

FORTISSIMO WP6 KOM HPC-SHEAKS Experiment



FORTISSIMO



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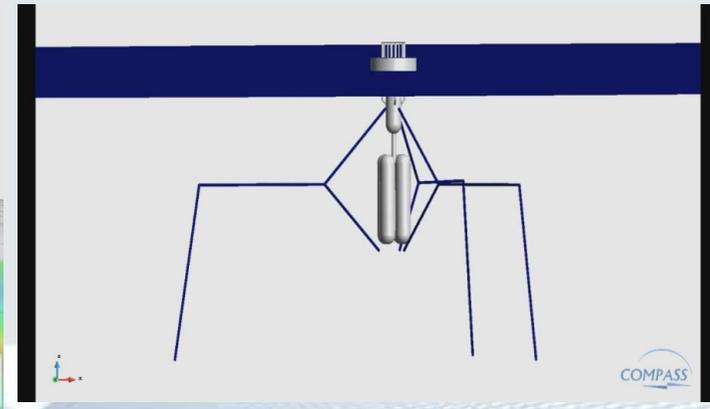
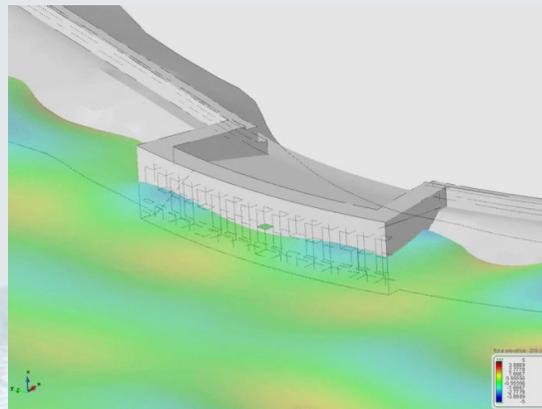
OBJECTIVES

- To develop and demonstrate a HPC-Cloud service for seakeeping assessment using state-of-the-art tools
- Efficient and easy-to-use integration of available HPC structures with the most advanced seakeeping software
- To increase the efficiency of the design, engineering and building processes of a marine structure
- To offer an advanced seakeeping assessment tool affordable in cost, time and usability by the most of the SMEs and large companies in the sector
- To increase the commercial penetration in the marine design industry for the HPC-enabled SeaFEM software
- To study the feasibility of using X-FIRE in practical seakeeping analysis



MAIN MARKET

- **Seakeeping:** the study of the response of a ship or marine structure to waves.
- The experiment focus on:
 - ✓ Well-established markets: shipbuilding, offshore oil & gas
 - ✓ Emerging markets: deep-water wind energy converters, wave energy converters.
- Industries characterized by a relatively large number of SMEs
- HPC-SHEAKS will investigate different software licensing and 'software as a service' (SaaS) models.



PARTNERSHIP

COMPASS Ingeniería y Sistemas (COMPASSIS): leads the experiment, a SME which develops and commercialize the advanced seakeeping software SeaFEM

International Centre for Numerical Methods in Engineering (CIMNE): Research centre specialized in numerical methods and developing the seakeeping solver X-FIRE

WavEC Offshore Renewables (WAVEC): a SME specialized on design and assessment of offshore devices to harness renewable energy

Vicus Desarrollos Tecnológicos (VICUSDT): a specialized SME in offering computational services in the ship and offshore industry

Fundación Centro Tecnológico de Supercomputación de Galicia (CESGA): HPC expert and service provider

