



Institut of Process Engineering Chair of Mechanical Process Engineering

Wiss. Mitarbeiter/-in

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Sergio Bengoechea obtained his MSc in Scientific Computing at the Technical University of Berlin. In his Master thesis at the Institute for Fluid Mechanics and Technical Acoustics (ISTA), the further development and implementation of the conservative skew-symmetric Navier-Stokes formulation for cylindrical geometries is presented.

He enjoys over seven years research experience in numerical reactive flows at ISTA under the CRC-1029 TurbIn project where the goal was to increase the gas turbine efficiency with the use of unsteady combustion. Specifically, his investigation was devoted to study and optimize the initiation of detonation waves for turbomachinery applications. He has gained expertise in the modelling of experimental-based detonative processes and its chemical kinetics and also in the adjoint optimization method. During this time, Sergio Bengoechea's teaching experience covered numerical methods, CFD, acoustics, gas dynamics, and the supervision of Bachelor and Master theses.

Sergio Bengoechea is now part of the research team at the Chair of Mechanical Process Engineering. His current work focuses on the study and modelling of real gas effects in underexpanded jets.