Dr. Anil Kumar K M Dr Hema B P JSS STU	An Avenue towards Interdisciplinary Research	16 th September 2023
Prof. J. Adhinarayana IIT Bombay	AIIA Model (Assimilate, Interpret, Innovative and Adapt) in Modern Agriculture	12 th December 2023
Dr. Vikram C M Samsung Research Institute Bengaluru	Analysis of Speech Disorders using AI	20 th November 2023
Dr. Bharathkumar Hegde Co-founder, Autoyos, Bengaluru	The Innovation Journey: Converting Healthcare Ideas to Products	21 st November 2023
Dr. Danya Pradeep Kumar University of Kansas Medical Center, USA	Sensor based Assessment of Frailty	22 nd November 2023
Bhoomica M Nataraja GXO Logistics, Netherlands	Operations Management in Healthcare	23 rd November 2023
Mr. Prasanna Hegde Advisor, ESPAR, USA	Cloud Computing And data analytics	23 rd November 2023
Dr. Sandeep K Prabu, Pennsylvania State University, USA.	Diet and Mechanism of Resolution of Inflammation in Inflammatory Bowel Disease	5 th July 2023

Dr. Vivian Suru JohnDenk, AT&S India Private Ltd.	High-End Printed Circuit Board Technology	17 th March 2023
Dr. Gururaj H L Manipal Institute of Technology, Bengaluru	Issues and challenges in Internet of Things Security	1 st April 2023

RESEARCH WOKSHOPS 2023

SPEAKER	TOPIC	DATE
Dr. Vikram C M Dr. Bharathkumar Hegde Dr. Danya Pradeep Kumar Mr. Prabhakaran P V Mr. Prasanna Hegde Mr. Amruteshwar Hiremath Ms. Reena Jha	One Week International Workshop on Interdisciplinary Topics on Electronics Instrumentation and Healthcare Engineering (EIHE-2023)	20th - 24th November 2023
Dr. Sudharsan K M Dr. Prashanth Joshi Dr. Srinivas Naik Dr. P Nagesh Dr. C Naveena Dr. S Manjunath Dr. H T Basavaraju Dr. Keerthi Kumar Dr. Praveen Kumar	Research Methodology	26 th – 27 th May 2023
Prof. Sampath Kumar B.T. □ Dr. Ramashesh Prof. Harinarayana N. S. Dr. Gavisiddappa Anandhalli Dr. Dhanu Kumar Pattanasetty Dr. Shivaram B.S. Dr. Anil Kumar K.M.	Scholarly Publications: Tools & Techniques	6 th – 8 th January 2023
Dr. Shreelakshmi Prashanth Dr. N. C. Balaji Dr. L.R. Manjunath Er. Shivaraj S Er. Ramesh Kikkeri Dr. K. Asha Dr. Kumthekar Madhav Bhalchandra	National Workshop on Facets of Sustainable Urban Infrastructure	9 th – 13 th January 2023

E Sai Prasad Chunduru, Central Forensic Science Laboratory, Hyderabad.		
Dr. Sowmya, JSSATE, Bengaluru	ATAL sponsored	27 th November
Dr. H. R. Channamma, JSSSTU	Workshop on Cyber	- 2 nd
Mr. Ashok Kumar, VM Ware.	Security and Digital	December
Sri. K.N. Yashavantha Kumar, Cyber Crime Division.	Forensics: Issues, Challenges & Techniques	2023
Dr. B.M. Prasanna Kumar, Vijayapura.		
Mr. G. Pradeep, Network Consulting Engineer, CISCO		
Ms.Priti Chothani, CEO, Shree Datta Law Consultancy, Gandhinagar	Workshop on Innovations and Intellectual Property Rights	24 th January 2023

RESEARCH GRANT PROJECTS 2023

The University encourages mobilization and promotion of research from external funding agencies and creates a conducive environment for such research, due to this a total of 46, 77, 300.00 worth of projects has been sanctioned during 2023-24 from various funding agencies. A total of 48.92 crores worth of projects have been submitted to various agencies.

