

Jean-Christophe RAUT

Curriculum Vitae

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Personal

Age 38 years old
Status **Associate professor in atmospheric sciences** Sorbonne Université
Institute **LATMOS** Laboratoire ATmosphères, Milieux et Observations Spatiales

Professional Experience

Since 2009 **Associate professor**, Sorbonne Université, LATMOS, France.
Since 2018 **Associate professor**, UQAM, Université de Québec à Montréal, Canada.
2008–2009 **Postdoctoral fellow**, École Polytechnique, LMD, funded by French spatial agency.

Scientific Education (France)

2005–2008 **PhD at UPMC**, CEA de Saclay, LSCE, Atmospheric physics, Experimental synergy combining lidar measurements for aerosol optical characterization: applications to air quality and radiative forcing.
With highest honours
2003–2004 **Master's degree**, École Centrale de Nantes, Fluids Dynamics and Transfers.
With high honours
2001–2004 **Engineer**, École Centrale de Nantes, Major in Energy and Environment.
With highest honours

Scientific activities

Scientific interests

- Microphysical and optical characterization of atmospheric aerosols
- Understanding of key processes related to aerosols in the Arctic region : transport and processing, ageing, deposition processes
- Aerosol radiative impacts and aerosol interaction with cloud microphysics at regional scale

Tools and Methodology

- Online mesoscale chemistry-transport modeling (WRF-Chem)
- Involvement in field campaigns : MAGENTA (2006), PARISFOG (2006-2007), CALIPSO validation (2007), EM25 (2009), MEGAPOLI (2009), ACCESS (2012), PARCS (2016)
- Analyses of active and passive remote sensing observations, including satellite measurements (in particular from CALIOP, MODIS and IASI instruments)

Selected projects

- National projects IPEV **ALPACA** 2019–2021, LEFE-CHAT **ALPACA** 2019–2021, CNES **EECLAT** 2018–2020, EQUIPEX **IAOOS** 2011–2019, Chantier Arctique **PARCS** 2016–2018, ANR **CLIMSLIP** 2012–2014
- European projects ERA-PLANET **iCUPE** 2017–2020, FP7 **ICE-ARC** 2015–2017, FP7 **ECLIPSE** 2012–2014, FP7 **ACCESS** 2012–2015
- PI Emergence SPU "Arctic atmospheric pollution" 2018, 6.1 k€ ; OVSQ "Pollution atmosphérique en Arctique" 2018, 4 k€

Responsibilities in research

- Since 2020 **Member of the Editorial Board**, *Atmosphere Journal*.
- 2016–2018 **WP leader**, *PARCS project*, Chantier Arctique, Aerosol-cloud interactions in the Arctic.
- 2012–2014 **WP leader**, *CLIMSLIP project*, ANR, Chemistry-transport modeling in the Arctic.
- Since 2013 **PI of a project dedicated to numerical simulations on French national super-computers**, *Team of ~ 10 people*, Regional impact of atmospheric chemistry and aerosols on air quality and climate.
- Since 2014 **Steering committee member**, *Regional climate and environments*, IPSL, In charge of activities related to the Arctic region.

Teaching activities

Current teaching activities ~ 200 hours/year

- M2-OACOS-WAPE Clouds, precipitations and aerosols (~ 22 h)
- M2-SPE Energy, environment (~ 20 h)
- M1-SPE Numerical physics (~ 28 h)
- BSc-Physics Hydrodynamics (~ 45 h)
- BSc-Physics Harmonic analysis (~ 37 h)
- BSc-Physics Physics of continuous matter (~ 20 h)
- BSc-Physics Transport processes (~ 16 h)

Responsibilities in teaching

- Since 2019 **Head of master's degree program**, *SPE*, Environmental Science and Policy, Sorbonne Université-SciencesPo.
- Since 2018 **Elected member of Master Council**, *SDUEE*, Sciences de l'Univers, Environnement, Écologie, Sorbonne Université.
- 2012–2019 **Head of master's degree program M1**, *SPE*, Environmental Science and Policy, Sorbonne Université-SciencesPo.
- 2011-2015 **Member of expert committee**, *CNU 37*, Sorbonne Université.

Advising

- Bachelor students Christelle Kadi (SU, 2010), Chloée de la Vega (SU, 2010), Mathilde Crabot (ENS-Ulm, 2011)
- Master students Lucien Blanc (ECP, 2010), Yvonnick Banchieri (ECP, 2010), Louis Marelle (SU, 2012), Thomas Vernaudon (SU, 2014), Lilian Loyer (SU, 2017), Cécile Carton (SU, 2018), Lilian Loyer (SU, 2018), Olivier Lemoine (UQAM, 2018-2019), Julia Maillard (École des Ponts, 2019)
- PhD students Louis Marelle (SU, March 2013–June 2016), Sétigui Keita (UQAM, December 2015–December 2018), Lilian Loyer (SU, October 2018–), Julia Maillard (SU, October 2019–)
- Post-docs Jennie Thomas (Novembre 2010–Octobre 2013), Boris Quennehen (Janvier 2012–Juillet 2015), Yoann Long (Mars 2014–Décembre 2014), Paolo Tuccella (Octobre 2013–Février 2015), Nikos Daskalakis (Février 2015–Février 2017)

Other activities

Organization of conferences, workshops

- June 2020 **LEFE Aerosol-cloud interactions**, *Workshop*, Lille Univ..
- April 2019 **QUIESCENT**, *Workshop*, British Antarctic Survey, 35 participants.
- May 2015 **PARCS**, *Chantier Arctique*, UPMC, 17 participants.
- January 2015 **ECLIPSE**, *EU projet*, UPMC, 19 participants.
- June 2015 **ECLIPSE**, *EU projet*, UPMC, 26 participants.

Referee

- Editor Atmosphere
- Reviewer Journal of Geophysical Research - Atmospheres, Atmospheric Chemistry and Physics, Bulletin of the American Meteorological Society, Atmospheric Environment, Geoscientific Model Development, Journal of the Atmospheric Sciences, Atmospheric Research, Journal of Atmospheric and Oceanic Technology, Annales Geophysicae, Asia-Pacific Journal of Atmospheric Sciences, Advances in Science and Research
- Referee for projects Call for french (LEFE, PNTS, TOSCA, DIM Qi²) or international (NSERC, NERC)
- Referee for book chapter Baghdadi, N., Zribi, M., Optical Remote Sensing of Land Surfaces, Techniques and methods, ISTE Press, London and Elsevier, Oxford, 2016. ISBN : 9781785481024