



(DEEMED TO BE UNIVERSITY)



**CATEGORY 1
UNIVERSITY**
BY MHRD, Govt. of India

**KL ACCREDITED BY
NAAC WITH A++
GRADE**

nirf
2024
NATIONAL
INSTITUTIONAL
RANKING
FRAMEWORK

**RANKED 22
AMONG ALL
UNIVERSITIES**

**45 YEARS OF
EDUCATIONAL
LEADERSHIP**

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



Centre for Applied Research in Electromagnetics

CENTRE FOR APPLIED RESEARCH IN ELECTROMAGNETICS



ABOUT THE RESEARCH CENTER

Dedicated to electromagnetic research and development, CARE-ECE is an integral part of the ECE department at KL University. Established in 2016, the center specializes in cutting-edge research with a focus on defense, space, and industry applications.



VISION

To be a globally recognized hub for pioneering research, innovation, and commercialization in the field of electromagnetics, contributing to technological advancements and sustainable development.

- **Globally Recognized**
Pioneering research and innovation.
- **Technological Advancements**
Contributing to the field of electromagnetics.
- **Sustainable Development**
Addressing societal challenges through research.



MISSION

- **Knowledge Enhancement**
Continuously expanding our knowledge base
- **Advanced Facilities**
Investing state of the art equipment.
- **Human Resource Development**
Nurturing future generation of researchers

KEY RESEARCH AREAS

- › Antennas
- › Microwave devices
- › Meta materials
- › Electromagnetic Interference
- › Physical bounds
- › Inverse problems

EQUIPMENT DEATILS

The center has established in the field of Electromagnetic Interference and Compatibility training with the infrastructure and experienced and qualified engineers and technicians. The centre has also established in the research and development in the areas of RF Communication, Antenna, Electronic Packaging.

Vector Network Analyzer



Aethalometer



Spectrum Analyzer



Agilent Spectrum Analyzer



Micro Rain Radar



EQUIPMENT DEATILS

Name	Purpose	Purchased From	Cost
OTT Parsivel Disdrometer	Raindrop measurements	SGS Weather & Environmental Systems Private Limited	3,53,662.00
Data Evaluation Software ASDO			40,554.73
Power Supply Unit 90-260V AC/24V&DC50W			25,099.72
Connecting Cable1.2M			3,861.57
Installation Pole			25,996.00

Name	Quantity	Working Condition	Data Availability
Micro Rain Radar (MRR)	1	Yes	11/06/2016 to Present
Aethalometer	1	Yes	19/01/2016 to Present
Microwave Radiometer (MWR)	1	Installation Under Process	
Ka Band30.5GHz Beacon Recording Equipment	1	Installation Under Process	

Name	Quantity	Product No	Working Condition
Antenna Measurements System	1	RFL -NCT-A-3G	Yes
Advanced Microstrip Component Trainer	1		Yes
Power Square UPS (L714)	1		Yes
Ham Radio	2		Yes
Deviser(Satellite Finder)	1	S30	Yes

TEAM MEMBERS



Dr. K. Ch. Sri Kavya

Director - Alumni Relations, Professor,
Department of Electronics
& Communication Engineering



Dr. K. Sarat Kumar

Director(R&D,PR), Professor
Department of Electronics
& Communication Engineering



Dr. M. Venkata Narayana

Director- Campus Recruitment Professor,
Department of Electronics
& Communication Engineering



Dr. I Govardhini

Principal Academic staff College Professor,
Department of Electronics
& Communication Engineering

COLLABORATORS

- Space Applications Centre, (SAC) Ahmedabad
- University of Calcutta, Kolkata
- SV University, Tirupati
- ESA, The Netherlands for RAPIDSII Access

SCHOLARS

- Mr. S. S. S Kalyan
- Mrs. MANJULATHA
- Mr. DRAVITEJA
- Mrs. R. Latha

HIGHLIGHTS OF RESEARCH CENTRE WORKS

> Electromagnetic Interference

Our team specializes in understanding and mitigating electromagnetic interference. We can help you design and implement solutions to reduce EMI noise.

> Antenna Design

We have expertise in designing and fabricating innovative antenna systems for various applications. We can help you with everything from conceptual design to prototyping.

PROJECTS

Name of the PI/Co-PI	Project Title	Funding Agency	Amount in Rs	File Number
Chinnari Sri Kavya Korada	Communication Platforms using the Low Cost Transceivers setup's for Quick Establishment and Operation during Disaster Situations	SERB	2545000	SR/WOS-A/ET-033/2011(G)
Chinnari Sri Kavya Korada	Performance Analysis Of Ka-Band Reconfigurable Antennas For Fade Mitigation In Earth Space Paths	SERB	3893000	SB/FTP/ETA-0175/2014
Chinnari Sri Kavya Korada	Characterization and Modeling of Ka-Band Earth Space Paths for Prediction of Total Attenuation including Fade Dynamics	SERB	5360000	EMR/2015/000100
Sarat Kumar Kotamraju	Science Technology and Innovation Hub in Guntur	CENTRAL GOVERNMENT	25936092	DST/SEED/SCSP/STI/2021/699)

PUBLICATIONS

- › Krishna Reddy Madikerra, Sarat K Kotamraju, Kavya Korada, Bala Gangadhar Tilak Gande, "Radar Reflectivity of Micro Rain Radar(MRR2) At16.44180N, 80.620E of India" December 2022-14(7) DOI:10.30880/ijie.2022.14.07.013
- › Kalyan, S.S.S., K. Ch Sri Kavya, and Sarat K. Kotamaraju. "PERFORMANCE ANALYSIS OF SYNTHESIZED BEAMSTEERING LINEAR ARRAY ANTENNA FOR KA-BAND SATELLITE COMMUNICATION LINKS." Journal of Fundamental and Applied Sciences 10.6S(2018):2895-2910.
- › Krishna Reddy Madikerra, Sarat K Kotamraju, Kavya Korada, "Seasonal Rainfall Analysis of Vertically Pointing FMCW Micro Rain Radar" July2023-4(5) DOI:10.1007/s42979-023-01987-8
- › Devika, S.V., Kotamraju, S.K., Kavya, K.C.S., Kumar, V.S., Suhas, K., Vinu, K., & Anudeep, B.(2016). A Circularly Polarized Ka-Band Antenna for Continuous Link Reception from GSAT-14. Indian Journal of Science and Technology, 9(38).



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