Submitted

Project Title	Department	Agency	Total Project Cost (in Rs.)
Establishment of SATHI (Sophisticated Analytical and Technical Help Institute)	Chemistry	DST	44.55 Crores
Experimental and Modelling of Alkali Activated Concrete Incorporating the Phase Changing Materials to Estimate the Energy Efficiency	CIVIL	VGST	30,00,000.00

Analysis of Flexural and Shear Behaviour of Concrete Encased Steel Beams Strengthened using Carbon Fiber Reinforced Polymer.	CIVIL	SERB	28,64,400.00
Real Time Machine Learning Model For Prediction of Bleed in Esophageal Varices with Chronic Liver Disease	ECE	CSIR	22,00,000.00
Antimicrobial stewardship through Gamification and Artificial Intelligence as per ICMR Antimicrobial Treatment Guidelines 2022 in Rural and Urban India.	ECE	BIRAC	40,00,000.00
Thin film conducting hybrid nano composites for EMI shielding Applications	ECE	SERB-SURE	22,05,000.00
Non-invasive human body Glucose level monitoring device for diabetic	ECE	New Age Incubation network (K-Tech)	3,00,000.00
Raga Therapy module for mentally retarded Children	ECE	New Age Incubation network (K-Tech)	3,00,000.00
Performance Monitoring of Water Treatment Plant Sludge Handling and Safe Disposal for Reuse in Mysuru City, Karnataka	ENV	CPHEEO (Central Public Health and Environmental Engineering Organization)	41,00,000.00
Monitoring and Surveillance of Water Quality in Selected Areas of Mysuru City, Karnataka, India	ENV	CPHEEO (Central Public Health and Environmental Engineering Organization)	40,95,404.00
Water Auditing and Control of Non-Revenue Water (NRW)	ENV	CPHEEO (Central Public Health and Environmental Engineering Organization)	40,95,401.00
Design of sustainable continuous pressurized water supply in selected areas around Mysuru City, Karnataka, India	ENV	CPHEEO (Central Public Health and Environmental Engineering	51,56,600.00

		Organization)	
Health Monitoring of Parkinson's disease Patients using Infrared Thermography and Machine Learning Approaches	E&IE	Science & Engineering, Research Board, DST, and Govt. of India	16,50,000.00
Breaking Barriers to Ear Health: Innovative and accessible student pocket mobile otoscope prototype for convenient home and community based ear health leading to point of care diagnosis	JSSMC , JSSAHER, & E&I JSS STU	BIRAC, PACE, DBT, Govt. of India	35,00,000.00
Virtual Hypermarket Immersive Virtual Reality (VHM-IVR)	CA	Google Research: Outreach The Award for Inclusion Research Program recognizes and supports academic research in computing and technology	3,00,000.00
Electric Vehicle Technology Innovation and Integration Laboratory	EEE	VGST KFIST L1	20,00,000.00
Sustainable Energy Technology Laboratory	EEE	VGST KFIST L2	30,00,000.00
Design and Implementation of Hybrid Inverter for Renewable Energy-Based Smart Grid Using Machine Learning	EEE	VGST Scheme: ECRA : Early Career Research Award	10,00,000.00

Sanctioned

Project Title	Department	Agency	Total Project Cost (in Rs.)
Comparative study on Complete Cost Analysis of Intermittent V/s. 24X7 Water supply system for Urban Areas	ENV	CPHEEO (Central Public Health and Environmental Engineering Organization)	40,27,300.00
Innovation in Renewable Energy and its Application	EEE	AICTE	3,00,000.00
Cyber Security and Digital Forensics: Issues, Challenges and Techniques	CA	AICTE	3,50,000.00

INTELLECTUAL PROPERTY RIGHTS (IPR) GRANTED

To focus on lab-to-market research, the University has strengthened the research, leading to the filing of patents for which the separate cell has already been in existence. Due to this, in the year 2023, a total of 14 patents have been granted and 2 are published.

