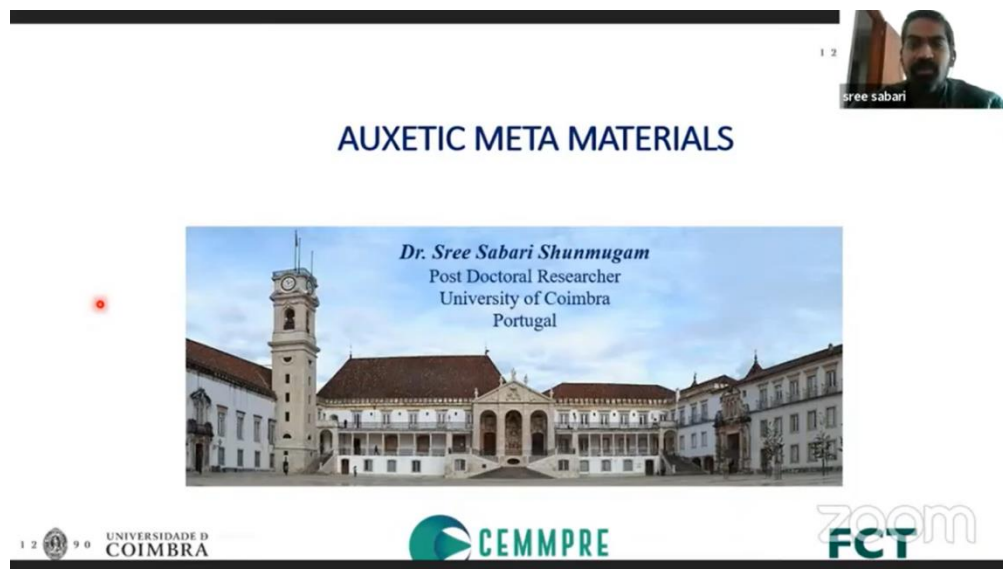


Report On Guest Lecture on
"AUXETIC META MATERIALS"
on 29th March, 2022

Organized by
Indian Welding Society - Student's Forum

"Materials and structures with negative Poisson's ratio exhibit a counter-intuitive behaviour. Under uniaxial compression (tension), these materials and structures contract (expand) transversely. The materials and structures that possess this feature are also termed as 'auxetics.'" Compared with conventional materials with positive Poisson's ratio (PPR), the AMMs have many unique advantages: shear resistance, fracture resistance, indentation resistance, synclastic behavior, variable permeability, and energy absorption, which make AMMs show enormous potential in the fields of medicine, aerospace, sensors, actuators, etc. The objectives are as listed below.

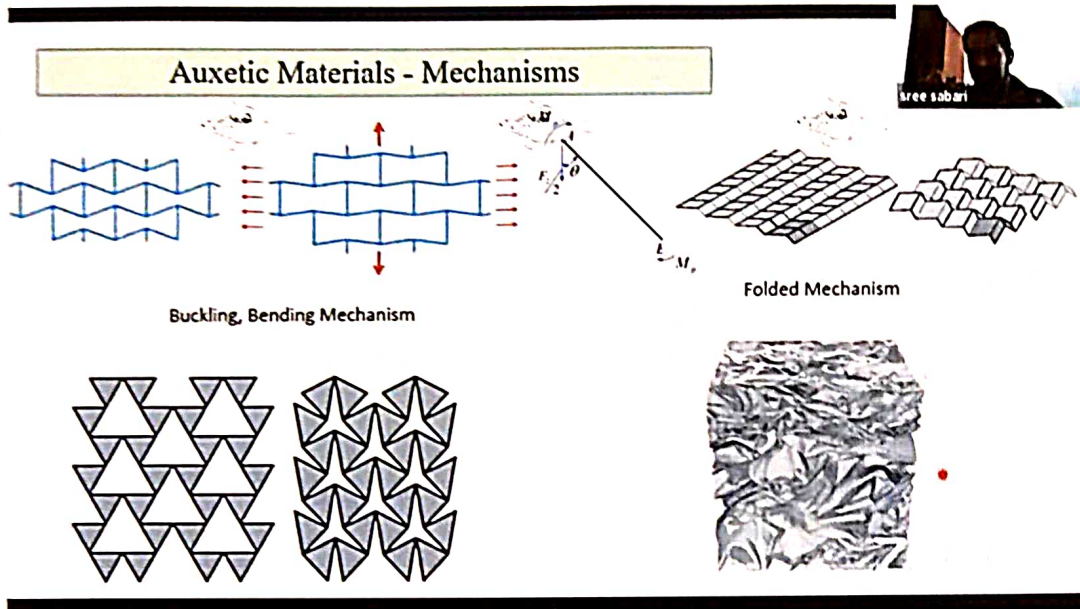
- To describe about the concepts of Auxetics meta materials mechanisms which will make the students to understand the science behind the process and nature behavior of the material.
- To intimate the need of analyzing the phases present in the auxetics meta materials.



A screenshot of a Zoom meeting. In the top right corner, there is a small video feed of a man with a beard, identified as 'sree sabari'. The main content is a slide titled 'AUXETIC META MATERIALS' in blue text. Below the title is a photograph of a large, historic building with a prominent clock tower, identified as the University of Coimbra. Text overlaid on the photo reads: 'Dr. Sree Sabari Shunmugam, Post Doctoral Researcher, University of Coimbra, Portugal'. At the bottom of the slide, there are three logos: the University of Coimbra logo (Universidade de Coimbra), the CEMPRE logo, and the FCT logo. The Zoom interface shows a red dot on the left side of the slide, indicating a cursor.

Guest lecture delivered by Dr.Sree Sabari Shunmugam, Investigator, University of Coimbra, Coimbra, Portugal.

With this objective, a guest lecture on "Auxetic Meta Materials" was organized in the department of mechanical engineering on 29th March 2022. Dr.Sree Sabari Shunmugam, Investigator, University of Coimbra, Coimbra, Portugal, was the resource person. The program started with the felicitation to the speaker.




Dr.Sree Sabari Shunmugam presented a lecture on "Auxetic Meta Materials" in which Dr.Sree Sabari Shunmugam explained the concepts of auxetic meta materials, mechanisms, metallurgical concepts, and phase transformation occurring during loading operations as well as the current importance of auxetic meta materials in various application sectors. Moreover, Dr.Sree Sabari Shunmugam highlighted the need and growth made in different types of manufacturing processes types and major influencing parameters to be considered while preparing the auxetic meta materials. Finally, Dr.Sree Sabari Shunmugam concluded by exploring the applications and future scope in auxetic meta materials employable to various industries.

Dr.Sree Sabari Shunmugam made awareness in the students with real life applications in the areas of light weight auxetic meta materials in future technology. Finally, he hallowed the students and recommended to shape their career in the right path for long term sustainment in the modest competitive world.

Co-coordinator: **Mr. S. Praveen kumar, Assistant Professor.**

Coordinator of the Program: **Dr. S. Ragu Nathan, Associate Professor.**


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