

## Job description for a Post-doctoral Position in Concrete mechanics & Simulation

Asets-lux invites applications for a post-doctoral position (m/f) as part of an industry collaboration funded by the FNR Industrial funding instrument <https://www.fnr.lu/funding-instruments/>.

### Research Framework:

An increased energy consumption paired with an expansion of renewable energy sources in many countries around the world has a strong impact on the traditional landscape of sustainable engineering design. A fiercely competitive energy market demands solutions other than “off-the-shelf” engineering designs for Industrial plants. Innovative and advanced plant technology, with a powerful 3D graphical interface, and above all an easy and intuitive plug & play tool, is delivered through the integrated platform of ASETS- LUX that allows a simultaneous analysis of the dynamic process behavior. **An accurate prediction of the structural mechanics focused at concrete design** is easily integrated into the design and operations including detail engineering addressing plug & play structural tool.

In particular, the latter is addressed by applying state-of-the-art optimization tools.

### Your profile:

- PhD degree in structural mechanics Engineering
- Concrete / mechanics / Civil engineering or equivalent required to pursue a post-doctoral study
- Good knowledge of Finite element analysis
- Familiar with Ubuntu/Windows and programming in C++, C, Python
- Good understanding of API's, web services – additional benefit.
- Good English language skills (spoken and written)
- Willingness to familiarize with open-source solvers and to work in an inter-cultural and international environment.
- Ability to work independently and as part of a team.
- Curiosity and self-motivation
- Good presentation skills will be an asset.

### We offer:

- A dynamic and well-equipped research environment within our innovative team.
- Intensive training in scientific and transferable skills, participation in schools' conferences and workshops.
- Fixed term employee contracts totalling 24 months

**Job responsibility:**

Your primary tasks as a post-doctoral candidate are to:

- Manage and drive forward your research project.
- Attend trainings and social events.
- Write scientific articles
- Disseminate your research at conferences and seminars.

**Gender policy:**

UL strives to increase the proportion of [female PhD students in its faculties](#). Therefore, we explicitly encourage women to apply.

**Supervision:**

Your lead supervisor will be Prof Stephane Bordas

**Application submission:**

Before proceeding with the submission of your application, please prepare the following documents.

- Curriculum vitae (maximum two pages).
- Motivation letter (maximum two pages) detailing how you meet the selection criteria for the given research direction.
- Publication list and PDFs of those publications.
- Full contact details of two persons willing to act as referees.
- Copies of diplomas, transcripts with grades, with English, French or German translation.

Please send a complete application to [stephane.bordas@uni.lu](mailto:stephane.bordas@uni.lu) , [careers@asetlux.com](mailto:careers@asetlux.com) , [borek.patzak@fsv.cvut.cz](mailto:borek.patzak@fsv.cvut.cz) Please note that incomplete applications will not be considered.

**Selection process:**

Candidates will be short-listed based on the criteria detailed above. Short-listed candidates will be invited for an interview and/or interviewed by phone.