

CoEC Combustion Autumn School 2023:

High-Performance Computing for Multiphase Reacting Flows

CERTIFICATE OF ATTENDANCE

Stanislav Georgiev

has attended the above CoEC Autumn School held in Panorama Hall, Hotel Expo Sofia, Sofia, Bulgaria
from 23th to 26th of October 2023

The CoEC School spans 24 lectures and hands-on sessions and includes the following topics:

** Navier-Stokes equations and the numerical approaches for their solution * Introduction to fundamentals of combustion * Why to use high order methods (HOM) for high fidelity simulations (DNS, LES) * Accuracy and cost of HOM, HPC scalability and performance aspects * Best practices for designing efficient HPC applications with focus on performance optimization, exploring the transition from CPU to general-purpose (GPUs) * Techniques and strategies that drive successful HPC application development with illustrative examples of porting codes to modern GPUs using OpenACC * Dynamic Mesh Adaptation for fronts and interfaces * Machine Learning assisted combustion simulations * YALES2 hands-on sessions demonstration of variable density flows and finite-rate chemistry*


Prof. Ananias Tomboulides

Co-chair of the Organising Committee

Laboratory of Applied Thermodynamics, Department of Mechanical Engineering, Aristotle University of Thessaloniki, Greece