Curriculum vitae with Julien Brajard

Role in the project Project manager ☐ Project partner ☐

*** PERSONAL INFORMATION**

*Family name, First name:	Brajard Julien		
*Date of birth:	13.01.1980	*Sex:	Male
*Nationality:	French		
Researcher unique identifier(s)	http://orcid.org/0000-0003-0634-1482		
URL of personal website:	https://www.nersc.no/staff/julien-brajard		

*** EDUCATION**

	Name of faculty/department, name of university/institution, country
2006	PhD: Disputation date: 07.01.2006. Environmental science, Sorbonne University (ex. University Pierre & Marie Curie),
2003	Data processing master, Telecom Sud Paris, France

*** POSITIONS**

Current Position

	Job title/name of employer/country
2019-	Researcher, Nansen Environmental and Remote Sensing Center, Norway
2009-	Associate professor, Sorbonne University, France

Previous positions held

	Job title/name of employer/country
2018-2019	Invited scientist, Nansen Environmental and Remote Sensing Center, Norway
2008-2009	Post-Doc, OQAI, Sorbonne Université, France
2006-2008	Post-Doc, CNES (French space agency), University Opal Côte d'Opal, France

PROJECT MANAGEMENT EXPERIENCE

	Project and role, funding from
2013-2015	Altifloat (Coordinator, 20 k€), Mistrals-ENVIMED, France-Lebanon
2018-2020	Project Altilev , P.I., funded by PHC-CEDRE.
2018-2020	APPLE-DOM (Coordinator, 10 k€), PNTS, France

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

	No. of	MSc/ Ph.D.	Name of faculty/department/centre, name of university
2022	1	Master	Nansan Center
2021-	1	Ph.D.	Nansen Center
2020	2	Masters	Nansen Center
2019-	1	Ph.D.	Sorbonne University, France
2019-2022	1	Ph.D.	Sorbonne University, France Georges Baaklini, co-supervision with Leila Issa
2019	4	Masters	Nansen Center, Norway and Sorbonne University, France
2014-2017	1	Ph.D	computer science, Sorbonne University, France
2016-2018	7	Master	Sorbonne University, France

TEACHING ACTIVITIES

	Teaching position – topic, name of university/institution/country
2019, 2021, 2022	Teaching Machine Learning (12h) at University in Bergen (MAT330)
Winter 2019	Teaching Machine Learning (9h) at the Geilo Winter School (Sintef)
Summer 2016	Teaching Machine Learning (15h) at the ICS Summer School (Roscoff)
2009-2018	Teaching 192 hours/year from L1 to PhD in computer programming (C/Python/Matlab), algorithmic, signal processing.

ORGANISATION OF MEETINGS

	Role and name of event/number of participants/country
2022	Convener of the session “Machine Learning and data assimilation” (Living Planet Symposium, 20 submissions, Germany
2019-2023	Convener of the session “Machine Learning for Earth System Model” (EGU general assembly), 25-50 submissions, Vienna/Austria (or online)
2020	Proceeding chair of the Climate Informatics conference, online
2019	Chair of the Climate Informatics workshop (150 participants), Paris, France.

INSTITUTIONAL RESPONSIBILITIES

	Name of university/institution/country
2022-	Member of the board of the research group Theory of climate science, CNRS, France
2018-present	Member of the board of the french National Program for Spatial Remote-sensing (PNTS)
2017-2020	Co-coordinator of the board of the network for Statistics for analysis, modelling and assimilation in IPSL.

COMMISSIONS OF TRUST IN ACADEMIC, PUBLIC OR PRIVATE ORGANISATIONS

	Name of university/institution/country – and role
2020-present	Editor for Environmental Data Science (Cambridge University Press)
2009-present	Reviewer for Non-Linear process in geoscience (EGU), Ocean modelling (Elsevier), Remote Sensing of environment, International journal of remote sensing, Journal of Geophysical Research, Remote Sensing (MDPI), Philosophical transaction, French National Research agency

MAJOR COLLABORATIONS

Name of university/ institution/center	Topic
Institute Pierre Simon Laplace	Machine Learning, data assimilation
Sorbonne University	Artificial intelligence for Climate science.
ENSIIE	Deep Learning
Libanese American University	Data assimilation

Track record

29 published papers in international journals, and more than 50 presentations in international conferences.
JB publication has been cited 378 /793 times (Publons/Google scholar) with a H-index of 11/15 (Publons/Google scholar).
2009-2018: As associate professor, JB was 50% on teaching activities and 50% on research.

Selected in the last 5 years

1. Baaklini, G., El Hourany, R., Fakhri, M., Brajard, J., Issa, L., Fifani, G. & Mortier, L. (2022). Surface circulation properties in the Eastern Mediterranean emphasized using machine learning methods, *Ocean Science,* 18(5), 1491-1505.

2. Barthélémy, S., Brajard, J., Bertino, L., & Counillon, F. (2022). Super-resolution data assimilation. *Ocean Dynamics*, *72*(8), 661-678.

3. Sonnewald M., Lguensat R., Jones D., Brajard J., Dueben P., Balaji V. (2021) Bridging observations, theory and numerical simulation of the ocean using machine learning. Environmental Research Letters. 16. 379 (2194).

4. Baaklini, G., Issa, L., Fakhri, M., Brajard, J., Fifani, G., Menna, M., Taupier-Letage, I., Boss, A. & Mortier, L. (2021). Blending drifters and altimetric data to estimate surface currents: Application in the Levantine Mediterranean and objective validation with different data types. *Ocean Modelling*, *166*, 101850.

5. Brajard, J., Carrassi, A., Bocquet, M., & Bertino, L. (2021). Combining data assimilation and machine learning to infer unresolved scale parametrisation. Philosophical transaction A.

6. Brajard, J., Carrassi, A., Bocquet, M., & Bertino, L. (2020) Combining data assimilation and machine learning to emulate a dynamical model from sparse and noisy observations: a case study with the Lorenz 96 model. Journal of Computational Science. 2020;44.

7. Boulze, H., Korosov, A., & Brajard, J. (2020). Classification of sea ice types in Sentinel-1 SAR data using convolutional neural networks. *Remote Sensing*, *12*(13), 2165. *It shows the relevance of convolutional based neural networks for sea-ice classification problems.*

8. Bocquet, M., Brajard, J., Carrassi, A., & Bertino, L. (2020). Bayesian inference of chaotic dynamics by merging data assimilation, machine learning and expectation-maximization. *Foundations of Data Science*, *2*(1), 55.