

Senior CAE Application Engineer

May 2026

Description Overview

Rafinex is looking for an experienced senior CAE Application Engineer to support a variety of design projects across prototypes, pre-series and production vehicles/components in the defence and security industries (e.g. space, unmanned systems, aerospace applications).

The role is primarily focused on CAE/FEA for structural mechanics and advanced topology optimization; covering a full workflow from problem definition through result evaluation. Integration and collaboration with further colleagues and tools on multi-physics codes and analysis is required. The algorithms and software to be used range from Rafinex internal proven tools through to cutting-edge developmental and research codes that may need verification and validation support. A sound foundational understanding of the underlying FEA theory and numerical implementation aspects is required.

This role is physically based in Luxembourg, offering a flexible remote environment. The role is full time and should be long-term to accompany the projects from design phase to manufacturing, trial and testing deployments. Experience in working on sensitive and/or classified materials is an advantage, though not a strict requirement. Starting as soon as possible.

Roles & Responsibilities

- Use Rafinex' simulation software for:
 - FEA for structural mechanics applications
 - Stochastic topology optimization studies
 - Algorithm performance profiling and computational scalability
- Identify structural load scenarios, and compare load cases at assembly and component level.
- Combine simulation results and produce engineering reports capable of providing relevant technical insights and recommendations to design and simulation engineers.
- Create and interpret free body diagrams to define load paths and support accurate simulation setup, with appropriate approaches for connecting different components of large assemblies.

- Creating and modifying solid and surface CAD models; preparing models for analysis; resurfacing results from topology optimization.
- Pre-processing operations including geometry preparation / defeaturing / meshing and automation.
- Post-processing operations using Rafinex tools or open-source software (Paraview); scripting and automation.
- Contribute to product roadmap, identifying future capability requirements / comparison with competitors.
- Assist in validation and verification of analysis and optimization methods.
- Collaborate and integrate structural FEA results and methodologies with other multi-physics tools and software from partners and research centers.
- Take global project ownership from administrative conception to final delivery and post-delivery reporting, including delegation and directing sub-teams / suppliers.

Candidates with a strong background in a distinct subset of the above Responsibilities will be considered for a standalone Role.

About You - Requirements

- 10-15+ years experience in industry applied FEA design and analysis.
- Degree in Mechanical/Aerospace engineering or equivalent.
- Proficiency in finite element analysis tools and methods for structural analysis (static and modal).
- Solid understanding of mechanics of materials, load paths, and failure modes.
- Demonstrated experience with structural optimization techniques.
- Expertise in defining load cases, constraints, and boundary conditions for complex systems.
- Experience modeling assemblies and connections, including contact interactions.
- Ability to clearly communicate complex technical results.
- Fluent in written and spoken English. Further European languages are advantageous.
- Procedural experience / mindset to work in sensitive and classified environments.
- Ability to effectively manage concurrent deadlines, integrate with other functional teams, ensuring project management ownership and on-time deliverable
- The right to work in Luxembourg; Rafinex will not assist with any relocation or visa applications.

Benefits

- Generous remuneration package.
- 25 days vacation per year.
- Flexible working hours.
- Dedicated Equipment budget.
- Financial support for professional development.

Apply

Rafinex is committed to fostering an innovative and inclusive environment.

To apply please send your CV to careers@rafinex.com

There is no closing date for applications but interviews will be held on a rolling basis and closed as soon as the position is filled.

No recruiters.