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Research Engineer - Software developer in engineering fracture mechanics - Cenaero Headquarters Belgium

Position:

Cenaero (<http://www.cenaero.be>) is an applied research center focused on the development of advanced simulation technologies for aeronautics. Located within the Aéroport de Gosselies in Belgium, it employs about 50 highly skilled researchers working on virtual manufacturing, multi-scale material modeling, CFD-based multi-physics and optimization. To further grow its fracture mechanics research activity, Cenaero invites applications for a research engineer position at Cenaero headquarters in Belgium, available immediately.

The position concerns contribution to the development of Morfeo, a manufacturing oriented finite element software. For any of the project activities, the candidate is expected to develop the numerical methodology up to industrial maturity. First of all, the candidate will contribute to the fracture analysis module of Morfeo. Morfeo relies on an innovative approach based on the extended finite element method (X-FEM) in order to easily handle complex industrial applications. Developments include general modeling of the crack propagation and the damage tolerant approach, contact, multi-crack analysis and parallel implementation of the algorithms. Targeted applications include e.g. determination of crack propagation paths on industrial large-scale components and fatigue analysis.

As member of the Morfeo development team, the candidate will also have to tackle more general developments within the finite element software, write portable code, stick to development rules already in place and write relevant test cases.

Profile:

Applicants should have an excellent scientific background in the field of numerical methods, and more specifically the finite elements method, structural mechanics and engineering fracture mechanics. Object oriented programming skills, especially C++, are essential. Prior experience with commercial finite element analysis such as Abaqus, Samcef or Ansys is desired. Experience with Extended Finite Elements Method (X-FEM) is a plus. The candidate should also possess good written and oral communication skills in French and English. He/She must demonstrate ability to work in a team.

Offer:

Cenaero offers a position in a growing and leading technological sector, a direct relationship with the economical actors and experts of the aeronautical sector, a competitive salary, and a stimulating and dynamic work environment. Interested candidates should send a cover letter and a resume via e-mail to rh@cenaero.be with mention to the reference number.