Name of Inventor(s)	Department	Title	Application No./Design Patent No.
Rajeev Kumar, Dr. R. Shashidhar, Dr. Roopa Manibyrappa, Dr. Neha Sharma, Dr. Khyati Marwah, Loveleena Mukhija, Dr. Nagaraj	ECE	IOT BASED ROBOT FOR SANITIZATION	371473-001

Mallikarjun Lutimath			
Dr. Neha Sharma, Dr. Chinmay Chakraborty, Dr. Shashidhar Rudregowda, Dr. Roopa Manibyrappa		NOVEL IOT BASED DIGITAL COLD SHAKING INCUBATOR	379748-001
Dr. R. Shashidhar		IOT ENABLED AUDIO PLAYER INTEGRATED PRINTER	386573-001
Dr. R. Shashidhar		PORTABLE CHEST X-RAY DEVICE FOR THE ACCURATE DETECTION OF RESPIRATORY DISEASES	6309594
Dr. Mallikarjun Aradhyा	Biotechnology	A METHOD OF PROCESSING LEAVES OF MEMBCYLON MALABARICUM WITH ANTIANGIOGENIC, ANTIOXIDANT AND PROAPOPTOTIC ACTIVITY	201841022650
Dr. V N Manjunath Aradya	MCA	TWO DIMENSIONAL OBJECT DETECTION DEVICE BASED ON SHAPE CONTOUR	201841030294
C S Santhosh K K Umesh		SMART ENERGY CONSUMPTION MONITORING METER	362254-001
Dr. S K Niranjan		IOT ENABLED FILE STORAGE RACKS	379414-001
Dr. Mallikarjuna Swamy M S	EIE	A PORTABLE IR THERMAL AND ULTRASOUND BASED DIOGNO-THERAPEUTIC INTEGRATED DEVICE FOR EFFECTIVE LOWER BACK PAIN	391633-001

		MANAGEMENT	
Dr. Mallikarjuna Swamy M S		FLEXION STRAIN SENSOR	382292-001
Dr. Mallikarjuna Swamy M S		THERMAL CAMERA FOR DETECTING RHEUMATOID ARTHRITIS	382293-001
Dr. Srinath S	CSE	SYSTEM AND METHOD OF CREATING A HAND GESTURE BENCHMARK IMAGE DATA SETS FOR RECOGNIZING AND INTERPRETING AMERICAN SING LANGUAGE	201941027784
Dr. Shivaprakash	ISE	SOLAR ENERGY BASED WASTE MANAGEMENT SYSTEM AND METHOD WITH TIMELY ALERTS	201941036846
Dr. B S Ravishankar	EEE	SOLAR AND WIND HYBRID ENERGY GENERATION APPARATUS	393344-001

JOURNAL PAPERS WHICH IS TOP EFFECTIVE 25% (Q1)

- Babu, A. | Somesh, T.E. | Ani Dechamma, C.D. | Hemavathi, A.B. | Kakarla, R.R. | Kulkarni, R.V. | Raghu, A.V., Ternary *structured magnesium cobalt oxide/graphene/polycarbazole nanohybrids for high performance electrochemical supercapacitors*, *Materials Science for Energy Technologies*, 10.1016/j.mset.2023.04.002.
- Murshed, B.A.H. | Mallappa, S. | Abawajy, J. | Saif, M.A.N. | Al-ariki, H.D.E. | Abdulwahab, H.M., *Short text topic modelling approaches in the context of big data: taxonomy, survey, and analysis*, *Artificial Intelligence Review*, 10.1007/s10462-022-10254-w, SDG 16
- Haswani, D. | Sunder Raman, R. | Yadav, K. | Dhandapani, A. | Iqbal, J. | Naresh Kumar, R. | Laxmi Prasad, S.V. | Yogesh, A. | **Sadashiva Murthy, B.M.** | Lokesh,

