

# *At FGC Plasma Solutions, we are developing the next-generation combustion control system for turbines and advanced propulsion platforms*



## **About FGC Plasma:**

FGC Plasma Solutions is an eight-year-old startup company founded in 2013 to commercialize research performed at Case Western Reserve University on plasma-assisted combustion. FGC Plasma endeavors to develop ground-breaking technologies to improve combustion and other reacting flow processes with applications in energy, aerospace, and national security. To date, FGC Plasma has raised \$6.2 million in funding and has established collaborations with Notre Dame, MIT, ARL, AFRL, and Argonne National Lab. FGC Plasma has native high pressure and supersonic combustion test capabilities and is seeking to grow its technical team.

FGC Plasma Solutions is located in Central Square, at the heart of innovation in Cambridge, Massachusetts, and just steps from MIT. Our team enjoys the benefits of this innovation ecosystem by regularly meeting with world-renowned faculty, visiting corporate and government members, and fellow entrepreneurs. We strive to produce an innovative, inclusive culture that allows our employees accelerated career and technical growth. We look forward to working with you!

## **Job Benefits and Perks**

At FGC Plasma, we strive to provide our team with the health, well-being, and career assistance that make them successful both in and outside of the office. This means providing unique benefits that allow our employees to thrive. A high-level overview of the things we provide to our full-time employees is outlined below:

- Healthcare – We offer medical and dental to employees and their families, and provide incentives to maintain a happy, healthy lifestyle
- Retirement planning – At FGC Plasma, we want to help you succeed today and thrive tomorrow. All full-time employees are set up with our company 401(k) plan
- Stock Options – When FGC Plasma does well, we want you to do well. Our employees are eligible for our company stock option plan
- Vacation and Holidays: At FGC Plasma we like to take time to celebrate throughout the year. We observe all government holidays, and offer generous vacation plans to all

At FGC Plasma, we are lucky enough to work with some of the brightest minds and institutions from around the world. As a full-time employee, you can anticipate:

- Interacting with world class professors, scientists, and researchers from universities in our Cambridge MA backyard, and from around the world
- Travelling and working with members of government research institutions

We look forward to working with you!

## **How to apply:**

Send an email with CV to [careers@fgcplasma.com](mailto:careers@fgcplasma.com)

*Better combustion for energy,  
aerospace and national security*



[www.fgcplasma.com](http://www.fgcplasma.com)  
[info@fgcpalsma.com](mailto:info@fgcpalsma.com)

## **Junior Propulsion/Mechanical Engineer**

### **Job Description**

- Work at an innovative startup developing plasma-assisted ignition and combustion technologies for jet engines, gas turbines and scramjets.
- Seize the opportunity to exercise technical direction of new products and join an emerging, innovative team.
- Take an active role in the development of novel plasma-based technologies for various reacting flow processes.
- Complete meaningful research and engineering on federally funded research projects in collaboration with major research institutions.
- Collaborate with a multidisciplinary team of engineers, experimentalists, and modelers on translational research.
- Design hardware and execute experiments at high pressure and supersonic combustion facilities.

### **Job Requirements**

For this position, it is required that applicants have:

- Hands-on, experimental, and mechanical design experience with gas turbine and/or scramjet combustion concepts.
- Strong background in fundamental high-speed reacting flows; fluid dynamics, thermodynamics, combustion, etc.
- B.S/A. or post-graduate degree in engineering/sciences field with strong educational background in combustion and/or plasma.
- U.S. Citizenship or Legal Permanent Resident status.
- Strong collaborative spirit, working well with team members in addition to other companies, laboratories, and universities.
- Comfort with project autonomy, uncertainty, and fast-paced work environment.
- Willingness to relocate to the Cambridge, MA or South Bend, IN. regions.

### **Desired Skills**

For this position, it is desired that applicants have:

- Prior experience with plasma-assisted combustion, high-speed internal/external flows, and/or reacting gas dynamics.
- Hardware design experience for fluid/thermal systems.
- Prior experience with experimental design, diagnostics, and post-processing.
- Enthusiasm for innovations in the clean energy and high-speed vehicles
- Software: Solidworks, AnSYS, MATLAB, Python, LabVIEW, C++

### **Expected Tasks**

- Mechanical design and mechanical/thermal/fluid analysis of reacting gas experimental rigs, test articles
- Component/System level mechanical/fluid/thermal analysis, and collaboration with mechanical, electrical, and system level design teams.
- Develop and promote design best practices and influence company mechanical design/versioning culture.
- Development and promotion of inter-disciplinary team culture built on trust, respect, and shared passion.