



EMPLOYMENT OFFER

FRISSBE PhD Student

Slovenian National Building and Civil Engineering Institute

www.zag.si

www.frisambe.eu

Note that the detailed requirements for the application, as well as where to submit it, are found under item 7 on page 6 (last page) of this document. The deadline for the application is on August 4, 2022.

1 THE SLOVENIAN NATIONAL BUILDING AND CIVIL ENGINEERING INSTITUTE

The Slovenian National Building and Civil Engineering Institute, ZAG (www.zag.si/en), is the leading Slovenian Institute in the field of building and civil engineering research. The institute successfully promotes the progress-orientated Slovenian basic and applied science and technical expertise on a global scale through high-quality work. ZAG's headquarters are located in Ljubljana.

The organisation is widely recognised both in Slovenia and in other countries by means of its expertise, top-class equipment and multi-disciplinary work, including life-cycle analyses of different construction materials and other pressing research topics.

ZAG is involved in international co-operation in science and technology with institutions from the EU, the USA and other partnering countries. Over the last 10 years, ZAG has participated in more than 80 projects funded by the EU (4th - 7th FP, H2020, Horizon Europe) and is currently coordinating two H2020 projects and eight other international projects. ZAG's research and testing sector is divided into six departments:

- Department of Materials,
- Department of Building Physics,
- Department of Structures,
- Department for Research of Fire-safe Sustainable Built Environment,
- Department of Geotechnics and Infrastructure,
- Department for Metrology.

In the field of tasks deriving from the CPR (the Construction Products Regulation), it has two independent services: the Certification Service and the Service for Technical Assessments.

ZAG's main activities include:

- basic and applied research in the field of building materials and structures,
- development of new methods of testing and measurement,
- certification and attestation of conformity of products, materials and executed works,
- training of research and technical staff in particular technical fields,
- participation in the preparation of technical codes and standards.

2 POSITION OFFERED: PhD Student

The position offered is for full-time employment for 36 months. The expected employment date is in September 2022.

One (1) PhD student will be hired. The best qualified candidate will be selected.

The PhD student are expected to be able to conduct experimental, theoretical and/or numerical research in a range of areas related to fire safety. Particular emphasis will be given to areas that could positively impact the evolution of fire safety engineering in Slovenia. These areas could include but are not limited to material flammability, performance of building systems, fire protection systems and the holistic assessment of infrastructure fire safety.

Some relevant areas of research are:

- numerical methods in fire (multiscale modelling, combustion process modelling, coupled thermal stress analysis),
- hybrid and advanced experimental methods in fire (numerical/experimental coupling, methods for toxicity and ecotoxicity, façade fire),
- emissions, toxicity and ecotoxicity in fire (linking bench-top methods to real scale fires, identifying the composition of combustion effluents, biomass burning),
- fire research and structures (timber, geopolymers and composite structural elements in fire, pyrophoric carbonisation of structural elements),
- fire research on materials (biobased composites, advanced thermal insulations, geopolymers).

The FRISSBE team has offices in a new research facility (<https://www.friissbe.eu/research/fire-laboratory>) with equipment for fire testing that has been purchased through a combination of EU structural, national, and own funds. This equipment consists of furnaces for testing fire resistance of various planar and 3D large samples, a test rig for façade testing, an open calorimeter, room corner test, and a full range of reaction to fire testing equipment, including equipment for chemical analysis of fire effluents. The FRISSBE team also has access to other state-of-the-art research facilities at ZAG.

The FRISSBE team has funds for meeting attendance and travelling.

The workplace is Logatec, a small town about 35 kilometres southwest of Slovenia's capital, Ljubljana. ZAG will have two departments in Logatec, both placed in the new laboratory and office building.

The successful candidates will be enrolled as doctoral students at the University of Primorska (in Koper, Slovenia) in the Faculty of Mathematics, Natural Sciences and Information Technology (<https://www.famnit.upr.si/en>). ZAG FRISSBE will cover all tuition fees.

3 EXPECTATIONS

The applicants for the PhD position at ZAG have to fulfil the following conditions:

- have completed a MSc in a relevant field (engineering or sciences);
- have demonstrated ability to conduct independent research (MSc thesis);
- have excellent written and spoken English;
- have special social skills: leading small groups, teamwork, ability to motivate co-workers, good communication skills.

