

Paola Formenti

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Education: **2011** : Habilitation diploma – ”**Experimental determination of the physico-chemical and optical properties of mineral dust aerosols**” - Director : Gilles Bergametti - University Denis Diderot - Paris 7 / **2000**: PhD in Sciences – ”**Observations of aerosol properties in the troposphere**” - Directors : Meinrat. O. Andreae and J. Lelieveld - University of Utrecht, The Netherland/ **1995** : Master in Physics - University of Genoa, Italy

Professional experience: **2014-present**: Senior research scientist at the Centre National de la Recherche Scientifique / **2004-2014**: Junior research scientist at the Centre National de la Recherche Scientifique / **2003**: Postdoctoral Fellow of the Max Planck Society at the University Paris East Créteil, France / **2001-2003**: Postdoctoral Fellow at Centre for Geophysics of the University of Évora, Portugal / **2000-2001**: Postdoctoral Fellow at the Max Planck Institute for Chemistry (Mainz), Germany / **1996**: Junior Research Officer at the University of the Witwatersrand, Johannesburg, South Africa

Research Interest – Synopsis: Dr. Paola Formenti is senior researcher at the Centre National de la Recherche Scientifique, where she was originally appointed as junior researcher on January 2004. Since January 2021, she leads the "MEREIA" group at the Laboratoire Interuniversitaire des Systèmes Atmosphériques (LISA). Her research focuses on the physico-chemical and optical properties of atmospheric aerosols that control their radiative effects on climate. Her research is based on field observations and laboratory simulations. She is the PI of the multi-instrumented airborne platform AVIRAD and of the ground-based facility PEGASUS. She leads several major aerosol field experiments (AMMA, SAFARI-2000, SHADE, ChArMex, AEROCLO-sA...) as well as the experimental activities on aerosol optical properties on the CESAM simulation chamber at LISA (Red-DUST, CLIMDO...). Due to her involvement in airborne research, she is currently chair of the National Steering Committee of the French airborne fleet and vice-chair of the European board EUFAR. Her work in the field of atmospheric aerosols has resulted in more than 100 peer-reviewed articles and more than 100 communications in national and international conferences.

Research Interest – Keywords: Atmospheric aerosols; mineral dust; optical properties; radiative effect; observations

Awards: **2019, 2012**: CNRS excellence research award; **2001**: Otto-Hahn Medal for significant advancement in sciences, Max Plank Society, Germany

Synergistic Activities and Services (selected): **2019-present**: Officer of the international Commission for Atmospheric Chemistry and Global Pollution (iCACGP) / **2017-present**: Chair of the French Scientific Committee for Airborne Research (previous member)/ **2015 – present**: Member of the Scientific Committee of the French National Data Center / **2004 – present**: Chair of the Aerosol Working Group of the EUFAR European Project / **2004 – 2008**: Member of the selection board in Chemistry (32nd section) for the University of Paris Diderot (Paris 7).

Graduate Students Advised: 6 PhD students (three internationally), 4 postdoctoral researchers

Five more relevant publications

1. Huang, Y., Adebisi, A. A., Formenti, P., & Kok, J. F. (2021). Linking the different diameter types of aspherical desert dust indicates that models underestimate coarse dust emission. *Geophysical Research Letters*, 48, e2020GL092054. <https://doi.org/10.1029/2020GL092054>
2. Mallet, M., Solmon, F., Nabat, P., Elguindi, N., Waquet, F., Bouniol, D., Sayer, A. M., Meyer, K., Roehrig, R., Michou, M., Zuidema, P., Flamant, C., Redemann, J., and Formenti, P.: Direct and semi-direct radiative forcing of biomass-burning aerosols over the southeast Atlantic (SEA) and its sensitivity to absorbing properties: a regional climate modeling study, *Atmos. Chem. Phys.*, 20, 13191–13216, <https://doi.org/10.5194/acp-20-13191-2020>, 2020.
3. LeBlanc, S. E., Redemann, J., Flynn, C., Pistone, K., Kacenelenbogen, M., Segal-Rosenheimer, M., Shinozuka, Y., Dunagan, S., Dahlgren, R. P., Meyer, K., Podolske, J., Howell, S. G., Freitag, S., Small-Griswold, J., Holben, B., Diamond, M., Wood, R., Formenti, P., Piketh, S., Maggs-Kölling, G., Gerber, M., and Namwoonde, A.: Above-cloud aerosol optical depth from airborne observations in the southeast Atlantic, *Atmos. Chem. Phys.*, 20, 1565–1590, <https://doi.org/10.5194/acp-20-1565-2020>, 2020.
4. Di Biagio, C., Balkanski, Y., Albani, S., Boucher, O., and Formenti, P. (2020). Direct radiative effect by mineral dust aerosols constrained by new microphysical and spectral optical data. *Geophysical Research Letters*, 47, e2019GL086186. <https://doi.org/10.1029/2019GL086186>
5. Formenti, P., B. D'Anna, C. Flamant, M. Mallet, S.J. Piketh, K. Schepanski, F. Waquet, F. Auriol, G. Brogniez, F. Burnet, J. Chaboureau, A. Chauvigné, P. Chazette, C. Denjean, K. Desboeufs, J. Doussin, N. Elguindi, S. Feuerstein, M. Gaetani, C. Giorio, D. Klopfer, M.D. Mallet, P. Nabat, A. Monod, F. Solmon, A. Namwoonde, C. Chikwililwa, R. Mushi, E.J. Welton, and B. Holben, 2019: The Aerosols, Radiation and Clouds in Southern Africa Field Campaign in Namibia: Overview, Illustrative Observations, and Way Forward. *Bull. Amer. Meteor. Soc.*, 100, 1277–1298, <https://doi.org/10.1175/BAMS-D-17-0278.1>