Sr. 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 Sr. 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. Candidates for this position must be passionate about physics, code development, and solving complex engineering problems.

Candidate Requirements

- MUST BE US CITIZEN (please do not apply otherwise)
- PhD in Mechanical Engineering, Aerospace Engineering, Physics, or Related Field
- 10+ years of modeling experience with use and development of 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 and coupling schemes
- Experience with particle laden flows
- Experience modeling combustion, reactive flows, turbulence, and/or multiphase flows
- Experience with common engineering programming and scripting languages
- Experience using high performance computers and running massively parallel simulations in a Linux compute environment
- Experience with development of CFD codes
- Experience with computational solid dynamics codes/methods is a plus

Job Duties

- Develop modeling methodology for complex problem**s** that may involve fluid-structure-interaction, coupling with finite element solvers, particle flows, reactive flows, and multiphase flows
- CFD team lead for the company that plans and oversees all ongoing CFD efforts
- 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, update, and validate 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