OUTREACH EVENT FROM C-DAC

BANGALORE

ON 21ST NOVEMBER 2023

SECAB INSTITUTE OF ENGINEERING AND TECHNOLOGY VIJAYAPURA

JOINTLY ORGANISED BY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

&

DEPARTMENT OF COMPUTER SCIENCE

OUTREACH EVENT FROM C-DAC BANGALORE

VENUE: CSE Seminar Hall- November 21st, 2023

SECAB Association's
SECAB INSTITUTE OF ENGINEERING AND TECHNOLOGY, VIJAYAPUR
(Approved by AICTE, New Delhi and Affiliated to VTU, Belagavi)
**Department of Electronics and Communication Engineering,
Department of Computer Science & Engineering
In association with IIC**

Academic Year 2023 - 2024

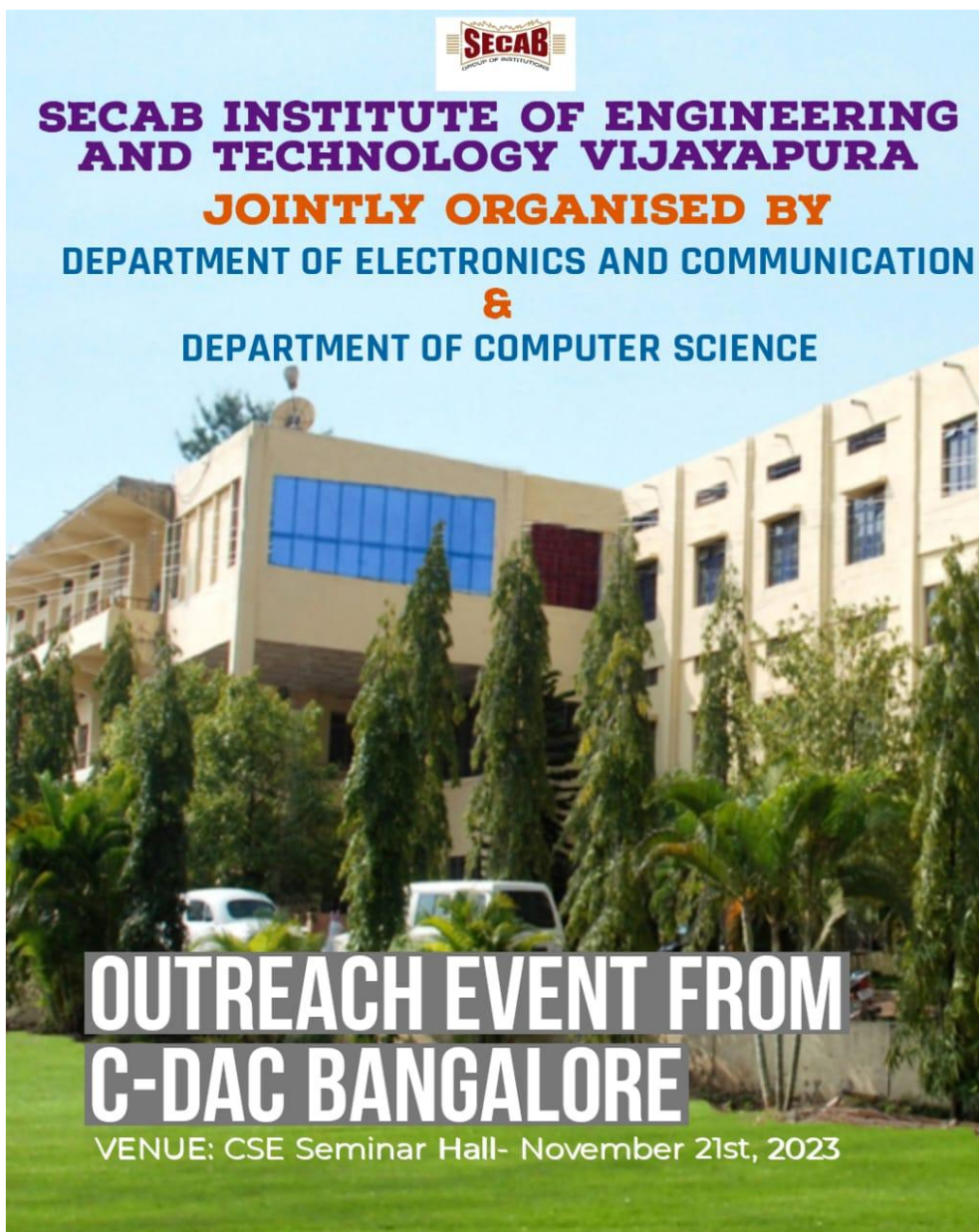## A REPORT ON OUTREACH EVENT FROM C-DAC BANGALORE

Department of Electronics & Communication Engineering together with department of Computer Science & Engineering, organized one day session for pre final and final year students from C-DAC Bangalore to create awareness about the projects, products, solutions on 21th November 2023 at CSE seminar hall. The resource person for the event: Mr. Shrikrishna S Chippalkatti, Joint Director, C-DAC, Bengaluru

