

ESEP Profiles

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Capt. Philip Cali

Air Force Research Laboratory
Aerospace Vehicles Directorate

Education:

MS in Aeronautical
Engineering, MIT
BS in Aerospace Engineering,
Syracuse

Current Assignment:

Office National d'Etudes et de Recherches Aeronautiques
(ONERA), Chatillon Cedex France, near Paris

Description of Work:

Captain Cali is working at Onera in the field of Computational Fluid Dynamics, or CFD. Briefly, CFD is the science of simulating the flow field in the vicinity of a body in motion. Modern CFD software packages simulate fluid flow properties using a mesh of grid points to represent the continuous physical domain around the body of interest. In order to facilitate constructing high quality meshes about complex geometries, the physical domain is often partitioned into separate regions (usually on a component basis) and individual grids are generated in each region. His current research is focused on improving the manner in which neighboring grids communicate. His approach, which is applicable to any CFD code, has been employed to augment the accuracy and efficiency of a production CFD software package developed at Onera. For a more detailed description of his work to date, please contact Captain Cali directly at calipm@onera.fr or reference his American Institute of Aeronautics and Astronautics paper number AIAA-2000-1008.



Research Highlights

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