

## JOB POSITION @UNIZAG FSB

### Research assistant on project: Development of efficient methodology for finite element method based structural analysis of marine structures - REMAKE (KK.01.2.1.01.0124)

#### Organization

University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Department of Naval Architecture and Ocean Engineering.

#### Job description

The research assistant (PhD candidate) will work on implementation of finite elements, applicable for the assessment of ship structures during the design process, into the open source program OOFEM. The work will include integration of the structural response calculated by OOFEM with ship structural adequacy criteria calculation. Expected result is an implemented mathematical model that will enable not just structural evaluation of ship structures but also efficient ship structural response sensitivity analysis that will enable application of the mathematical model for optimization of ship structural scantlings. The duration of the job contract is limited to the project duration (until 26. 12. 2021.). The total monthly salary 1370 € (includes obligatory health insurance and retirement fund expenses). The estimated net salary is 810 €. Position includes covered tuition fees for Doctoral study (Naval Architecture) at Faculty of Mechanical Engineering and Naval Architecture.

#### Qualifications

Required qualifications:

- Completed university graduate study programme and earned total of 300 ECTS with an average grade above 3.50 in one of the next fields: naval architecture, marine engineering, mechanical engineering, aeronautical engineering, applied mathematics or computational mathematics.
- Working knowledge in computer programming
- Good working knowledge of English

Preferred qualifications:

- Experience in application of finite element method for structural analysis
- Experience in scientific software development
- Working knowledge of C++.

**Additional information:** Assit. Prof. Pero Prebeg, email: [pero.prebeg@fsb.hr](mailto:pero.prebeg@fsb.hr), <http://www.studyincroatia.hr/>

#### Basic info about project

**Duration:** 42 months

**Financing:** European Regional Development Fund, project partners internal funds

**Lead partner:** BONUM d.o.o.

**Partners:** University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture  
 University of Zagreb, Faculty of Science (Department of Mathematics)

**Objective:** To develop an innovative software tool capable for a more efficient and productive analysis and design of marine structures, as a result of the effective collaborative research of an entrepreneur and a scientific research institutions.

