

Post-Doc position in Operations Research and Artificial
Intelligence for Healthcare Management
School of Mines Saint-Etienne

Direct Link: <https://www.AcademicKeys.com/r?job=141468>

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Posted Apr. 23, 2020, set to expire Aug. 23, 2020

Job Title	Post-Doc position in Operations Research and Artificial Intelligence for Healthcare Management
Department	Center for Biomedical Engineering https://www.mines-stetienne.fr/recherche/departements/ingenierie-systemes-de-soins-services-de-sante-i4s/
Institution	School of Mines Saint-Etienne Saint-Etienne, , France
Date Posted	Apr. 23, 2020
Application Deadline	Jun. 30, 2020
Position Start Date	Available Immediately
Job Categories	Post-Doc
Academic Field(s)	Computer/Information Sciences
Apply By Email	garaix@emse.fr

Job Description

Title: Vehicle routing in flexible and dynamic transportation systems

Location: Ecole des Mines Saint-Etienne (Saint-Etienne, France)

Funding: The French National Research Agency - ANR project FITS - Flexible Intelligent Transportation Systems (<https://anr.fr/Project-ANR-18-CE22-0014>)

Basic salary : 2 400€/months

Duration: 1 year (could be extended by 1 year)

Skills expected:

Operational research

Programming (C/C++, JAVA and/or Python are preferred)

Expected profile:

Doctor in operations research, computer science and/or in industrial engineering.

Supervisor:

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Collaborators in the project:

Philippe Lacomme, Université de Clermont Auvergne - LIMOS, Clermont-Ferrand France

Nabil Absi, Mines Saint-Etienne - LIMOS, Gardanne, France

Dominique Feillet, Mines Saint-Etienne - LIMOS, Gardanne, France

Marina Vinot, INSA Lyon - DISP, Lyon, France

Context:

Project description: <https://anr.fr/Project-ANR-18-CE22-0014>

Home services are a growing sector. On the one hand, the range of services offered widens dramatically (delivery of meals, cleaning, care, help with daily or administrative tasks, etc.). On the other hand the mode of reservation of these services evolves and diversifies with the explosion of offers through platforms like Uber. Thus, the reactivity of these systems to unforeseen events is essential to guarantee the quality of services rendered and their economic viability.

Scientific objectives:

Several types of hazards are considered: the availability of the drivers, the availability of the customers, the delays in the progress of the initial planning. The unexpected absence of a driver will be the first case study. In this case, it will be necessary to reassign its activities either to another driver or to distribute them among several drivers.

Some additional difficulties come from different sources of hazards, and have to be taken into account: (1) the variation on the transportation times, (2) modification of patient care schedules and (3) the arrival of new requests.

Exact and / or approximate methods may be addressed in this postdoc. The exact methods considered are based on stochastic programming and robust programming. The approximate methods will generalize existing heuristics by redefining the operators of the literature.

Numerical experiments will be conducted on academic data sets on dynamic dial-a-ride problems and real data from ambulance and home health care companies.

How to apply:

Send by email to garaix@emse.fr, your academic CV, publications, PhD thesis manuscript, motivation letter and at least two reference letters.

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EEO/AA Policy

Basic salary : 2 400€/months.

35 hours per week.

1 year that could be extended to 2 years.

Contact Information

Please reference Academickeys in your cover letter when
applying for or inquiring about this job announcement.

Contact Garaix Thierry
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