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Computational Fluid Dynamics Engineer

About Karagozian and Case, Inc.

Karagozian and Case, Inc. (K&C) is an internationally recognized multidisciplinary science and engineering consulting firm founded in 1945 with a focus on creating custom engineered solutions for extreme environments. K&C's mission is to engineer specialized solutions and products for the defense, space, energy, security, construction, and manufacturing industries. K&C's rapidly growing practice areas include: 1) applied research and testing, 2) modeling, simulation, and analysis, 3) product and software development, 4) protective design engineering, and 5) threat vulnerability assessments.

Career Opportunity

K&C is seeking a highly talented Computational Fluid Dynamics Engineer that can work, think, and innovate independently in a fast-paced work environment with challenging time constraints. The ability to multi-task and work on projects that require varying skill-sets simultaneously is a must.

Candidate Requirements

- Ms or PhD in Mechanical Engineering, Aerospace Engineering, Physics, or Related Field
- 3+ years of modeling experience with commercial or research CFD codes
- Experience with structured and unstructured computational methods and watertight meshes
- Experience with fluid mechanics and shock physics
- Experience modeling compressible flows and shock capturing schemes
- Experience modeling fluid-structure-interaction problems
- Experience developing and fitting equations of state from test data as well as thermochemical equilibrium codes
- Experience with common engineering programming and scripting languages
- Experience using high performance computers and Linux compute environments
- Experience with OpenFOAM, STAR-CCM, ALE3D, or CTH is a plus
- Experience modeling combustion, reactive flows, turbulence, and/or multiphase flows is a plus
- Experience with development of CFD codes
- Eligible to obtain DoD Secret Clearance

Job Duties

- Develop modeling methodology for complex problems that may involve fluid-structure-interaction, coupling with finite element solvers and thermal solvers, chemical reactions, and/or multiphase flows
- Address shortcomings in modeling methodology by developing/coding new solvers and algorithms
- Perform CFD computations using a variety of Government, commercial, and research codes
- Plan and interpret data from small-scale and large-scale tests
- Enhance and update in-house codes
- Support proposals and bids for Government contracts
- Independently manage projects and prepare contract deliverables (progress reports, final reports, briefings, etc.)
- Collaborate with academia and publish in technical journals
- Participate in technical conferences

Karagozian & Case, Inc.

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