	K.S., <i>Pollution characteristics and ecological risks of trace elements in PM2.5 over three COALESCE network sites - Bhopal, Mesra, and Mysuru, India</i> , Chemosphere, 10.1016/j.chemosphere.2023.138203, SDG 3 SDG 11
4	Vedavathi, N. Anil Kumar, K.M., <i>E-learning course recommendation based on sentiment analysis using hybrid Elman similarity</i> , Knowledge-Based Systems, 10.1016/j.knosys.2022.110086.
5	Hezam, A. Abutaha, N. Almekhlafi, F.A. Morshed Nagi Saeed, A. Abishad, P. Wadaan, M.A., <i>Smart plasmonic Ag/Ag₂O/ZnO nanocomposite with promising photothermal and photodynamic antibacterial activity under 600 nm visible light illumination</i> , Journal of Photochemistry and Photobiology A: Chemistry, 10.1016/j.jphotochem.2022.114322, SDG 3.
6	Vitek, M. Das, A. Lucio, D.R. Zanlorensi, L.A. Menotti, D. Khiarak, J.N. Shahpar, M.A. Asgari-Chenaghlu, M. Jaryani, F. Tapia, J.E. Valenzuela, A. Wang, C. Wang, Y. He, Z. Sun, Z. Boutros, F. Damer, N. Grebe, J.H. Kuijper, A. Raja, K. Gupta, G. Zampoukis, G. Tsochatzidis, L. Pratikakis, I. Aruna Kumar, S.V. Harish, B.S. Pal, U. Peer, P. Struc, V., <i>Exploring Bias in Sclera Segmentation Models: A Group Evaluation Approach</i> , IEEE Transactions on Information Forensics and Security, 10.1109/TIFS.2022.3216468.
7	Gururaj, H.L. Manju, N. Nagarjun, A. Manjunath Aradhya, V.N. Flammini, F., DeepSkin: A Deep Learning Approach for Skin Cancer Classification, IEEE Access, 10.1109/ACCESS.2023.3274848, SDG 3.
8	Chennamma, H.R. Madhushree, B., <i>A comprehensive survey on image authentication for tamper detection with localization</i> , Multimedia Tools and Applications, 10.1007/s11042-022-13312-1.
9	Pooja, S. Mallikarjunaswamy, S. Sharmila, N., <i>Image region driven prior selection for image deblurring</i> , Multimedia Tools and Applications, 10.1007/s11042-023-14335-y.
10	Shubha, J.P. Roopashree, B. Patil, R.C. Khan, M. Shaik, M.R. Alaqrabeh, M. Alwarthan, A. Mahmoud Karami, A. Adil, S.F., <i>Facile synthesis of ZnO/CuO/Eu heterostructure photocatalyst for the degradation of industrial effluent</i> , Arabian Journal of Chemistry, 10.1016/j.arabjc.2023.104547, SDG 6 SDG 9 SDG 12
11	Subbalakshmi, A.R. Sahoo, S. Manjunatha, P. Goyal, S. Kasiviswanathan, V.A. Mahesh, Y. Ramu, S. McMullen, I. Somarelli, J.A. Jolly, M.K., <i>The ELF3 transcription factor is associated with an epithelial phenotype and represses epithelial-mesenchymal transition</i> , Journal of Biological Engineering, 10.1186/s13036-023-00333-z.
12	H. P, T. C, R. M. D, D., <i>Assessing the life cycle performance of green building projects: a building performance score (BPS) model approach</i> , Architectural Engineering and Design Management, 10.1080/17452007.2022.2068495, SDG 7 SDG 8 SDG 12.
13	Murshed, B.A.H. Suresha Abawajy, J. Saif, M.A.N. Abdulwahab, H.M. Ghanem, F.A., <i>FAEO-ECNN: cyberbullying detection in social media</i>

