

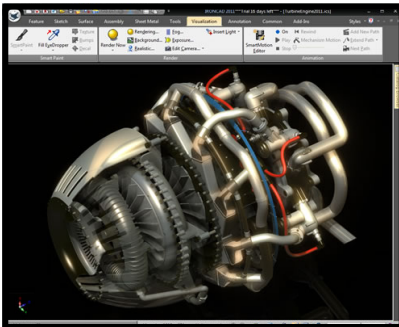
# MECHAZINE

DEPARTMENT OF MECHANICAL ENGINEERING

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## IRONCAD



IRONCAD is a software product for 3D and 2D CAD (computer-aided-design) design focused mainly on the mechanical design market that runs on Microsoft Windows. It is developed by Atlanta, GA based IronCAD LLC. IRONCAD was originally developed by Visionary Design Systems (VDS) based in Santa Clara, CA. The product launched in 1998. In 2001 the development team led by Dr. Tao-Yan Han split from VDS (now known as Alventive) to form IronCAD LLC to continue the

development of the IRONCAD product. IRONCAD primary focus is on 3D CAD design using solid modeling technology. IRONCAD uses both Parasolid and ACIS modeling kernels to provide computational methods for solving geometric calculations such as calculating blends and shells. Users create designs in 3D using a drag and drop design methodology by dragging and dropping shapes and components from 3D catalogs to build parts and assemblies. They then use those designs to communicate with other users in the design process using both 3D models and 2D drawings. The drawings remain associative to the 3D model so as the model is updated the drawings reflect the changes. IRONCAD also employs the use of direct face editing and allows the combination of features and direct face edits within the same part.

## Floating solar farms (aka 'floatovoltaics')



Silicon panels are becoming cheaper and more efficient day-by-day. According to experts, if photovoltaic panels are placed on reservoirs and other water bodies, they offer even greater efficiency as well as a plethora of other benefits. "Floatovoltaics" are photovoltaic solar power systems created for floating on reservoirs, dams, and other water bodies. Floating solar farms can generate huge amounts of electricity without

using valuable land or real estate. The installation costs of floating photovoltaic panels are less than land-based photovoltaic panels. Also, research showed that the power production of floating solar panels is greater by up to 10% due to the cooling effect of water. Besides producing clean solar power, floating solar farms can help with water management. They reduce the loss of water to evaporation as they limit air circulation and block sunlight from the surface of the water. Also, floating solar farms prevent noxious algae production, lowering water treatment costs. Furthermore, the water beneath keeps solar panels clean and minimizes energy waste. In 2008, the first commercial 175 kWh floating panel system was installed in California at the Far Niente winery in Napa Valley.

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## INAUGURATION OF INSTITUTION OF ENGINEERS STUDENT CHAPTERS



The inauguration of the Institution of Engineers student chapters was inaugurated on 26.03.2018. Dean, FEAT, AU, Students and Faculty members graced the function.

## GUEST LECTURE



The Mechanical Engineering IEI Students Chapter organized a guest lecture on 03.04.2018. The guest lecture was delivered by Shri. T. Thiruvengatchari B. E., M. E., MBA (Finance), Deputy General Manager, Material Management Complex Unit, Purchase Department (Division), Neyveli Lignite Corporation India Ltd.,

## THENDRAL 2018

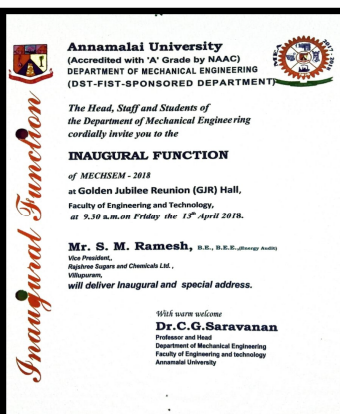


THENDRAL-2018 was planned on 06.04.2018 and 07.04.2018 in an elaborative way. Total 14 events were selected, each department has to conduct maximum of ten events. 150 IEI students members have participated in this event.

## THENDRAL 2018



## INAUGURATION OF MECHSEM 2018



The inauguration of the MECHSEM-2018 was inaugurated on 13.04.2018. Mr. S. Ramesh, B. E., B. E. E., (Energy Audit), Vice President, Rajshree Sugars and Chemicals Ltd., Villupuram, was inaugurated the MECHSEM-2018 Dean, FEAT, AU, Students and Faculty members graced the function.

## NSS UNIT-21 SPECIAL CAMP



The NSS Unit 21 - Department of Mechanical Engineering, Annamalai University organized a special camp programme in Ayipuram village from 08.03.2018 to 14.03.2018 for seven days. 50 students from B.E. (Mech) classes participated in the camp and carried out various activities. The camp was held in the community hall in Ayipuram. In that camp students were cleaned campus of the school and cleaned the roads, temple and banks of ponds in the village. Cricket match were conducted for the NSS students in the morning session followed by cultural events for the school students. Elocution, essay writing, drawing competition and sports events for the school students were organized.

#### VISION:

The Mechanical Engineering Department endeavors to be recognized globally for outstanding education and research leading to well-qualified engineers who are innovative, entrepreneurial and successful in advanced fields of Mechanical Engineering to cater to the ever changing industrial demands and social needs.

#### MISSION:

1. Prepare the graduates to pursue life-long learning, serve the profession and meet the intellectual, ethical and career challenges.
2. Extend a vital, state-of-the-art infrastructure to the students and faculty with opportunities to create, interpret, apply and disseminate knowledge.
3. Develop the student community with wider knowledge in the emerging fields of Mechanical Engineering.
4. Provide set of skills, knowledge and attitude that will permit the graduates to succeed and thrive as engineers and leaders.
5. Create a conducive and supportive environment for all round of growth of the students, faculty and staff.

#### PROGRAM EDUCATIONAL OBJECTIVES:

1. Prepare the graduates with a solid foundation in Engineering, Science and Technology for a successful career in Mechanical Engineering.
2. Train the students to solve problems in Mechanical Engineering and related areas by engineering analysis, computation and experimentation, including understanding basic mathematical and scientific principles.
3. Inculcate students with professional and ethical attitude, effective communication skills, team work skills and multidisciplinary approach.
4. Provide opportunity to the students to expand their horizon beyond mechanical engineering.
5. Develop the students to adapt to the rapidly changing environment in the areas of mechanical engineering and scale new heights in their profession through lifelong learning.

## DEPARTMENT OF MECHANICAL ENGINEERING



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dc=E09](https://www.annamalaiuniversity.ac.in/E09_info.php?dc=E09)

## PROGRAMME OUTCOMES (PO)

**PO1:** Engineering Knowledge: Graduates will be able to apply knowledge of mathematics, science and engineering for the solution of mechanical engineering problems.

**PO2:** Problem analysis: Graduates will be able to formulate and analyze complex mechanical engineering problems.

**PO3:** Design/development of solutions. Graduates will be able to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, and public health.

**PO4:** Conduct investigations of complex problems: Graduates will be able to design and conduct experiments, and to analyze and interpret data.

**PO5:** Modern tool usage: Graduates will be able to use the techniques, skills, and modern engineering tools necessary for mechanical engineering practice.

**PO6:** The engineer and society: Graduates will be able to include social, cultural, ethical issues with engineering solutions.

**PO7:** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice

**PO9:** Individual and team work: Graduates will be able to function effectively on multidisciplinary teams.

**PO10:** Communication: Graduates will be able to communicate effectively.

**PO11:** Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

**PO12:** Life-long learning: Graduates will be able to adopt technological changes and promote life-long learning.