

**Contact
Information**Flat 3, 50 Drewstead Road
SW16 1AG, London, United Kingdom*Phone:* +44 (0)73 9929 2757
E-mail: farid.ait-chaalal@polytechnique.org
in: in/faridaitchaalal

Work experience

- 05.2016 - present **Risk Management Solutions**, London, UK
Lead modeller (12/2018 - present)
Senior modeller (12/2017 - 11/2018)
Modeller (05/2016 - 11/2017)
- Developed a stochastic set of wind hazard for European windstorms (dynamical modelling, spatial downscaling, and hazard calibration).
 - Collaborating on European windstorms surge modelling.
 - Modelled drought hazard for the financial sector (05.2016 - 03.2017).
- 01.2014 - 03.2016 **ETH**, Zürich, Switzerland
Postdoctoral research associate in climate dynamics
- Investigated novel approaches to computing climate statistics.
 - Conducted fundamental research in atmospheric dynamics
 - Updated a high-performance atmospheric general circulation model.
- 01.2012 - 12.2013 **Califronia Institue of Technology**, Pasadena, California, USA
Brown University, Providence, Rhode Island, USA
Joint postdoctoral position in climate dynamics and theoretical physics
Relocation of the research group from Caltech to ETH Zürich in 2013.
- 09.2006 - 12.2011 **McGill University**, Montreal, Quebec, Canada
Graduate research position in atmospheric sciences
- Used statistical approaches to understand chemical reactions in chaotic flows.
 - Developed a code to compute chemical reactions in turbulent flows.
- 04.2005 - 07.2005 **Ouranos and UQAM**, Montreal, Quebec, Canada
Internship
- Developed a code to process large meteorological data sets with an artificial neurons network in order to determine modes of variability of the climate.

Leadership

- 2016 - present **Member of the board**, *Climanosco*, Swiss non-profit association to make state-of-the-art climate science free and accessible to everyone.
- 06.2012 - 03.2015 **Lead co-organiser** of the workshop *Theoretical Advances in Planetary Flows and Climate Dynamics* (Les Houches, France, March 1-6 2015). Initiated the project, designed the scientific program, and led the practical organisation.
- 09.2006 - 06.2011 **Assisted in teaching** 8 undergraduate or graduate courses in geophysical fluid dynamics, turbulence, climate dynamics and meteorology. **Co-supervised** research projects.
- 06.2006 - 05.2007 **President** of the atmospheric and oceanic sciences graduate students society at McGill University. Organised events for the student community, represented the student body before the faculty, helped new students to relocate in Montreal.

Skills

Advanced knowledge of **climate and weather numerical models** (e.g. CAM, GFDL, WRF). Familiar with reanalysis products and climate data sets.

Computer: Advanced level in Linux, Fortran, Matlab, R and Latex. Very familiar with high-performance computing and large data sets management. Limited experience with Python and Objective-C.

Languages: French (native), English (full professional proficiency), Spanish (elementary proficiency, currently learning), German (elementary proficiency).

Certifications: RMS CCRA[®] (Certified Catastroph Risk Analyst).

Education

McGill University, Montréal, Canada

09.2007 - 12.2011

Doctor of Philosophy, *Atmospheric and Oceanic Sciences*

"Bimolecular Chemical Reaction in a Two-Dimensional Navier-Stokes Flow"

Thesis graded respectively in the top 10% and top 25% by the two examiners.

09.2005 - 08.2007

Master of Science, *Atmospheric and Oceanic Sciences*

Transfer to PhD program in 2007 (GPA 3.8/4.0)

Geophysical fluid dynamics, ocean dynamics, turbulence, climate dynamics, synoptic meteorology, mathematical statistics.

Ecole Polytechnique, Palaiseau, France

09.2004 - 06.2005

Master of Science & "Diplôme d'ingénieur de l'Ecole Polytechnique"

Majors in fluid mechanics and Earth sciences.

09.2002 - 08.2004

Bachelor of Science

Mathematics, applied mathematics, physics, mechanics, computer sciences.

Publications

L. Novak, T. Schneider, and F. Ait-Chaalal, 2019: **Midwinter suppression of storm tracks in an idealized zonally symmetric setting**, *Journal of the Atmospheric Sciences*, submitted.

F. Ait-Chaalal, T. Schneider, B. Meyer and JB. Marston, 2016: **Cumulant expansions for atmospheric flows**, *New Journal of Physics*, **18**, 025019.

F. Ait-Chaalal and T. Schneider, 2015: **Why eddy momentum fluxes are concentrated in the upper troposphere**, *Journal of the Atmospheric Sciences*, **72**, 2744-2761.

F. Ait-Chaalal, M.S. Bourqui and P. Bartello, 2012: **Fast chemical reaction in two-dimensional Navier-Stokes flow: initial regime.**, *Physical Review E*, **85**, 046306.

Awards and honors

- Visiting researcher at the Aspen Center for Physics (07.2012), and at the Kavli Institute for Theoretical Physics (04.2014 – 05.2014).
- Scholarships (McGill University, 2005-2011, Canadian Regional Climate Modelling Network, 2005 and Ecole Polytechnique, 2003-2005).

Interests

- Sports (long-distance and trail running, trekking, climbing, ski touring).
- Photography (nature and urban landscapes, street photography, architecture, travels).
📷: [instagram/fridoou](https://www.instagram.com/fridoou).
- Interests in international relations, geopolitics and history.