



**The Combustion Institute**

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## **Research Mechanical Engineer or Aerospace Engineer. (Must be US Citizen)**

**Job Summary:** The Laboratories for Computational Physics (LCP) and Fluid Dynamics at the Naval Research Laboratory is seeking a candidate with a background in the numerical simulation of high-speed reacting flows to perform cutting-edge research in the fields of combustion and hypersonic aerodynamics. The permanent position will be located at NRL's Washington, DC location. The selectee will begin working immediately on Navy-relevant projects but will also have the opportunity to pursue his or her own research ideas within LCP's mission to create advanced computational physics and high-performance computing capabilities and apply them to critical Department of Navy (DON) applications.

**Duties and responsibilities:** The hired individual will be responsible for working within a group of engineers, scientists, and mathematicians to advance the state-of-the-art in multi-physics computational fluid dynamics and to demonstrate new concepts and algorithms on problems of DON relevance. Duties will be driven by program and sponsor needs, but a typical division of duties includes approximately 20% time in algorithm and code development, 50% running and analyzing simulations, and the remainder in communicating research findings at scientific meetings and conferences and by publishing in the open scientific literature. The hired individual will be mentored initially by senior staff members but will become responsible for developing his or her own research program as his or her career progresses.

### **Essential Requirements**

Applicants must be US Citizens and willing to undergo a background investigation. Applicants must possess at least a Bachelor's degree in Mechanical Engineering or Aerospace Engineering, but advanced degrees are preferred. The position also requires detailed understanding of chemical kinetics and chemical and thermal non-equilibrium physics, detailed understanding of fluid dynamics, proficient coding skills with the willingness to learn new coding techniques, experience using computational fluid dynamics and simulating multidimensional problems, experience using high performance computing platforms, and willingness to learn and utilize proper version control for cooperative code development.

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## How to Apply

**Applications can be sent to:**

Ryan Johnson

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**About the Naval Research Laboratory (NRL):** NRL operates as the Navy's full-spectrum corporate laboratory, conducting a broadly-based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies. NRL's parent organization, the Office of Naval Research (ONR), coordinates, executes, and promotes Navy and Marine Corps science and technology programs through universities, government laboratories, and nonprofit and for-profit organizations.

**NRL is an equal opportunity employer.**

***The Combustion Institute Disclaimer***

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