

Sophie Giffard-Roisin

CHARGÉE DE RECHERCHE IRD

ISTerre, Grenoble Universités, France

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Employment

ISTerre, Université Grenoble Alpes

CHARGÉE DE RECHERCHE IRD (INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT)

Grenoble, France

oct. 2019 - current

Colorado University and CNRS Paris Saclay

POSTDOCTORAL POSITION IN CLIMATE INFORMATICS WITH CLAIRE MONTELEONI AND BALÁZS KÉGL

Boulder, USA and Paris, France

mar. 2018 - aug. 2019

Inria Sophia Antipolis (Asclepios Group)

PHD IN MACHINE LEARNING FOR MEDICAL APPLICATIONS

Sophia Antipolis, France

apr. 2014 - dec. 2017

Organization & Responsibilities

- 2021 - **Associate Editor**, *Environmental Data Science* open-access journal, Cambridge University Press. -
- 2020 - **GdR Board Member**, *Théorie et Climat* CNRS groupement de recherche (GdR), leader: F. Bouchet. France
- 2018-19 **Organizer**, Organizing committee of the **2019 Climate Informatics Workshop**, Paris, Oct. 2019 and organizer of the 2018 Climate Informatics **Hackathon**. Boulder CO, USA
- **Reviewer**, NeurIPS, ICLR, IEEE TIP, Geophysical Res. Solid Earth, Remote Sensing, JSTARS, Climate Informatics, NSF Grant -

Education

PhD in Computer Science

ASCLEPIOS RESEARCH PROJECT, INRIA SOPHIA (ADVISORS: M. SERMESANT, N. AYACHE, H. DELINGETTE)

- Title: Non-invasive personalisation of cardiac electrophysiological models from surface electrograms
- [Manuscript link](#).

Sophia-Antipolis, France

2014-2017

MVA research master (Math, Vision and Learning)

ECOLE NORMALE SUPÉRIEURE (ENS) CACHAN

Paris, France

2013-14

Master of Science in Engineering

ECOLE NATIONALE SUPÉRIEURE DES MINES DE SAINT ETIENNE

Saint-Etienne, France

2010-13

Awards & Grants

- 2020 **UGA Grant**, UGA Projet exploratoire et émergent (100k €), 2nd PI, PI: James Hollingsworth on Deep Learning in optical image correlation. Grenoble
- 2020 **MIAI Grant**, MIAI development and promotion of AI grant (5K €) 1st PI on remote sensing SAR interferometry for surface deformation estimation. Grenoble
- 2019 **PNTS Grant**, PNTS (programme national de télédétection spatiale) grant (7K €). 2nd PI, PI: James Hollingsworth on fault maturity and slip localization. Grenoble
- 2018 **PNTS Grant**, PNTS (programme national de télédétection spatiale) grant of 20K €. 2nd PI, PI: Fatima Karbou (Météo France) on avalanche detection from remote sensing. France and USA
- 2017 **Award**, Prix d'Excellence of Université Côte d'Azur Nice, France
- 2017 **Best Paper Award**, FIMH Conference, *Sparse Bayesian Non-linear Regression for Multiple Onsets Estimation in Non-invasive Cardiac Electrophysiology* Toronto, Canada
- 2017 **Journal First Highlight**, IEEE TBME journal, *Noninvasive Personalization of a Cardiac Electrophysiology Model From Body Surface Potential Mapping* U.S.A

Publications

PUBLICATION LISTS

Scholar See my [Google Scholar account](#)

HAL See my freely available [HAL paper list](#).

SELECTED PUBLICATIONS

- 2021 **Journal of Geophysical Research: Solid Earth**, [Designing convolutional neural network pipeline for near-fault earthquake catalog extension using single-station waveforms](#). Josipa Majstorović, Sophie Giffard-Roisin, Piero Poli. *Journal*
- 2020 **Frontiers in Big Data - Data-driven Climate Sciences**, [Tropical Cyclone Track Forecasting using Fused Deep Learning from Aligned Reanalysis Data](#). Sophie Giffard-Roisin, Mo Yang, Guillaume Charpiat, Christina Kumler Bonfanti, Balázs Kégl, Claire Monteleoni. *Journal*
- 2019 **Tackling Climate Change with Machine Learning NeurIPS workshop**, [Detecting Avalanche Deposits using Variational Autoencoder on Sentinel-1 Satellite Imagery](#). Saumya Sinha, Sophie Giffard-Roisin, Fatima Karbou, Michaël Deschatres, Anna Karas, Nicolas Eckert, Claire Monteleoni. *Vancouver, Canada*
- 2018 **IEEE Transactions on Biomedical Engineering**, [Transfer Learning from Simulations on a Reference Anatomy for ECGI in Personalised Cardiac Resynchronization Therapy](#). Sophie Giffard-Roisin, Hervé Delingette, Thomas Jackson, Jessica Webb, Lauren Fovargue, Jack Lee, Christopher A. Rinaldi, Reza Razavi, Nicholas Ayache, Maxime Sermesant. *Journal*
- 2017 **IEEE Transactions on Biomedical Engineering**, [Noninvasive Personalization of a Cardiac Electrophysiology Model From Body Surface Potential Mapping](#). Sophie Giffard-Roisin, Thomas Jackson, Lauren Fovargue, Jack Lee, Hervé Delingette, Reza Razavi, Nicholas Ayache, and Maxime Sermesant. *Journal*

Expertise & Languages

Expertise Machine Learning, Image and Signal Processing, Numerical Simulation and Modeling, Inverse Problems, Remote Sensing, Climate Informatics

Languages French (native language), English (fluent), Italian (fluent), Spanish (in training)