



IMT Lille Douai
École Mines-Télécom
IMT-Université de Lille

Further explorations between Machine Learning and Control Systems

A postdoc position is offered at IA IMT Lille Douai as a part of CPER Data project,
Duration: 12 months of contract,
Starting Date: Open in February 2018

We are looking for a candidate with a strong scientific background and a PhD in one of the following fields: control theory, system identification, machine learning and statistics.

Context and works to be achieved during this post-doc

The Informatics and Automatic Control UR <http://ia.ur.mines-douai.fr/en/home/> is a specific unit of IMT Lille Douai. Its research domain is the engineering of evolving systems. Most of its works concern original Big Data and ICT-based solutions for better system management. Original techniques for modelling, monitoring and control of complex processes, are developed at the boundary between control systems, machine learning and artificial intelligence.

The successful applicant will work on the frontier between machine learning and control theory/system identification. System identification is a sub-discipline of control theory which aims at learning dynamical models (difference/differential equations) from data and use these models for decision making (control). Recently, the same problem has gained attention in the machine learning community.

The specific tasks the candidate is expected to contribute to are:

- To study the connections between dynamical models typically considered from a machine learning point of view and those seen by control systems community;
- To study the connections between Machine Learning algorithms and system identification techniques;
- To transfer results for better methods of control or prediction;
- To experiment on benchmark examples related to Building or Industry.

Profile

The candidate must hold a PhD Thesis in Machine Learning, Automatic Control, Model estimation. The candidate must demonstrate scientific expertise and abilities to implement solutions in domains of application such as smart manufacturing and smart cities.

Contact

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