	<i>platforms using topic modelling and deep learning</i> , Multimedia Tools and Applications,10.1007/s11042-023-15372-3, SDG 16.
14	Manikanta, P. Mounesh, N. Nikam, R.R. Mohanty, J. Balakrishna, R.G. Sandeep, S. Nagaraja, B.M., <i>CdO Decorated with Polypyrrole Nanotube Heterostructure: Potent Electrocatalyst for the Detection of Antihistamine Drug Promethazine Hydrochloride in Environmental Samples</i> , Langmuir, 10.1021/acs.langmuir.3c01445.
15	Saif, M.A.N. Niranjan, S.K. Murshed, B.A.H. Al-ariki, H.D.E. Abdulwahab, H.M., <i>Multi-agent QoS-aware autonomic resource provisioning framework for elastic BPM in containerized multi-cloud environment</i> , Journal of Ambient Intelligence and Humanized Computing,10.1007/s12652-022-04120-4.
16	Gagan Kumar, S.K. Santhosh, A.S. Sumana, S. Trishul, A.M. Sandeep, S. Karthik, C.S. Rajabathar, J.R. Selvaraj, A., <i>Synthesis of LaW/Ag/GNRs nanocomposite: Application as transducer material for the simultaneous nano molar detection of synthetic dyes and as anode material for Li ion batteries</i> , Surfaces and Interfaces, 10.1016/j.surfin.2023.102744, SDG 7.
17	Prakash, K. Sridharan, A. Prasanna, H.S., <i>Compression Curves and Compression Indices of Compacted Montmorillonitic and Kaolinitic Soils</i> , Geotechnical and Geological Engineering 10.1007/s10706-023-02552-z.
18	Manikanta, P. Mounesh Nikam, R.R. mohanty, J. Sandeep, S. Nagaraja, B.M., <i>Designing hybrid nanocubes-like cobalt stannate with appliance of MWCNT's nano composite for electrochemical detection of dopamine in bio-clinical samples</i> , Materials Chemistry and Physics, 10.1016/j.matchemphys.2023.128131.
19	Mahesha Hema, M.K. Karthik, C.S. Udaya Kumar, A.H. Pampa, K.J. Mallu, P. Lokanath, N.K., <i>Structural conformation and coordination architecture investigation in the solvent induced cis Cu(II) complex containing fluorine-substituted β-diketonate ligand</i> , Journal of Molecular Structure, 10.1016/j.molstruc.2022.134146.
20	Shubha, J.P. Roopashree, B. Patil, R.C. Assal, M.E. Shaik, M.R. Kuniyil, M. Alduhaish, O. Dubasi, N. Farooq Adil, S., <i>A green approach for the degradation of toxic textile dyes by nickel oxide (NiO-SD) NPs: Photocatalytic and kinetic approach</i> , Journal of King Saud University – Science ,10.1016/j.jksus.2023.102784, SDG 6.
21	Bhat, D. Spoorthy, L. Sharanya, R. Siddesh, M. Mahesha H Udaya Kumar, A. Lokanath, N.K., <i>Influence of hydroxyl group in stabilizing the Schiff base crystal structure: Crystal structure, computational and molecular docking studies</i> , Journal of Molecular Structure, 10.1016/j.molstruc.2023.135054, SDG 3.
22	Saif, M.A.N. Niranjan, S.K. Murshed, B.A.H. Ghanem, F.A. Ahmed, A.A.Q., <i>CSO-ILB: chicken swarm optimized inter-cloud load balancer for elastic containerized multi-cloud environment</i> , Journal of Supercomputing, 10.1007/s11227-022-04688-w.
23	Dhandapani, A. Iqbal, J. Kumar, R.N. Bhardwaj, A. Shukla, D. Raman, R.S. Prasad, S.V.L. Murthy, B.M.S., <i>Characterization of fine particulate matter water-</i>

