

Offre de stage rémunéré de Recherche en Informatique (niveau Master/Ingénieur)
au LAMIH UMR CNRS 8201, dans le Département Informatique, Université de Valenciennes

A six-month funded research internship is offered in the field of Computer Sciences, at the LAMIH UMR CNRS 8201, University of Valenciennes, in the Computer Science Department
(<http://www.univ-valenciennes.fr/LAMIH/en/computer-science>)

Topic:

The topic deals with the development of a software application dedicated to the simulation of a freight intermodal (container) transportation system. The transportation activities follow a tactical plan of services offered by a carrier on a network transportation infrastructure (inland waterway transportation is chosen for the case study). Customers' transportation demands reach the network-managing booking system sequentially and need to be accepted or rejected in their order of arrival. That decision is based on an optimisation problem solved (off-line) at operational level, with the goal of maximising the expected revenue of the carrier. The stochasticity of the future demand is explicitly taken into account when solving the problem. A number of performance indicators are computed and collected. The simulation results are analysed, based on extensive experimentations corresponding to a variety of operation plans (scenarios).

Keywords: stochastic event-driven simulation, dynamic systems, demand modelling, decision support systems, intermodal freight transportation, inland waterway transportation

Application requirements:

The candidate needs a strong background in Computer Sciences and/or Operations Research, including discrete-event simulation, data structures and algorithms in C/C++ language; knowledge in the field of modelling methods and optimisation techniques would be appreciated. **French is not compulsory.**

The successful candidate might get the opportunity to enrol in the PhD programme of the LAMIH, at the University of Valenciennes, in collaboration with the CIRRELT, Montréal, Canada (<https://www.cirreht.ca>) for a three-year period starting in 2017, on a related research topic.

Practical information:

Supervisors: I. Bilegan and D. Duivivier (LAMIH, Valenciennes), T.G. Crainic (CIRRELT, Montréal)

International research collaboration: LIA CNRS (LAMIH France – CIRRELT Canada)

Financial support: 900€/month

Period: six months starting as soon as possible (in 2016)

Location: LAMIH UMR CNRS 8201, on the Mont Houy Campus of the University of Valenciennes (student accommodation in the University Residence may be booked upon request)

How to apply: send an extended CV, together with academic transcripts of the last three years and at least two recommendation letters, to the following e-mail addresses:

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