Effect of GHG regulations to shipping and port business and operations

Summary

Maritime transport is on the verge of a big change to reduce its carbon emissions. The aim of the doctoral research project is to analyse the present shipping business, and to study how new strict GHG regulations and consecutive actions will affect the shipping and port business models and operations.

Research field:	Mechanical engineering
Supervisor:	Prof. Dr. Ulla Pirita Tapaninen
Availability:	This position is available.
Offered by:	Estonian Maritime Academy
Application deadline:	Applications are accepted between September 01, 2021 00:00 and September 30, 2021 23:59 (Europe/Zurich)

Description

For long, shipping has remained outside strict GHG-regulations, but now maritime transport is on the verge of a big change to reduce its carbon emissions. The recent IMO restrictions and EU Fit for 55 package are putting the shipping world into a new situation.

The exhaust gas emissions of the vessels can be reduced in three ways: (i) the choice of energy, (ii) vessel design, and (iii) the choice of vessel type, route and speed. All of these areas are under large-scale research, e.g. new low or zero-carbon fuels or use of wind or sails, energy-efficient vessels and operative model, even slow-steaming or intermodal transport are studied extensively. All these changes are fundamental alone, but together they will lead to a new shipping world.

The aim of the doctoral research is to analyse the present shipping business, and study how the new fuels, vessel design and operative changes will affect the shipping business models and operations. The research can be focused on geographical areas or cargo types and on effects of certain technological innovations or new fuels, e.g. hydrogen.

Research is multidisciplinary and various methods can be used. Background in statistical analysis and economics is welcome. Also, basic knowledge in shipping economics is seen as an advantage.

The position is at the Tallinn University of Technology and includes some work as a teaching assistant in our courses. The expected duration of doctoral studies is four years, but a contract is first made for 4 months, and its extension is subject to the advance of studies and research.

The salary is according to the salary system of Tallinn University of Technology. The minimum net salary is 13200€/year. Salary can be increased when externally funded project proposals on the topic receive funding.

Applicants should fulfil the following requirements:

The applicant for the position must have a master's degree and must fulfil the requirements for doctoral students at the Tallinn University of Technology. In addition, a competitive candidate for this role should demonstrate the following qualifications:

- A degree in maritime, economics, engineering, mathematics or another closely-related discipline
- High level of interest on the topic
- Good writing and communication skills, in particular in the English language
- A lack of experience in the above skills could be compensated by evidence of research potential

Appropriate training will be provided.

To get more information or to apply online, visit https://taltech.glowbase.com/positions/376 or scan the the code on the left with your smartphone.