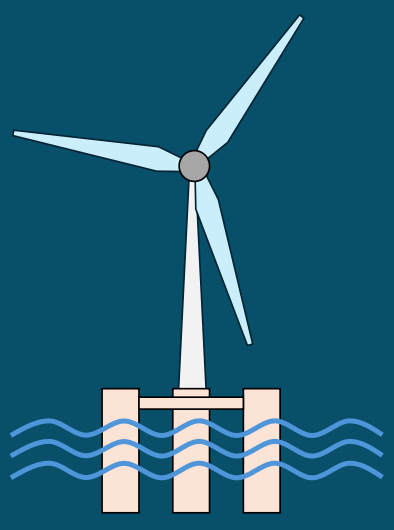
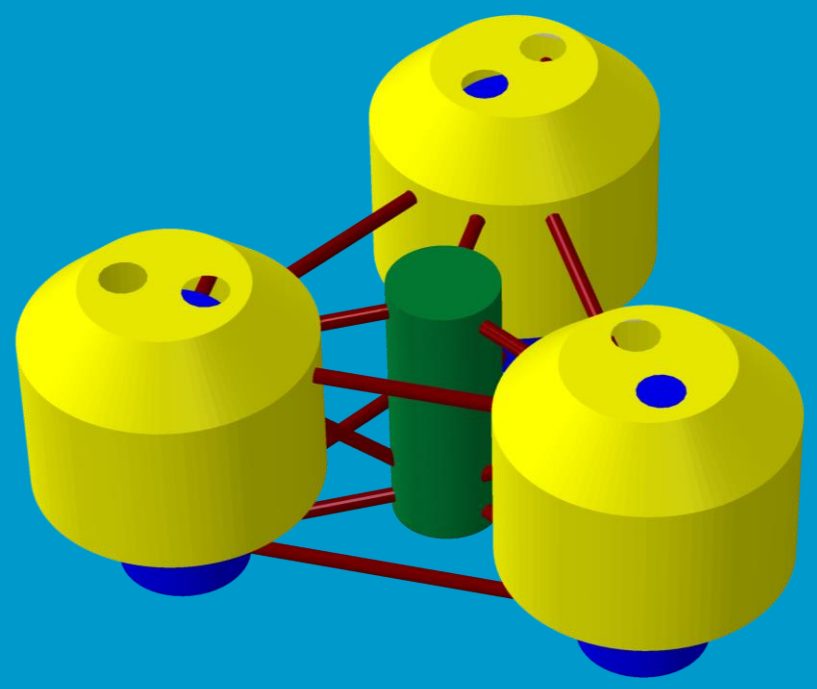
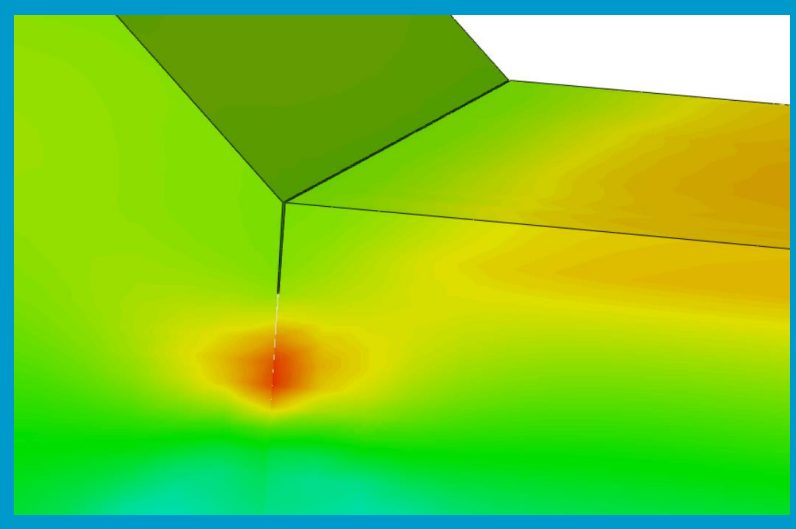
SIRENES
WORKSHOP



July 07 – 08, 2025

Volos, Greece





Structural Integrity of Offshore Energy Systems

Project description

SIRENES (2022-2025) focuses on the structural integrity of offshore floating systems for cost-efficient wind and wave energy exploitation. It extends work of previous projects and aims at improving the structural performance of an offshore floating platforms, suitable for installation in deep-water locations. The research optimizes the structural design of the platform, proposing cost-efficient solutions. For the fatigue resistance of critical components, experimental and numerical methodologies are used, and special issues are examined, e.g., robot welding, HFMI post-weld treatment, high-strength steel, fatigue performance in seawater environment and low-cycle fatigue. Numerical methodologies based on cohesive elements and damage mechanics will also be employed for simulating fatigue crack development. The results of SIRENES are expected to improve the performance of offshore renewable energy platforms and optimize their structural design, towards safeguarding their structural integrity, extending their design life and reducing the construction cost.

Workshop outline

The SIRENES workshop (https://sirenes.mie.uth.gr/) aims at presenting to the engineering community the latest research outcomes and developments related to structural systems used for offshore energy production, towards more efficient, sustainable and cost-effective design. It will provide stakeholders, academics and practicing engineers the opportunity to share their knowledge, experience and considerations on offshore energy production, acquaint themselves with the results and deliverables of the SIRENES project and discuss special topics related to the structural integrity of offshore energy structures, with emphasis on fatigue strength of critical components.

Registration

Online registration is open: https://sirenes.mie.uth.gr/

There is no registration fee for participation in the workshop.

Organizers & contact

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