



MICKAËL LALANDE

CONTACT



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Driving licence

SOCIAL NETWORKS



@LalandeMickael



@mickaellalande



@mickaellalande



mickaellalande.github.io

COMPUTER SKILLS

- Python (xarray, proplot, dask, pandas, scipy, xesmf, keras, etc.)
- Jupyter Lab/Notebook
- Linux
- GitHub
- Latex (Overleaf)
- Fortran (basic level)
- Climate models:
LMDZ/ORCHIDEE (IPSL)
- Supercomputer: IDRIS, TGCC

LANGUAGES

- French (native speaker)
- English (fluent)

RESEARCH INTERESTS

Snow - Models - Mountain Areas - General Circulation Models - CMIP6 - Parameterizations - Deep Learning

CURRENT POSITION

PhD Student | Oct 2019 - Dec 2022 | IGE (Grenoble, France)

Cryosphere and climate modeling in the High Mountain Asia
(supervised by Martin Ménégoz and Gerhard Krinner)

↳ CMIP6 - LMDZ/ORCHIDEE (IPSL GCM) - Snow Cover Parameterization

PROFESSIONAL EXPERIENCE

Master thesis | Feb 2019 - Jul 2019 | IGE (Grenoble, France)

Identification and filtering of oceanic chaos by Machine Learning
(supervised by Thierry Penduff and Redouane Lguensat)

↳ Oceanography - Chaos - Deep Learning - Spatial Altimetry

MSc internship | May 2018 - Jul 2018 | IGE (Grenoble, France)

Impact of Arctic sea ice variability on the northern latitude
(supervised by Olga Zolina and María Santolaria-Otín)

↳ Hydrological cycle - Models - Reanalyses

EDUCATION

MSc | 2017-2019 | Université Grenoble Alpes (Grenoble, France)

Majors in Atmosphere, Climate, and Continental Surfaces
(with highest honors)

BSc | 2013-2014 | Université Joseph Fourier (Grenoble, France)

Majors in Physics (with high honors)

BSc | 2012-2013 | Université Joseph Fourier (Grenoble, France)

Majors in Earth and Environmental Sciences (with honors)

PUBLICATIONS

Lalande, M., Ménégoz, M., Krinner, G., Ottlé, C., & Cheruy, F. (in prep.). Reducing the High Mountain Asia cold bias in GCMs by adapting snow cover parameterization to complex topography areas.

Lalande, M., Ménégoz, M., Krinner, G., Naegeli, K., & Wunderle, S. (2021). Climate change in the High Mountain Asia in CMIP6. *Earth System Dynamics*, 12(4), 1061–1098. <https://doi.org/10.5194/esd-12-1061-2021>

SCIENCE POPULARIZATION



Science et Climat

YouTube channel created in 2019
www.youtube.com/c/ScienceetClimat



Thès' en Images | T'fais une thèse ?
Modéliser la neige en Himalaya



FLASH | OSUG

Is the current global warming due to human activity?



Allodocs Podcast

#21: How can we make climate projections until 2100, when we can't predict the weather in 10 days?



HMA | OSUG

Exacerbated warming in the High Mountain Asia

HOBBIES

- Hiking
- Snowboard
- Guitar

TRAVELS

- Japan (1 year Working Holiday Visa in Kyoto | 2014 - 2015)
- New Zealand (3 months backpacking | 2012)

TALKS

Lalande, M., Ménégos, M., Krinner, G., & Ottlé, C: **Adaptation of a snow cover scheme for complex topography areas: regional calibration over High Mountain Asia and application in global models**, JMASC2022, International Symposium on Snow 2022, International Mountain Conference 2022, EGU2022, SnowHydro2022, <https://doi.org/10.5194/egusphere-egu22-615>

Lalande, M., Ménégos, M., & Krinner, G.: **Climate change in the High Mountain Asia simulated with CMIP6 models**, EGU2021, <https://doi.org/10.5194/egusphere-egu21-8365>

Penduff, T., Lalande, M., Lguensat, R., Close, S., & Speich, S.: **Attenuating the ocean chaotic variability in altimetric observations: from band-pass filtering to machine learning**, AGU2019, OST/ST2019

TEACHING

ERCA school | Jan 2022 | UGA (Grenoble, France)

Practical works (4h), <https://github.com/mickaellalande/ERCA> (referent Didier Voisin)

Climatic and Environmental Variability | 2020 - 2021 | UGA

Tutored project (~ 6h), Python (3h), Practical works (6h) (referent Théo Vischel)

MISCELLANEOUS & REVIEWING ACTIVITIES

MC-Toolkit | 2019 - 2022 | IGE (Grenoble, France)

Computer tools meetings for research (Python, etc.)

Mountain Research School | Jun - Jul 2021 | French Alps

Interdisciplinary school to address issues in mountain territories

Lautaret Field Course | Feb - Mar 2018 | French Alps

Snow-Atmosphere interface (mass and energy balance of the surface, nivology, thermics, chemistry; referent Ghislain Picard)

Reviewing activities journals

Journal of Advances in Modeling Earth Systems (JAMES)