

## Internship position @ CEREА on sand transport modelling in the atmosphere

### Introduction

The CEREА (EDF R&D MFEE, ENPC) is the leader within EDF R&D for the modelling of atmospheric composition and environment. The Masdar Institute in Dubai was recently involved in the atmospheric study for solar power farms in desert areas. Solar farms will develop quickly in the future and desert areas are potentially hot spots for developments. The CEREА and the Masdar Institute are studying the estimation of the sand and aerosol transport in the atmosphere to allow the optimal design of such facilities in desert areas.

### Internship scope and deliverables

The main goal of the intership is to determine and quantify how sand may affect solar farms in Emirates area. The deposition of sand onto solar farms will be quantified by using the meteorological model WRF coupled to the air-quality model POLYPHEMUS, as well as the impact on sand on solar radiation. A report describing the methodology and a demo of the application of the case study is expected.

### Required skills

The optimal candidate will have a MS degree on climate or atmospheric related sciences. She/He will be keen to use numerical models. Ideally she/he will know the WRF model. He she/he will have skills in statistical data analysis and data visualisation.

### Logistic

The stage will be located at the ENPC CEREА, Batiment Coriolis, 6 rue Blaise Pascal, 77455, Champs sur Marne. for submitting candidature, please send a CV (maximum 1 page) and a cover letter (maximum 15 lines) to [pietro.bernardara@edf.fr](mailto:pietro.bernardara@edf.fr) and/or [Karine.sartelet@enpc.fr](mailto:Karine.sartelet@enpc.fr)