	<i>soluble inorganic ions and estimation of aerosol acidity at three COALESCE network sites — Mysuru, Bhopal, and Mesra — in India</i> , Environmental Science and Pollution Research, 10.1007/s11356-023-27032-y.
24	M R, S. K M, R. S, B. A B, H. Vishwanath, P.M. Syed, A. Eswaramoorthy, R. Amachawadi, R.G. Shivamallu, C. Chattu, V.K. Majani, S.S. Kollur, S.P., <i>Pectin/PVA and pectin-MgO/PVA films: Preparation, characterization and biodegradation studies</i> , <i>Heliyon</i> , 10.1016/j.heliyon.2023.e15792.
25	Lohith, T.N. Hema, M.K. Karthik, C.S. S, S. Rajabathar, J.R. Karnan, M. Lokanath, N.K. Mallesha, L. Mallu, P. Sridhar, M.A., <i>Probing the hydrogen bond network in the crystal structure of a sulfonamide derivative: A quantum chemical approach</i> , <i>Journal of Molecular Structure</i> , 10.1016/j.molstruc.2023.135841.
26	Chahra, B. Ouahida, Z. Mahesha Udaya Kumar, A.H. Chahrased, B. Richard, W. Lokanath, N.K., <i>Design and structural analysis of centrosymmetric and non-centrosymmetric Zn(II) complexes by the host-guest complexation method</i> , <i>Journal of Molecular Structure</i> , 10.1016/j.molstruc.2022.134716.
27	Vedavathi, N. Kumar, K.M.A., <i>Bat competitive swarm optimizer enabled DMN for automatic recommendation of learning objects</i> , <i>Evolutionary Intelligence</i> , 10.1007/s12065-022-00706-1, SDG 4.
28	Shamarao, N. Chethankumar, M., <i>Molecular mechanism of anti-obesity effect of total lutein oxidized products (LOPs) in diet-induced obese mice</i> , <i>Journal of Taibah University for Science</i> , 10.1080/16583655.2023.2226489, SDG 3.
29	Hema, M.K. García-Santos, I. Castiñeiras, A. Mehrabian, M. Zangrandó, E. Ramalingam, R.J. Ramakrishna, B.N. Lokanath, N.K. Karthik, C.S. Mahmoudi, G., <i>Cg...Cg interactions driven 1D polymeric chains bridged by lattice solvents in N3-(2-pyridoyl)-4-pyridinecarboxamidrazone Pb(II) complex</i> , <i>Journal of Molecular Structure</i> , 10.1016/j.molstruc.2023.136420,
30	Tapkire, M.D. Arun, V., <i>Application of artificial intelligence to correlate food formulations to disease risk prediction: a comprehensive review</i> , <i>Journal of Food Science and Technology</i> , 10.1007/s13197-022-05550-w.
31	Mohana, S.D. Prakash, S.P.S. Krinkin, K., <i>CCNSim: An artificial intelligence enabled classification, clustering and navigation simulator for Social Internet of Things</i> , <i>Engineering Applications of Artificial Intelligence</i> , 10.1016/j.engappai.2022.105745, SDG 11.
32	Shivamurthy, A. Jagannat, R.K. Prashanth, G.R. B, S. Rajini, N. Muhammed, F.F. Al-Lohedan, H.A. Boranna, R. Krishnan, K., <i>Carbon-graphene-epoxy sandwich dielectric for improved dielectric response to humidity</i> , <i>Journal of Materials Research and Technology</i> , 10.1016/j.jmrt.2023.09.322.
33	Prasanna, B.T. Ramya, D. Shelke, N. Fernandes, J.B. Galety, M.G. Ashok, M., <i>Radial basis function neural network-based algorithm unfolding for energy-aware resource allocation in wireless networks</i> , <i>Wireless Networks</i> , 10.1007/s11276-023-03540-0, SDG 7.
34	Reshma, G. Prasanna, B.T. Murthy, H.S.N. Murthy, T.S.N. Parthiban, S. Sangeetha, M., <i>Privacy-aware access control (PAAC)-based biometric</i>

	<i>authentication protocol (Bap) for mobile edge computing environment, Soft Computing</i> , 10.1007/s00500-023-08226-5, SDG 9.
35	Gour, G.B. Udayashankara, V. Badakh, D.K. Kulkarni, Y.A., Quest for Speech Enhancement Method in the Analysis of Pathological Voices, Circuits, Systems, and Signal Processing , 10.1007/s00034-022-02286-y, SDG 3.
36	Naji Saif, M.A. Niranjan Aradhya, S.K. Hezam Murshed, B.A. Farhan Alnaggar, O.A.M. Ali, I.M.S., <i>Multi-objective container scheduling and multi-path routing for elastic business process management in autonomic multi-tenant cloud, Concurrency and Computation: Practice and Experience</i> , 10.1002/cpe.7584.
37	S. V, N. B. S, C. Mahesha K. N, C.P. M. K, H. N. K, L., In-silico investigation of 4-nitro-N-1H-pyrazol-3-ylbenzamide towards its potential use against SARS-CoV-2: a DFT , molecular docking and molecular dynamics study, <i>Journal of Biomolecular Structure and Dynamics</i> , 10.1080/07391102.2023.2262597, SDG 3.
38	Manikanta, P. Mounesh, N. Nikam, R.R. Sandeep, S. Nagaraja, B.M., Development of novel microsphere structured - calcium tungstate as efficacious electrocatalyst for the detection of antibiotic drug nitrofurantoin , <i>Journal of Materials Chemistry B</i> , 10.1039/d3tb02087h.
39	Bhavani, S.D. Bharathi, R.K., A multi-dimensional review on handwritten signature verification: strengths and gaps , <i>Multimedia Tools and Applications</i> , 10.1007/s11042-023-15357-2.
40	Zhang, L. Zhang, C. Wang, P. Shabaz, M. Skanda, M.G. Vijayalakshmi, C. Kishore, K.H., Realization of optimization design of electromechanical integration PLC program system based on 3D model , <i>Nonlinear Engineering</i> , 10.1515/nleng-2022-0252, SDG 9.
41	Nagaraju, M. Karthik, C.S. Hema, M.K. Chethan, B.S. Ramalingam, R.J. Karnan, M. Lokanath, N.K., Perusal on the role of DMF solvent and hydrogen bonding in the formation of 1D polymeric chains in mixed ligand Ni(II) complex as an anticancer agent: a computational approach , <i>Journal of Biomolecular Structure and Dynamics</i> , 10.1080/07391102.2023.2291543, SDG 3.
42	Madhushree, B. Basanth Kumar, H.B. Chennamma, H.R., An exhaustive review of authentication, tamper detection with localization and recovery techniques for medical images , <i>Multimedia Tools and Applications</i> , 10.1007/s11042-023-16706-x.
43	Srinivasamurthy, L. Nataraja, M.C. Srinivasan, K., Investigation on Flexural Behavior of Conventionally Reinforced, Steel Fiber-Reinforced, and Post-tensioned Geopolymer Concrete Beams , <i>Journal of The Institution of Engineers (India): Series A</i> , 10.1007/s40030-023-00772-3.
44	Shashidhar, R. Shashank, M.P. Sahana, B., Enhancing Visual Speech Recognition for Deaf Individuals: A Hybrid LSTM and CNN 3D Model for Improved Accuracy , <i>Arabian Journal for Science and Engineering</i> , 10.1007/s13369-023-08385-5.
45	Prakash, K. Sridharan, A. Manoj, N. Manoj, Friction Angles of Sands: An Appraisal , <i>Geotechnical and Geological Engineering</i> , 10.1007/s10706-023-02548-9.
46	Bramesh, S.M. Kumar, K.M.A. Nayyar, A., An effective rule- and network-based

