

Research Engineer /Post-Doc en D-InSAR (funding: FEDER-CHERLOC)

Beginning : September 2020

Duration: 18 months

Salary : ~2300€

Laboratory: Laboratoire M2C, 24, rue des Tilleuls, Université de Caen-Normandie, Caen, France

Coastal landscapes are permanently changing, partially in reason of the increase of the infrastructure building induced by the raise of economic activities, housing etc. This is especially the case of the coasts of Manche, where the tidal range is important.

The FEDER CHERLOC project aims to survey the coastal structures as well as the natural surfaces using geophysical/geotechnical *in situ* measurements and spaceborne remote sensing. In the proposed position it is planned to operate spaceborne differential interferometry for stability assessment of the coastal structures using multi-temporal acquisitions.

To that end, the candidate will participate to the development of a D-InSAR chain and will benefit from the computing facilities of the University of Caen-normandie. The classical methods (Persistent Scatterers, SBAS, etc.) will need to be adapted to the polarimetric capability of the actual spaceborne sensors as well as to the injection of external measurements (DGPS etc.). In the theoretical point of view, the research developments will concern optimization, source separation, change detection methods based on interferogram combinations.

Depending on the candidate profile, it will also be possible to investigate other thematics, to evaluate the methods (rocky/sandy coasts, permafrost, forests).

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Profile of the applicant: experience en D-InSAR and knowledge of SAR polarimetry