

MoEs Institution Innovation council
 In association with
 AICTE Industry Institute Partnership Cell

organises

Sairam
Defence Innovation and Startup

HACKATHON  **4.0**

*Ignite innovation and Foster Collaboration
 for Forging the Future of Defence*

5th November 2024, Tuesday



Sri
SAIRAM
ENGINEERING COLLEGE
An Autonomous Institution
 West Tambaram, Chennai - 44
www.sairam.edu.in

Sairam

Defence Innovation and Startup



PROBLEM STATEMENTS

DISC 12

- ▶ Li-Fi Tech for OT's/MRI Centers
- ▶ C-UAS Bubble for VA/VP Protection Using GNSS Jamming
- ▶ Antiskid Tracks for BMP
- ▶ Analysis of SAR Imagery
- ▶ Tethered Drone Mounted B/FWS Antenna
- ▶ V/UHF Satellite Appliqué Unit
- ▶ Solid-State Amplifiers for 'X' Band Radars
- ▶ Offline NLP-Based Near Real-Time Multilingual Language Translation System
- ▶ Starter to Enable the Powering Up of the Russian Gas Turbine Generator GTG 1250-2E
- ▶ Underwater Smart Communication Buoy
- ▶ Deep Sea Seal for Shaftlines
- ▶ Drone-Based/Innovative Range Scoring System for Air-to-Ground Weapons
- ▶ Flight Data Recorder (FDR) Using Onboard Camera
- ▶ Artificial Intelligence for Human Resource Management
- ▶ Helicopter Electronic Glide Path-Based Landing System
- ▶ AI-Based Prediction Model for Bird Hazard Management System
- ▶ Communication Between Machinery Control Room and Engine Room Watch Keepers
- ▶ 25kW and 35kW Radars
- ▶ AC Compressor for Marine ACs
- ▶ Shaft Bearings Used Onboard Vishwast, Samarth, Sachet Class of Vessels
- ▶ Silicon / Compound Semiconductor Based High-Power Pulsed Laser Diode
- ▶ Proximity Sensor of Aerial Bomb Fuze for Activating Fuze Firing Circuit
- ▶ Proximity Sensor of Naval Artillery Fuze for Activating Fuze Firing Circuit
- ▶ Frequency Difference of Arrival-Based Direction of Arrival for Radar Signals
- ▶ Wireless and Telemetry-Based Temperature & Strain Measurement System
- ▶ Hydraulically Operated Main Winch with 50T Single Line Pull
- ▶ Electrolytic Manganese Production
- ▶ Ground Power Supply Bottle (GPSB) for Missile
- ▶ MIL Grade Airborne Connectors
- ▶ Autonomous/Remote Controlled Robot Mounted with Sniper
- ▶ Digital Elevation Model of Areas for Tunnel
- ▶ Construction of Roads
- ▶ Male Incontinence Device
- ▶ AI-Based Comprehensive Device for Detection of Cognitive Disturbances
- ▶ In-Flight Urination Device for Female Fighter Pilots
- ▶ Feedback Loop Extravasation Detection & Alarm System
- ▶ MRI-Compatible Multi-Parameter Monitor with Accessories
- ▶ NBC Protective Suit with Weather Conditioning System
- ▶ Peripheral Intravenous Cannula (PIVC)
- ▶ Ultrasound Chip-Based Non-Invasive Urodynamic Monitoring System
- ▶ Anti-Fogging Solution for Vision Field of CBRN Respirator

ADITI 2.0

1. Anti-drone Capability for Armoured Fighting Vehicles AFVs
2. Adaptive Camouflage for 'A' & 'B' Vehicles
3. MILGRAD/JSS-55555 Compliant 5G Mobile Handset (UE) For Applications
4. AI as a Service along with Infra Setup
5. Multi Barrel Loiter Munition (MBLM) System
6. Development of 76 mm Dart Ammunition
7. Design and Development of High-Power Laser Source
8. Design and Development of Infra-Red (IR) Detectors
9. Naval- Collaborative Combat Air Vehicle (N-CCAV)
10. Quantum Positioning System
11. Counter Swarm Drone System
12. Personal Oxygen Delivery System
13. Universal Anti-G Suit Test Rig
14. Road Mobile Tethered Aerostat System
15. Rubberized Fuel Tank (RFT) for Storage of ATF
16. Space Weather Package
17. Autonomous Docking Operations for OOMR
18. Portable Battery-Operated Towing Aggregate
19. Hovercraft For Military Operations

ABOUT THE HACKATHON 4.0



Sri Sairam Engineering College is thrilled to unveil its upcoming Sairam Defence Innovation and Startup Hackathon 4.0 - an extraordinary event designed to ignite innovation and foster collaboration in the realm of defense technology. This exceptional hackathon aims to establish a platform where gifted individuals, dynamic startups, and emerging innovators can actively participate in bolstering our nation's defense capabilities. The event serves as a catalyst for sparking creativity and problem-solving prowess among all participants. Anticipated as a landmark occasion, it signifies a pivotal juncture in our relentless pursuit of cutting-edge solutions that have the potential to fortify our nation's security infrastructure.

Rules and regulations:

1. Individual student registration is permitted
2. Participant can register for only one challenge from the list

**To Identify and support Students, Research Scholars & Faculty
for the Development of Technology / Product
for Defence Sector**

Chief Patron :

Dr. Sai Prakash LeoMuthu
Chairman & CEO, Sairam Institutions

Patron :

Dr. J. Raja
Principal

Conveners :

Dr. K. Renganathan, HOD / EIE
Dr. A. Sanjeevi Gandhi, Prof / EEE

For any Queries contact:

Coordinators:

Mr. M. Subramanian 9245525838
Dr. K. Suresh 9894895181



Sri
SAIRAM
ENGINEERING COLLEGE
An Autonomous Institution

Affiliated to Anna University & Approved by AICTE, New Delhi

Accredited by NBA and NAAC "A+"
BIS/EOMS ISO 21001:2018 & BVQI 9001 : 2015 Certified
and NIRF ranked institution

Campus: Sai Leo Nagar, West Tambaram,
Chennai - 600 044. www.sairam.edu.in

Administrative Office: "Sai Bhavan",
31B, Madley Road, T.Nagar,
Chennai - 17. Ph: 044-4226 7777.

www.sairamgroup.in



Sairam
RAISE
Inspiring
PEOPLE

Sairam
EOMS
Improving
PROCESS

Sairam
SDG ACTION
PROGRAM
Instilling
PURPOSE