

	<p>Marie Dumont</p>	<p>FRANCE</p>
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Marie Dumont was born in 1983 and is since 2015 deputy scientific head of Centre d'Etudes de la Neige (Météo - France – CNRS/CNRM/CEN) and head of the research team *Snowpack observations and processes*. Her main research interests are the optical properties of snow from in situ and remote sensing measurements and snow numerical modelling and data assimilation. She co-authored 47 publications in international scientific journal since 2009.

Her researches are mainly gathered around a common thread, the **optical properties of snow** and the subsequent snow-atmosphere feedbacks. During the past ten years, four main scientific axes have structured my researches:

- Linking snow optical properties and snow microstructure using both modelling and measurements (e.g. Dumont et al., 2010; Libois et al. 2014, 2013 ; Gallet et al., 2014)
- Method design and implementation for retrieval of snow surface properties from in situ or remotely sensed optical data (e.g. Dumont et al., 2011, 2014, 2017 ; Masson et al., 2018)
- Using albedo derived from satellite images as a proxy for glacier mass balance (e.g. Dumont et al., 2012a ; Sirguey et al., 2016; Davaze et al., 2018)
- Assimilation of satellite optical reflectance to improve detailed snowpack simulations (e.g. Dumont et al., 2012b ; Charrois et al., 2016)

More recently, Marie Dumont dedicated her work to (i) improving our current understanding and modelling of the effect of **light-absorbing impurities** (mainly Saharan dust and soot) in snow, by leading extensive field campaigns in the French Alps, using new satellite capabilities (Sentinel-2) and improved snowpack models (e.g. Tuzet et al., 2017; Skiles et al., 2018) (ii) developing an **ensemble satellite assimilation scheme** to simulate and forecast snow cover properties over the French mountain ranges in order to mitigate uncertainties originating from different sources of information and (iii) contributing to the design of a 'next generation' **snow model** that aims at closing the gap between snow physics and current detailed snow modelling.

Her research is mainly conducted within CNRM/CEN but also builds on national (e.g. IGE, Grenoble) and international collaborations (e.g. Canada, USA, Finland, Norway, Great Britain, Switzerland, Italy, Denmark, Germany, Russia).

HISTORY OF EMPLOYMENT

2017	Habilitation thesis ("Habilitation à diriger des recherches"): <i>On the colour of snow: measurements, modelling and applications</i> , Grenoble-Alpes University
2015 – present	Researcher, Deputy Scientific Head of Centre d'Etudes de la Neige (Météo France – CNRS/CNRM/CEN), Head of research team <i>Snowpack observations and processes</i> (9 permanent positions)
2011-2015	Researcher at CEN
2011	Post-doctoral position at Norwegian Polar Institute during 6 months (Tromsø, Norway)
2007-2010	PhD thesis in Environmental sciences: <i>Retrieval of snow and ice covered area from remotely-sensed data</i> - Laboratoire de Glaciologie et de Géophysique de Environnement (LGGE), Grenoble, France, Paris University.

HONORS

2018	Arne Richter Award for Outstanding Early Career Scientists (European Geoscience Union) and Early Career Scientist Awards of the International Union of Geodesy and Geophysics (IUGG)
2011	Aguirre-Basualdo price for best PhD thesis (Paris University, national award)
2006	Rivot price of « Académie des sciences » (best student in mathematics and physics)