Air-Breathing Computational Fluid Dynamics Engineer/Scientist

ISSI seeks highly motivated individuals for Computational Fluid Dynamics (CFD) positions on our air-breathing propulsion team in Dayton, OH. Our team is responsible for research ranging from the fundamental physics of turbulent combustion to the development, testing, and building of gas-turbines and novel propulsion concepts at Wright-Patterson Air Force Base, OH. Research areas include: rotating detonation engines, small-scale turbine engine development, integration of simulation and experiment, massively-parallel code development for high-fidelity simulation of relevant geometries, development of new turbulence models, liquid breakup modeling, engineering analysis of new and existing designs, and combustion instabilities. Full-time and postdoc positions are available.

US citizenship required.

Role & Responsibilities:

As a CFD Engineer for ISSI, you will:

- Perform validation engineering tasks including setting up simulation cases, managing runs and output data, processing and analyzing results, writing up analyses, and preparing presentations;
- Contribute to the development of simulation-based tools solutions that solve practical problems;
- Work closely with other members of our computational propulsion team;
- Interact with the experimental teams to develop and test new/existing designs or computational tools; and
- Be a member of a cohesive and highly collaborative group with a clear mission to develop novel ideas.

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Essential Requirements

We seek candidates with the following qualifications:

- MS or PhD in Aerospace Engineering, Mechanical Engineering, or related field
- 3-5 years of academic and/or industry experience using Computational Fluid Dynamics (CFD)
- Strong background in fluid mechanics and CFD
- Strong knowledge in any of the following:
  - Detonations
  - Combustion
  - Turbulence
  - Liquid injection/spray
  - High-performance computing
- Expertise in either commercial solvers or programming languages used for high performance computing (Fortran, C, C++, Python)
- Self-starter, motivated, strong work ethic, ability to thrive in fast-paced environment
- Strong English communication skills
- Excellent problem-solving skills, well organized
- Ability to apply his/her talents cooperatively as part of a team of professionals
- U.S. citizen

How to Apply

Questions and/or resumes/CV’s can be directed to Dr. Tim Gallagher, tgallagher@innssi.com

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