

Research Engineer

Engineering Software Research & Development (www.esrd.com) provides leading edge finite element analysis (FEA) technology with a unique implementation that is designed to provide the most reliable solutions for detailed analysis. We seek to address the analysis needs of the aerospace & defense (A&D) industry through research, consulting, and FEA software development.

You will join a team of highly motivated engineers that seeks to transform the way numerical simulation is performed across the A&D industry. In a small company we each share many responsibilities that can significantly vary from day to day; the typical work to be performed in this position includes the following responsibilities:

- Expand state-of-the-art analysis A&D procedures through research grants, and present work at technical workshops and conferences.
- Support the development of our FEA software product StressCheck with model and algorithm development.
- Serve as a technical resource for the ESRD engineering team and ESRD customers on solid mechanics topics such as elasticity, plasticity, and fracture mechanics.
- Assist the ESRD engineering team complete consulting and custom software development projects for A&D customers.
- Expand your understanding of FEA theory and implementation.

Requirements

- This position must meet Export Control compliance requirements, therefore "U.S. Person" status is required.
- M.S. or Ph.D. in Mechanical Engineering, Aerospace Engineering, or a related field.
- Strong solid mechanics background.
- Programming experience with Matlab, C++, Visual Basic, C#, or similar.
- Interest in software development to help other engineers solve complex problems.
- Self-motivated with strong desire to learn and continually improve.
- Excellent interpersonal skills.
- Occasional travel is required for projects and conferences.

Preferred Skills

- 2-5 years' experience preferable.
- Strong mathematical background.
- Familiarity with FEA theoretical background, and experience using or developing FEA software (or other numerical methods).
- Familiarity with geometric and nonlinear material analysis.
- Good theoretical background or working knowledge in fatigue and fracture mechanics analysis, including computation of stress intensity factors and energy release rates.
- Experience with laminate composites theory and/or analysis.
- Familiarity with writing government grants (e.g. SBIR and STTR programs).