The different phases of the PhD will be:

- Literature review: This review will focus on the modeling approaches potentially usable for the integration of the dissipation processes during the impact of a block on a soil and on deformable obstacles.
- Numerical modeling: the response of elastic beam and/or cables structures to impact using nonsmooth contact dynamics methods.
- Formulation and numerical implementation of a novel model of the response of deformable elastoplastic beam and/or cables structures to impact in the framework of second-order cone complementarity.

References

Compétences

The PhD candidate should have competences in solid mechanics and numerical modeling. A strong theoretical background in solid mechanics is mandatory. Furthermore, the applicant must show a strong interest for software development in computational mechanics. He also has to be motivated by applied research in collaboration with researchers from different disciplines. A good level of English and subsequent writing capacities are also requested.

Avantages

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

Rémunération