Social Welfare Impacts of Self-driving Technology using Transport Modeling and Cost-benefit Tools

Self-driving technology has been talked about frequently in the news for the last decade after advancements in AI technology and experiments are ongoing at both KTH and with a bus in Barkarby in northwest Stockholm. During the last 1½ years, a research project Self-driving vehicles and public transport – threats and possibilities has looked at long-term impacts for the transport system using transport modeling tools, with a focus on public transport implications. This project is coming to an end, but the project has yielded a lot data and aspects that have not been explored.

Few studies have looked at the entire transport system to grasp societal impacts. One such aspect, which has not been explored in the general field, are implications for different social groups. During the last 2 years researchers at KTH has developed better tools to understand impacts on e.g. different income groups.

**The aim of this thesis** is to combine the two research areas, analyzing the social welfare impacts of the different scenarios developed within the first project.

**We seek one student or a team of two students,** preferably with some familiarity with using traffic models and a basic understanding of cost-benefit analysis. Since the aim is to publish a scientific article the student should have an interest in pursuing an academic career, since this work will be done in addition to writing the thesis.

The thesis is hosted by Integrated Transport Research Lab (ITRL) at KTH and have the Stockholm Public Transport Authority as a partner. Main supervisor will be Erik Almlöf, KTH/Stockholm PTA, and co-supervisor will be Isak Jarlebring Rubensson, Stockholm PTA.

The intention is that, apart from the master thesis itself, write a scientific article and publish with the student as either main author of co-author.

**Your application, including CV and a motivation letter, is welcome to** Erik Almlöf – [ealmlof@kth.se](mailto:ealmlof@kth.se)

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| Application deadline | 2020-01-15 |
| Selection process end | Continually |
| Start period | 2020-02-01 |
| End period | 2020-08-01 |

**About Integrated Transport Research Lab - ITRL**

ITRL is a multidisciplinary and multi-stakeholder arena that brings together experts from various fields in order to contribute to the development of a sustainable transport system. The main research question is *How can new technology contribute to a sustainable transport system?ow How*

More information at: [www.itrl.kth.se](http://www.itrl.kth.se).