2-years (1+1) Post-doc position on revenue management and dynamic pricing in container shipping at KEDGE Business School/CMA CGM group

Context

Present in over 160 countries through 755 offices, 750 warehouses and 110,000 employees, equipped with a young and diverse fleet of 511 vessels, **CMA CGM** serves 420 of the world's 521 commercial ports and operates on more than 200 shipping lines. CMA CGM is merging its expertise in maritime transport with top quality logistics and intermodal solutions to offer an end-to-end shipping service that exceeds all expectations.

KEDGE Business School is a French business school with 4 campuses in France (Paris, Bordeaux, Marseilles and Toulon), 2 in China (Shanghai and Suzhou), 1 in Dakar, Senegal, and 3 partner campuses (Avignon, Bastia and Bayonne). KEDGE BS offers a portfolio of 36 management programs for students and industry professionals and comprises a specific research center specialized in Supply Chains, the Center of Excellence in Supply Chain Innovation and Transportation the Centre of Excellence in Supply Chain (CESIT).

The project

Revenue management and dynamic pricing is pivotal to drive better performances in the maritime and CMA CGM is currently revisiting his pricing methodology to build upon the latest academic developments. KEDGE Business School is supporting this effort by bringing in its expertise of pricing, its knowledge of the maritime sector and its command of predictive and prescriptive analytics.

The project will focusses initially on maximizing the revenues of the vessel voyages. In particular, this involves analyzing, developing and solving optimization models to ensure an efficient arbitrage between short (spot market) and long contracts and to achieve an efficient sharing of spaces amongst CMA CGM trades. Then in a second phase, we will consider end-to-end pricing (including intermodal legs) and global revenue optimization (including the management of empty containers).

For this project, we are looking for a post-doc with a background in operations research who is confortable with the techniques from revenue management and pricing and has an appetency for machine learning (CMA-CGM has developed tools for demand forecasting based upon the latter techniques and we will use some of these tools to nurrish the optimisation models).

Location

The post-doc will spend most of her/his time at CMA-CGM headquarter in Marseille. However regular visits (around 1 week per month on average) to the Center of Excellence in Supply Chain Innovation and Transportation (CESIT) at Kedge Business School Bordeaux are to be expected (the corresponding expenses will of course be covered).

Pre-requisite

- Proficiency with mathematical modeling and optimization (mixed integer programming, dynamic programming, etc.)
- Proficiency with CPLEX, Gurobi
- Command of some programming language: Julia, python, C++ or alike
- Knowledge of Python or R packages for machine learning is a plus

- A good command of French is preferable.

Salary

The position is for two years (the contract is set up for an initial period of one year, continued by tacit renewal). The successful candidate will receive **a post-doc scholarship of 3 000 EUR per month** and additional funding for travel, research visits and international conferences.

Application

Application should be sent electronically to Professor Pierre Cariou and Gautier Stauffer and should include:

- A cover letter containing your motivation for the position
- A Curriculum Vitae with a list of publications
- A copy of the applicant's PhD
- Letters of recommendation and/or references

Contact

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