



Two years postdoc position in signal processing and Monte Carlo methods applied to epidemiology

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Description of work

The purpose of the postdoc position is to design **Markov Chain Monte Carlo samplers** accompanied with, or including, **hyperparameter selection** for credibility interval estimation of epidemiological indicators, e.g., for the reproduction number R_t of Covid19.

The recruited postdoc researcher will tackle both implementation challenges and theoretical questions related to stochastic approximation. He/she is expected to develop commented, easy to handle codes to make available the proposed methodologies to nonspecialists. He/she will work in contact with epidemiologists and will be provided real epidemiological data. An interest in interdisciplinary research will be highly appreciate.

Host institution and place of work

The recruited candidate will be hired by the Centre National de la Recherche Scientifique (CNRS). CNRS is a the largest state-funded french research institution, employing researchers in all fields from exact sciences to humanities. He/she will integrate the Laboratoire des Sciences du Numérique de Nantes (LS2N), in the Signal, Image and Sounds (SIMS) team (<https://www.ls2n.fr/equipe/sims/>) and work on the campus of Centrale Nantes, a top-level engineer school.

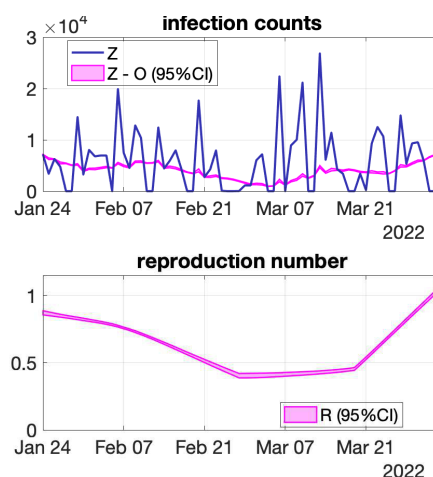
"Regularly quoted in newspapers as being one of the nicest cities in France, Nantes is also renowned for being a rich, lively and innovative city. Its economic clout makes Nantes France's 3rd largest industrial city and 2nd most successful city in terms of employment growth." (<https://metropole.nantes.fr/nouveaux-arrivants>)

Candidate profile

Prospective applicants are expected to have a PhD in signal processing, statistics or a related discipline, excellent programming skills (e.g., in Python or Matlab), and good communication skills in English, both written and oral. The net monthly salary is around 2250€ for researchers with less than 2 years of professional experience after the PhD, and starts around 3200€ in other cases. The position comes with health insurance and other social benefits.

Candidates are requested to send a CV, a brief statement of research interests and the contact details of two referees in a single PDF file. Applications will be collected until a suitable candidate is found.

Applications and informal information requests are to be emailed to barbara.pascal@cnrs.fr.



Covid19 indicators in Finland