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Aims & Objectives:

- Raise Awareness:
  Increase awareness about C-DAC's research areas, projects, and contributions in the field of advanced computing among students, professionals, and the general public.

- Technology Showcase:
  Showcase C-DAC's cutting-edge technologies, innovations, and solutions in areas such as high-performance computing, artificial intelligence, cyber security, and more.

- Collaboration Opportunities:
  Provide a platform for networking and collaboration between C-DAC researchers, industry professionals, and academic institutions to foster partnerships and joint initiatives.

- Skill Development:
  Conduct workshops, seminars, and training sessions to enhance the skills of participants in emerging technologies and tools developed by C-DAC.

- Educational Outreach:
  Engage with educational institutions to promote the integration of advanced computing concepts into academic curricula and encourage students to pursue careers in technology.

- Career Guidance:
  Offer career guidance sessions and discussions to help students and professionals understand the diverse career opportunities available in the field of advanced computing.

- Showcase Success Stories:
  Highlight success stories and case studies of projects undertaken by C-DAC, demonstrating the practical impact of advanced computing in various domains.

- Innovation and Entrepreneurship:
  Encourage innovation and entrepreneurship by showcasing start-ups, spin-offs, and success stories of individuals or groups who have leveraged C-DAC technologies for their ventures.

- Community Engagement:
  Engage with the local community through interactive sessions, demonstrations, and outreach activities to promote a better understanding of the importance of advanced computing in everyday life.

- Feedback and Improvement:
  Collect feedback from participants to assess the effectiveness of the outreach event and identify areas for improvement in future initiatives.

- Inclusivity:
  Foster inclusivity by ensuring that the outreach event reaches a diverse audience, including individuals from different backgrounds, genders, and communities.

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- Promote Open Source Initiatives:
  Emphasize C-DAC's commitment to open-source initiatives and promote collaboration with the wider community for the development and improvement of open-source projects.

Centre for Development of Advanced Computing (C-DAC) is the premier Research and development organization under the Ministry of Electronics and Information Technology (MeitY) for carrying out Research and Development (R & D) in IT, Electronics and associated areas. C-DAC is committed to nation-building through its Education and Training / Advanced Computing Training School (ACTS).The aim of this outreach program is to create awareness about its Projects, Products, Solutions & Services. C-DAC, Bangalore has various funded projects from Government of India for the benefit of Academic community

Details from the C-DAC Bangalore
C-DAC, Bengaluru centre, is the 2nd of C-DAC centres established in 1989 to carry-out research and deliver solutions and products in the area of System Software for PARAM series of supercomputers of C-DAC. PARAM Padma was housed at C-DAC's Terascale Supercomputing Facility (CTSF), results from its third mission project in High-Performance Computing Technologies, which was listed in the Top 500 Supercomputers.

The centre is equipped with PARAM Utkarsh Supercomputing facility, contributing towards National Super computer mission (NSM) and offers HPC System Software solutions & services along with development of debuggers, profilers, web frameworks, high speed data transfer tools for national grid computing, AI framework & big data Software suites, and gateways for multiple scientific application domains.

The centre is highly acclaimed as a centre for excellence in the thematic areas of HPC, Grid Computing, Hardware Security, Cyber Security, IoT, DNSSec, Strategic Electronics, FOSS and Software Technologies, Language and Heritage Computing, Knowledge & Resource Centre for Accessibility, ICT for Social welfare, Consultancy and Training. C-DAC Bengaluru is enriched with indigenous solutions in cloud security, next generation SCADA systems, Industrial control systems, critical infrastructure Security, power optimization for HPC, Network firewall systems, Indian Heritage and Language computing, IoT solutions for smart cities, Smart Post Kiosk, Indus IoT Kit, IoT Lab Kit, Indus Copter, Smart Energy Meter, ICT for Social Welfare, 32-bit High performance Microcontroller, chip design, crypto module validation and

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Quantum Simulator. This center is involved in disseminating vast experience for the enrichment of education and knowledge.