The expectations and requirements at the University of Primorska can be found in the following links:

<https://www.famnit.upr.si/en/education/enrolment--2223#heading2>

<https://www.famnit.upr.si/en/resources/files/education/enrolment--2223/anglfamnitrazpis-dokt22-23objava.pdf>

4 RIGHTS AND DUTIES

The PhD student will have the following rights and duties:

- implementation of school obligations for obtaining a doctoral degree at University of Primorska;
- conducting research in the framework of projects under the guidance of a mentor;
- management of the PhD research project;
- preparation of scientific papers and technical reports;
- presentations at national and international meetings, workshops and conferences;
- preparation of doctoral dissertation.

5 REMUNERATION PACKAGE

ZAG is offering an attractive remuneration package to the PhD student. A more detailed overview can be provided once the hiring level and the candidate's work experience is known. There are also other financial benefits that depend on performance and company/national regulations. Health and dental insurance, social charges and pension contribution, and taxes are included.

ZAG can provide administrative support concerning things such as housing and legal/immigration issues.

6 THE FRISSBE PROJECT

The FRISSBE project will implement new practices at the Slovenian National Building and Civil Engineering Institute, ZAG, by attracting and maintaining high-quality human resources under the direction of the ERA Chair holder.

The team will build a strong interactive ecosystem with the InnoRenew CoE and the University of Primorska, and other supporters of the project. Added-value of the project amplifies the Fire laboratory's capacities co-financed with ERDF funds, ensuring conditions to foster excellent research. The project will yield completed at least 3 PhD studies and 6 Post-Doctoral Researchers. The long-term sustainability of the ERA Chair will be achieved by combining national and EU research and innovation funding with industry-funded research and development.

The main objective of the FRISSBE project is to establish an ERA Chair for fire-safe sustainable built environments at ZAG, where cutting edge research infrastructure for fire testing is being established. Combining the new research infrastructure and the ERA Chair will create the appropriate conditions for high-quality outstanding researchers and research managers to move and engage with the beneficiary, aiming to achieve excellence in the scientific field of fire-safe sustainable built environments and modify their research and innovation landscape. With adequate institutional support and by carrying out outstanding research, the ERA Chair team will have a decisive and positive impact on the culture and performance of the beneficiary, which will result in:

1. wide-ranging advancement in the scientific excellence of the beneficiary in the addressed scientific field and in general,
2. creation of an internationally recognised autonomous unit at the beneficiary,
3. making the beneficiary an attractive institution for foreign researchers,
4. capacity building of the beneficiary in the area of competitive funding, project management, utilisation of infrastructure, and scientific performance,
5. creation of a sustainable, interactive inter-institutional ecosystem, consisting of the FRISSBE ERA Chair and partnering with the InnoRenew CoE and University of Primorska (UP) in Koper, Slovenia that will enable the transfer of new knowledge to students, their early engagement in research activities of the ERA Chair team, and creation of partnerships with students' future employers, and
6. increase the innovation activities of the beneficiary in collaboration with regional and international stakeholders.

7 APPLICATION

The job offer for the two PhD student positions will open on July 12, 2022, and close on August 4, 2022.

Applications should contain (in the same order):

1. Cover letter;
2. Copy of a document which shows the candidate to hold the required qualification;
3. CV that includes:
 - a. evidence of fulfilling our expectations and having competences for doctoral student set by University of Primorska;
 - b. list of publications, if any, including h-index and citations;
4. Motivation letter (1 page maximum) that describes the vision of the applicant on how to co-operate with the FRISSBE team;
5. A 2-page state-of-the-art research description, including relevant references, on one of the following topics, which are intended to be the PhD research topics:
 - a. Fire safety in timber in construction
 - b. Fire safety of building envelope systems
 - c. Topic of your choice
6. Other materials considered relevant by the candidate (e.g. recommendation letters are seen as important).

Applicants have to use reference ON51589 and position name »YOUNG RESEARCHER (H017002) - M/Ž« in the title of their application.

Applications should be in English and sent to the following e-mail address: kadri@zag.si

Additional information is available here: www.frissbe.eu and from the FRISSBE team and the ERA Chair Holder Grunde Jomaas by email (frissbe@zag.si).

The selection will be done in two rounds; a shortlist will be formed, and then there will be interviews (conducted online in August 2022).

ZAG is committed to employment equality, in particular, as set in the national legislation and the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. We welcome applications from all qualified candidates who fulfil the requirements specified in the announcement.