IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

Post-doc position

User-centric Complex Network Partitioning

Lab-STICC

Location : IMT Atlantique, Brest campus, France
Duration : 12 months
Start date : as soon as possible

Description of the professional ecosystem

IMT Atlantique is a renowned French graduate engineering school, training future professionals in innovation, technologies and management, whose teaching themes are at the intersection of engineering, computer science, telecommunications and energy. The **Lab-STICC** laboratory is a recognized interdisciplinary research unit, dealing with issues related to computer science, electronics and information sciences. With a strong focus on innovation, this lab encourages collaboration between researchers to solve complex issues.

The **DECIDE** team of Lab-STICC and the **Data Science** department of IMT Atlantique aims to exploit synergies between decision support and data science to address emerging scientific, industrial and societal issues related to decision-making in complex systems (environment, transportation, energy, social networks, health, defense).

In this context, the team is looking to hire a **postdoctoral researcher** for an innovative research project on **user-centric complex network partitioning**.

Mission

You will participate in the development of a new approach to **partitioning complex networks** (social, transportation, energy, etc.) guided by user preferences. Your role will be to:

- Define the properties that characterize partitions according to user needs
- Integrate the time dimension into the partitions
- Efficiently explore the solution space using optimization algorithms
- Take into account non-monotonic user preferences
- Generate explanations about the obtained partitions

This multidisciplinary approach involves **multi-objective optimization**, **decision support** and **complex network analysis**.

Profil

- PhD in **computer science**, **applied mathematics** or **decision support**
- Skills in **optimization**, **algorithms** and **analysis of complex networks**
- Good skills in Python and ideally in using mathematical programming solvers (Gurobi, Cplex, ...)

How to apply

Please send your application (CV + cover letter) to patrick.meyer@imt-atlantique.fr by 31/12/2023. Interviews start from January 7, 2024.