Apart from the R& D projects, C-DAC Bangalore offers the following services:

- Onsite Application services for HPC and other IT applications
- Conducting training programs in the emerging areas of Parallel Programming, Many core GPGPU / accelerator architectures, Cloud computing, Grid computing, High performance Peta-exascale computing, etc.
- Porting of applications on state-of-the-art HPC system and parallelization of serial codes
- Provide design consultancy in the emerging technology areas
- Scientific software products for Parallel Programming such as Automatic Code Parallelizer, Parallel Program Development Environment, HPC Profiler, etc.
- Cloud Builder and Labkit, Porting applications to Cloud, cloud based solutions
- Design and Development of custom web based solutions such as Problem Solving Environments, Scientific Workflows, Portals, IDEs, etc.
- Advanced Security audit, disaster recovery, designing and implementing the security policy
- Provide C-DAC's HPC Systems Facility as a service for exploratory study
- Benchmarking of Applications to assess HPC requirement for the respective applications
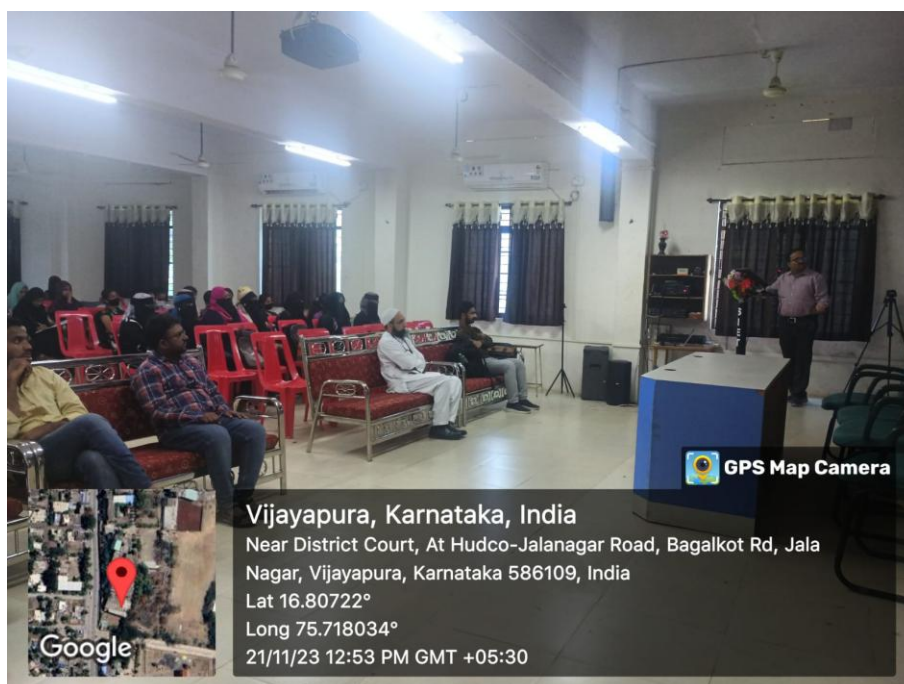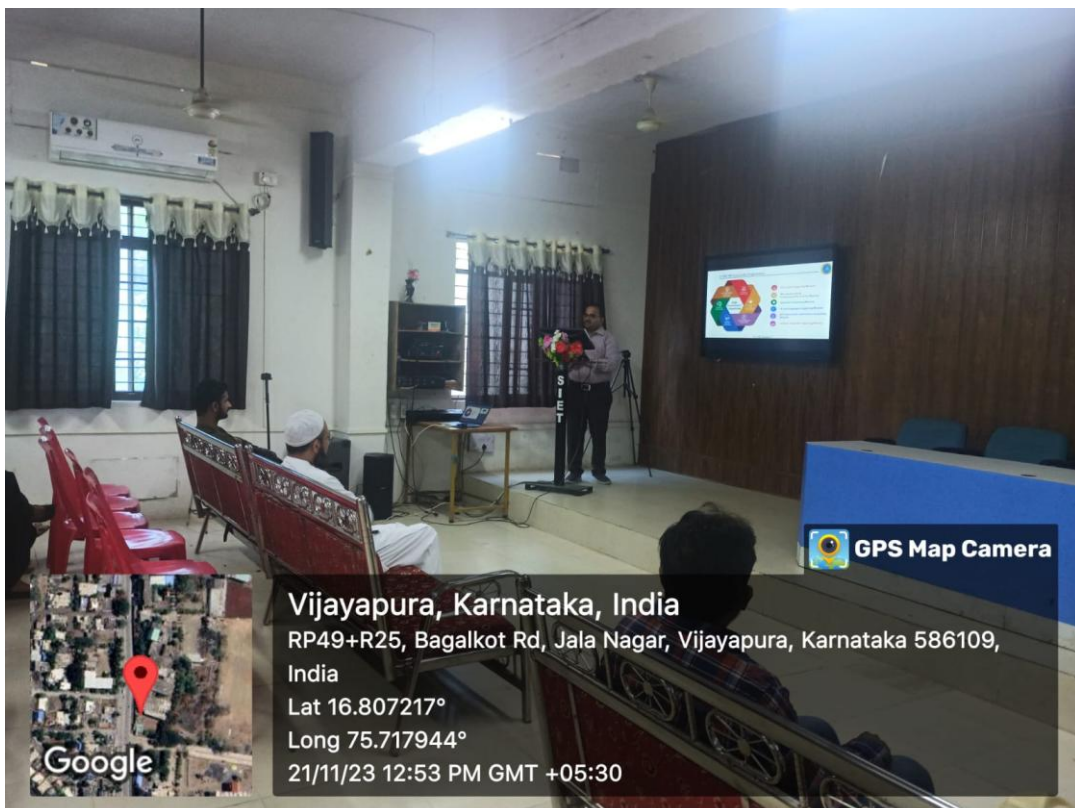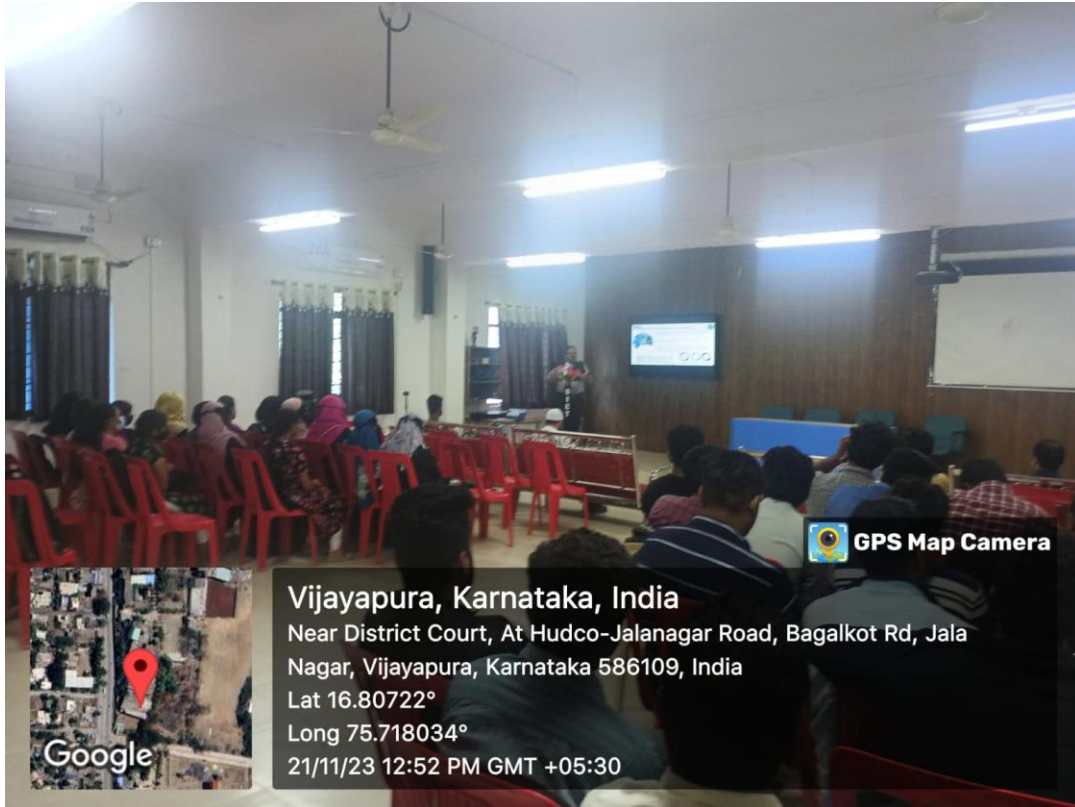
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Glimpses of the Program

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