

CoEC: Center of Excellence in Combustion

Description

The Center of Excellence in Combustion (CoEC) is a collective effort to exploit Exascale computing technologies to address fundamental challenges related to combustion technologies. The CoEC vision is aligned with the decarbonization goals of the European power and transport sectors and the European roadmap to achieve net-zero greenhouse gas emissions by 2050. The consortium is composed by leading institutions in the fields of computational combustion and High-Performance Computing. It promotes a core of scientific and technological activities aiming at extending the state-of-the-art in combustion simulation capabilities through advanced methodologies enabled by Exascale computing. These advances will increase the TRL of representative codes from the EU combustion community. Selected Exascale Application Challenges are used to demonstrate and validate the project achievements. The most ready technologies will be the basis of a service portfolio to support the academic and industrial activities in the power and transportation sectors. This will eventually increase the EU competitiveness and leadership in power and propulsion technologies.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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