approach for identification of gender- and age-dependent comorbidity patterns in diabetic patients, *Multimedia Tools and Applications*, 10.1007/s11042-023-16943-0, SDG 3.

CONFERNECES

Second International Conference on Advanced Materials for Health, Energy, and Environment (AMHEE-2023)

As a part of Diamond Jubilee Celebration of SJCE, The Department of Chemistry, Sri Jayachamarajendra College of Engineering, JSS Science & Technology University in association with Department of Biotechnology, Environmental Engineering and Polymer Science & Technology has organized the “Second International Conference on Advanced Materials for Health, Energy and environment (AMHEE-2023)” from **28th February to 2nd March 2023**.

Around 230 participants registered for AMHEE-2023. Among those participants 135 participants presented their research work by oral presentation and around 95 participants presented their research work through poster.



5th International Conference on Cognitive Computing and Information Processing (CCIP 2023)

The 5th International Conference on Cognitive Computing and Information Processing (CCIP 2023) is jointly organized by the flagship Departments of Computer Science & Engineering, Information Science & Engineering and Computer Applications during 15th Dec. 2023 – 16th Dec. 2023. The main focus of the conference was to understand the recent advancements in the cognitive era of computing systems that emulate the capability of human mind. The conference was partnered with prestigious **Springer CCIS** for publications in this series.

CCIP 2023 had received a number of submissions from the fields of Cognitive Computing and Information Processing and its prospective applications. The papers received have undergone a rigorous peer review process with the help of the technical program committee members of the conference from the various parts of country as well as abroad. The review process has been crucial with minimum three reviews each along with due checks on similarity and content

overlap. There were more than 130 papers submitted to CCIP-2023, upholding the quality requirements, around 15% of the papers received were selected for presentation.



SUSTAINABLE DEVELOPMENT GOALS (SDG) MAPPED TO JSSSTU

The United Nations Sustainable Development Goals (SDGs) are specific research areas that are helping to solve real-world problems. They are part of a plan to end poverty, protect the planet, and improve the lives and prospects of everyone by 2030. JSS STU contributions towards SDG* is shown below.

