

Samuel Favrichon

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EDUCATION

Sorbonne Université, LERMA

Ph.D. in Remote Sensing, Advisor: Catherine Prigent, Carlos Jimenez

Paris

2018–Current

- Thesis: “Improvement and exploitation of land surface temperature estimation from satellite microwave observations, on a global scale and over 40 years.”

Université de Technologie de Compiègne

Diplôme d'ingénieur: Computer science, data mining and decision making

Compiègne

2011–2016

- Thesis: “Outils d'analyse de donnée dans le domaine médical: cartographie de réseau et analyse d'image”

EXPERIENCE

Observatoire de Paris, CNRS

Engineer, LERMA

Paris

Jan. 2018–Nov. 2018

- Analysis of brightness temperatures from microwave instruments for Earth study

SWORD Insight

Engineer

Lyon

Sep. 2016–Nov. 2017

- Data and model engineering: image classification, unstructured data research and visualisation tools

Equisense

R&D Developer

Compiègne

Summer 2015

- Data compression and motion analysis for horse performance connected device

Multiposting

Web Developer

Paris

Sep. 2014–Feb. 2015

SKILLS

- **Remote sensing:** Data assimilation, Inverse problems, Microwave, Land surface temperatures, Radiative Transfer
- **Tools:** QGIS, Unix, Git, Python (Numpy/Scipy, Scikit-learn, Keras/Tensorflow)
- **Machine learning:** Neural networks, Error estimation, U-Net, Unsupervised methods

LANGUAGES

- **French:** Native
- **English:** Fluent
- **German:** Intermediate

PUBLICATIONS

- [1] S. Favrichon, C. Prigent, and C. Jiménez, “A Method to Downscale Satellite Microwave Land Surface Temperature”, *Under review*, pp. 1–24, 2021.
- [2] V. Pellet, F. Aires, and S. Favrichon, “Convolutionnal Neural Network classification of clouds using IASI brightness temperatures over sea”, *In preparation*, 2021.
- [3] S. Favrichon, C. Jimenez, and C. Prigent, “Inter-calibrating smmr brightness temperatures over continental surfaces”, *Atmospheric Measurement Techniques*, vol. 13, no. 10, pp. 5481–5490, 2020.

- [4] S. Favrichon, C. Prigent, C. Jimenez, and F. Aires, “Detecting cloud contamination in passive microwave satellite measurements over land”, *Atmospheric Measurement Techniques*, vol. 12, no. 3, pp. 1531–1543, 2019, ISSN: 18678548.
- [5] J. Dorner, S. Favrichon, and A. S. Ogrenici, “Weight exchange in distributed learning”, *Proceedings of the International Joint Conference on Neural Networks*, vol. 2016-October, pp. 3081–3084, 2016.

TEACHING

- **Practical class assistant** at Sorbonne Université
Discrete Mathematics (LU2IN005) - Finite-state machine, Python Fall 2020
- **Teaching Assistant** at Sorbonne Université
Projet Pluridisciplinaire (MAIN3) - Computer assisted numerical modelisation Fall 2020

WORKSHOPS AND CONFERENCES

- Microrad - *All-weather downscaling of microwave Land Surface Temperatures* Remote - 2020
- ESA Land Surface Satellite Application Facility user Workshop Mainz - 2019

EXTRACURRICULAR ACTIVITIES

- Abroad studies
Turkey, Germany, United Kingdom 2010,2014,2016
- Volunteer, Barefoot College, Tilonya, Rajasthan, India
Computer class teacher and curriculum creation Mar. 2016–Jul. 2016
- Sports
Cycling, Mountaineering