



Academic position

Post-doctoral researcher in Mathematical Modeling of Infectious Disease Mechanisms

JOB DESCRIPTION

Contract type : Fixed-term contract

Renewable contract: 2 years max.

Salary: 1300 DT net

Level of qualifications required: PhD or equivalent

Function: Post-Doctoral Researcher

Context

This project aims at analyzing and evaluating existing disease transmission models and then finding innovative approaches. The postdoc will be expected to develop mathematical/statistical modeling methods backed with Artificial Intelligence (AI) using Machine Learning and Deep Learning algorithms. More precisely, he/she should explore and exploit the connections between Partial Differential Equations and Statistics for modeling the transmission dynamics of infectious diseases. An accurate prediction of the spread of the pandemic can help to contain health issues and reduce emergent cases.

The researcher will be hosted by the Labo. Of Analysis and Control Of PDE, Department of Mathematics of the University of Monastir, located in Monastir.

There are possibilities to extend the contract. There is flexibility for the starting date.

DETAILS

Title	Post-doctoral researcher in Applied mathematics, modelling and Data sciences
Employer	Université de Monastir
Job location	Faculté des sciences, Monastir
Published	15 Mars 2021
Deadline	15 avril 2021
Type	Post-doc

Assignment

- The post doc chosen for this project should have a broad range of skills at the intersection of Applied Science and Computer Science.
- Proven research publications in top scientific journals.
- Ability to work independently and comfortable to work as part of a collaborative multidisciplinary research team.
- Development of computational models from the results of the data analysis as well as based on relevant prior literature.
- The implementation of data-driven computational models.
- Ability to work independently and comfortable to work as part of a collaborative multidisciplinary research team.
- Ability to present and communicate research ideas to researchers in spoken (communications) and written (research papers) forms.
- Good command of written English.

For more information on the project, potential candidates should look at the EDSTI (Ecole Doctorale Sciences et Techniques de l'Information) website at <http://www.fsm.rnu.tn/fra/pages/55/Actualités>

Scientific Profile

- Strong background in Mathematics and Statistics.
- Strong programming skills, including proficiency in R or Python, are mandatory.
- Knowledge of Partial Differential Equations and numerical methods for solving such equations.
- Knowledge of time series models (like ARIMA, AR etc.) and Machine-Learning or Deep Learning
- Interest for applied Mathematics and Epidemiology. Knowledge in infectious disease transmission models (such as Susceptible-Infected-Removed (SIR) epidemiological model) is desired.

Application

The application package should contain the following elements:

- Curriculum vitae,
- Copy of IDCard
- Cover letter which should specifically explicit how this position relates to the applicant's experience and career goals.
- Two reference letters, and any other pertinent information (e.g., relevant published scientific works).

- Copy of the thesis
- The university transcripts
- Fulfill the attached commitment, contract and form (click to download)

The position is planned for one year, but the contract will be signed for renewable periods of one year.