SDG contributions

No poverty Goal 1	Zero hunger Goal 2	Good health and well-being Goal 3	Quality education Goal 4
View 1 document	View 8 documents	View 180 documents	View 10 documents
Gender equality Goal 5	Clean water and sanitation Goal 6	Affordable and clean energy Goal 7	Decent work and economic growth Goal 8
View 1 document	View 73 documents	View 85 documents	View 10 documents
Industry, innovation and infrastructure Goal 9	Reduced inequalities Goal 10	Sustainable cities and communities Goal 11	Responsible consumption and production Goal 12
View 72 documents	View 1 document	View 46 documents	View 21 documents
Climate action Goal 13	Life below water Goal 14	Life on land Goal 15	Peace, justice and strong institutions Goal 16
View 16 documents	View 9 documents	View 9 documents	View 11 documents
Partnership for the goals Goal 17			
View 114 documents			

*Source: Scopus

FEATURED RESEARCH @ JSS STU



B.S. Harish

Fully Annotated Datasets for Pedestrian Detection, Tracking, Re-Identification and Search from Aerial Devices: The P-DESTRE dataset is the result of a joint effort from researchers at the University of Beira Interior (Portugal) and at the JSS Science and Technology University (India). To enable the research on pedestrian identification from aerial data, a set of "DJI Phantom 4" drones controlled by human operators flied over different scenes of the campus of both universities, acquiring data that simulate the everyday conditions in outdoor urban crowded environments.



M.S. Mallikarjunswamy

Medical assistive devices and Diagnostic tools using Infrared (IR) thermal Imaging: Infrared (IR) thermal imaging is a non-invasive, fast, and effective approach of medical imaging for disease diagnosis. The dataset is created using the IR thermal camera images. Radiography, clinical test data and Infrared images were recorded for analysis of Rheumatoid Arthritis and lower back pain patients. The developed interface of IR camera and software program helps doctors in diagnosis and treatment of patients. The work is carried out in collaboration with CRICR, Bengaluru.



S.B. Rudraswamy

Nano-Devices and Sensors: In the field of metal-oxide based gas sensors, the major challenges are to reduce the cost of sensors, improve reliability and long-term stability with low order of detection, selectivity and low power consumption. Bulk production of nano-sized sensors, sensors on plastic sheets and new sensor device structure are few of the approaches to achieve low effective, low power and high selective sensors. Currently, our team is engaged in developing sensor array platform for portable devices, and new sensor device architectures for the selective detection of hazardous gases using CMOS compatible process.



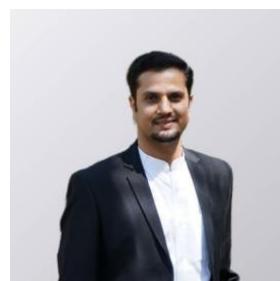
Madhu Chennabasappa

Materials for energy storage (Li-ion & Na-ion batteries): Energy is the most sought in the day-to-day activity of the modern world. It is part and parcel of each activity irrespective of the walk of life, be it household, industry, or commuting. Our group aims to research sustainable - renewable energy sources and material characterization. We collaborate with institutes of national and international importance to carry out state-of-the-art characterization techniques such as neutron, synchrotron diffraction, or spectroscopy techniques. Thereby looking to explore the potential of the materials for energy storage (Li-ion and Na-ion), photocurrent generation, photocatalytic degradation, and magnetocaloric materials.



Vijaykumar M.S.

Utilization of Microgravity Environment: High Temperature Materials: We have been focusing on the effect of gravity on materials, high refractive index glasses, thermophysical property measurements, molten oxide electrolysis, metastable phases, high temperature materials, design and engineering of functional materials, metallic nanoparticles, materials chemistry, and so on. Microgravity science is a gift from space development and various technological inventions can be done to develop the space-material technology and other undiscovered materials. In order to accelerate research on physics of *gravity-dependent phenomena*, we have made lots of effort to prepare materials by utilizing microgravity even on earth by opposing gravity with a levitation force such as an electromagnetic, electro-static, gas stream and aero-acoustic forces; this is a concept of “*microgravity simulation laboratory*”.



Skanda M. G.

Information Display Design and Human Systems Integration for Advanced Fighter Aircrafts: Our involvement centered around utilizing Task/Analysis and Work Analysis techniques for requirements elicitation in the context of information display design and human systems integration for advanced fighter aircraft. Drawing on a background in human factors (Systems Engineering/Industrial Engineering), our responsibilities encompassed

understanding and modelling the work domain through interviews with pilots. The ultimate goal was to create work domain models and decision scenarios that informed the design of information displays crucial for the operational effectiveness of advanced fighter aircraft. This research work was a collaborative effort between two prominent institutions, IIT Bombay and DRDO ADA, Bangalore.



THANK YOU

Office of the Dean (Research), JSS STU, Mysuru
www.jssstuniv.in