Post-doctoral position

Title: Optimization of tramways fleet taking into account planning and reduction of energy consumption

Advisors: S. Enjalbert (Ass-Professor, UVHC-LAMIH UMR CNRS 8201)

University: UPHF – University Polytechnique Hauts-de-France

Project: ELSAT 2020 by CISIT/ GS2RI : Greener & Safer Rail Road Interaction

Position
Post-doctoral position at UVHC, monthly gross salary: 2550€

Mission
Global optimization of tramways fleet is based on criteria such as the customer satisfaction (punctuality), the reduction of energy consumed by fleets (e.g. by recovering the brake energy (recyclability)) and more generally on the management of traffic (planning and dynamic reorganization) for the operators. The optimization considering urban one-way routes and the increase of traffic should also be addressed by developing adapted planning tools and/or methodologies. In this post-doctoral position, further developments based on previous works on energy efficient driving profiles for a tram-driver system will be realized. The objectives of the post-doctoral are:
- To contribute to the reduction of energy consumption by tramways fleets, integrating constraints such as tramway dynamics, routes, operators policy and also including driver behaviours, in solving planning problem,
- To conduct experimentations on PSCHITT-RAIL platform,
- To realize several scientific publications in highly ranked international journals,

- To purse existing international collaborations of the lab with teams and labs from Hauts-de-France and with industrials from domain.

Skills

PhD in Automatic control, Computer Sciences, Industrial Engineering, Operation Research with a specialization in solving planning problems based on qualitative and quantitative criteria.

Strong abilities in Programming (Matlab, Simulink, VBA or C++) and experience in driving experiments.

Duration

September 2018, 12 months.

How to Apply

Please send a CV, a covering letter, your list of publications, and a letter(s) of recommendation to simon.enjalbert@univ-valenciennes.fr

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