Company Details:

Howe Industries is an engineering and research firm located in Tempe, AZ, which focuses mainly on advanced power concepts for space exploration. The company was founded in 2015 by Dr. Troy Howe and soon brought on Dr. Steve Howe as head of research. Howe Industries currently has five employees, including two ASU engineering alumni and one current ASU engineering student.

Howe Industries has won SBIR awards for a new fuel form for nuclear thermal rockets and CubeSat propulsion systems, and a NASA NIAC award for nuclear electric propulsion. Other recent projects of Howe Industries include analysis of a nuclear rocket testing facility, design of propellant for a fission/fusion drive, and consulting on fission reactor technology for melting through icy moons. We also are developing advanced solid-state power conversion technology, debris de-orbiting methods, and laser induced decay of radioisotopes for power generation.

Our company promotes and thrives off creative ideas and individuals. With our open workspace we promote collaboration and creative thinking to solve complex engineering challenges relating to space exploration and development.

Job Description:

Title: Research Intern

Desired Skills: Applicants with backgrounds in physics, math, engineering, and computing will be considered for this position. Individuals with experience in experiment design, research, and space systems are highly encouraged to apply. All individuals with a collaborative mindset, creative thinking, and a desire to learn will also be considered.

Position Overview: Howe Industries has multiple projects available for applicants to work on. Interns will have the ability to work on the research and development of the following: CubeSat propulsion system, nuclear thermal rocket propulsion system, advanced solid-state power conversion system, de-orbiting methods for satellites, and laser induced decay of radioisotopes. Individuals may also brainstorm with our team to research another topic with guidance from their supervisor. All projects include the following to some degree: CAD modeling, numerical simulations and modeling, experimental testing, data analysis, and research. Applicants will collaborate with fellow full-time engineers and their supervisor, leveraging their expertise to guide them along in their projects. Interns will be expected to present their research to the Howe Industries team and invited guests at the end of the summer internship.

Technical Skills Gained: Autodesk Inventor Professional, COMSOL, computer modeling, research and development, test procedures, data analysis, communication, teamwork.