Offer of Post-doctoral Position at Ifremer

Ifremer general presentation:
Created in 1984, Ifremer is a public institute of an industrial and commercial nature (EPIC). It is supervised jointly by the Ministry of Higher Education and Research; Ministry of Ecology, Energy, Sustainable Development and Sea; and Ministry of Food, Agriculture and Fisheries. Ifremer, through its research work and expert advice, contributes to knowledge of the oceans and their resources, to monitoring of marine and coastal environments and to the sustainable development of marine activities. To these ends, Ifremer conceives and operates tools for observation, experimentation and monitoring, and manage the oceanographic databases. The Ifremer Unit of Technology Research and Development (RDT) highlights the role of technology in oceanographic research and notably by underlining the complementarity needed between "upstream" technological research and "downstream" developments allowing technology transfer to scientific teams and to industry. In this context the team develops long term measurement systems and platforms deployed at sea acquiring long time series data.

Position description:
The position is offered by the RDT unit of the Physical Resources and Deep-sea Ecosystems department, in Brest (Brittany, France), in the framework of the in situ monitoring of the sea. The proposed position is focused on mathematical methods dedicated to analyze environmental time series such as those acquired by long term monitoring systems, for instance deep sea observatories and coastal buoys, or those obtained from numerical models.

The objective is to review and study time series analysis methods for environmental science in several steps: (1) from a bibliographic review in other scientific domains such as econometrics, health, signal processing, and (2) then to test and to assess some selected methods by carrying out some case studies performed on acquired data. Several categories of methods will be tested: gap filing methods, methods dedicated to the multi-scale characterization of signal contents (e.g. orthogonal methods), methods dedicated to the study of extreme events. Pitfall, advantages and robustness of the methods will be assessed according to methods parameterization and data series types. This will lead to publications in peer-reviewed journals, to the writing of a dedicated handbook and to organize and participate to training workshops.

Candidate profile :
- Requested knowledge and skills:

The ideal candidate will have a background in applied mathematics, statistics and signal processing, preferably with knowledge in applications to environmental sciences. A PhD is required. Young and senior researchers are welcome.
- Language

English: spoken and written fluently or almost.
French: better if spoken but not necessarily.
- Computing skills.

Programming with Matlab, R, etc…

Duration and wage:
According to the candidate profile several sources of wage are considered (national funding and Marie Curie grant). The duration is from 12 months to 24 months.

Contact references:
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Applications:
Interested applicants should send:
1. A letter including the specific skills and competence for the particular postdoctoral position you are interested in.
2. A detailed curriculum vitae.
3. A summary of work previously done, mentioning the date of submission of the thesis.
4. A list of publications and communications / symposia.
5. Two letters of recommendation.