

4 PhD and Postdoc positions in Machine Learning for Geosciences [ERC Consolidator Grant project]

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2 PhD and 2 Postdoc positions in Machine Learning for Geosciences

We are searching for outstanding candidates with a strong interest in machine learning and/or geosciences to cover 2 PhD and 2 postdoctoral positions to join the Image and Signal Processing (ISP) group in the Universitat de Valencia, Spain, <http://isp.uv.es>. The positions are funded by an ERC Consolidator Grant 2015-2020 entitled “Statistical Learning for Earth Observation Data Analysis” (SEDAL) under the direction of Prof. Gustau Camps-Valls. More info about the openings in <http://isp.uv.es/sedal.pdf>

The project and job description

We aim to develop the next generation of statistical inference methods to analyze Earth Observation (EO) data.

Machine learning models have helped to monitor land, oceans, and atmosphere through the analysis and estimation of climate and biophysical parameters. Current approaches, however, cannot deal efficiently with the particular characteristics of remote sensing data. We will develop advanced regression (retrieval, model inversion) methods to improve efficiency, prediction accuracy and uncertainties, encode physical knowledge about the problem, attain self-explanatory models, learn graphical causal models to explain the complex interactions between essential climate variables and observations, and discover hidden essential drivers and confounding factors in Climate/Geo Sciences.

Highly motivated researchers with a degree/PhD in computer science, statistics, machine learning, electrical engineering, physics, or mathematics are encouraged to apply. All candidates should have a solid understanding and knowledge of machine learning and statistics, and being particularly interested in remote sensing and geoscience problems. Positions will cover two different profiles: (1) Expertise in remote sensing and geosciences: model inversion, radiative transfer models, biogeochemistry, climate science, detection and attribution, global carbon/heat/water fluxes, in-situ datasets for land/vegetation monitoring; and (2) Expertise in machine learning, statistics and signal processing: regression and time series analysis, change and anomaly detection, structured/relational/transfer learning, graphical models and causal inference. In both cases, good programming skills (Matlab/Python/R/C++), a critical and organized sense for data analysis, as well as maturity and commitment, strong communication, presentation and writing skills are a big plus.

Application details

– How? Send me: 2-pages CV, motivation letter, 3 best papers, 3 recommendation letters or contacts

- When? Preferred starting dates: January or May 2016
- How long? 1 year contract (extendable upon mutual satisfaction and qualifications to 3-4 years)
- How much? Salary according to UV scales including social security, health insurance benefits, and travel money
- Where? Valencia, Spain, Mediterranean, nice weather, hike and beach.

Excellent cost-of-living index = 55

Contact

- Before applying: Informal inquiries may be addressed to Prof. Dr. Gustau Camps-Valls, gustau.camps@uv.es
- Ready to apply? Send your dossier in one single PDF to gustau.camps@uv.es, subject: SEDAL application

Prof. Gustau Camps-Valls

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