

NILU – Norwegian Institute for Air Research (180 employees) aims to increase the understanding of processes and effects of climate change, of the composition of the atmosphere, of air quality and of hazardous substances. The institute holds a strong position both on the national and international level within its core fields of research.

Post-doctoral position (3 years)

In the framework of the new ERC (European Research Council) Advanced Grant project COMTESSA (Camera Observation and Modelling of 4D Tracer Dispersion in the Atmosphere, see <https://comtessa-turbulence.net/>), we offer a post-doc position at the forefront of atmospheric research in boundary-layer turbulence and turbulent dispersion. The position is available for three years, extensions are possible subject to funding availability. The successful candidate will contribute to the following tasks:

- Numerical simulation of turbulence and turbulent dispersion in the atmospheric boundary layer by large-eddy simulation, Lagrangian stochastic models and a combination of these modelling methods.
- Participate in field campaigns in Norway and abroad to measure atmospheric boundary layer turbulence and turbulent dispersion. These campaigns will involve the deployment of multiple instrumented masts equipped with e.g. multiple sonic anemometers and fast gas analysers.
- Scientific data analysis, interpretation, development of model closures and parameterizations and investigation of fundamental aspects of turbulent flows and turbulent dispersion.
- Publish the results in scientific journals.

The successful applicant is expected to have a background in the following:

- Physics of turbulent flows.
- Computational fluid dynamics of turbulent flows and/or leading expertise in turbulence measurements.
- PhD degree in physics, engineering, applied mathematics, environmental sciences or any similar field.
- Background in atmospheric physics is a plus (but not necessary).

It is required that the candidate is proficient in scientific computer programming (e.g. FORTRAN, C, C++, Python). While the focus of the position will be on modelling aspects, it will be beneficial for the candidate to have experience in atmospheric measurements in the field (e.g. eddy covariance measurements) and/or in turbulence measurement techniques. It is expected that the candidate is willing to join field measurements campaign and is willing to contribute to setting up instruments in the field. For experimentalists with an exceptionally high qualification, it is also conceivable to shift the focus of the position towards experimental work.

The successful candidate will be part of a highly interdisciplinary and productive team and shall therefore be interested in collaboration with radiative transfer and atmospheric dispersion modellers as well as remote sensing experts for joint analysis and publication of COMTESSA results. Consequently, we expect this project to substantially advance the career perspectives of the candidate.

COMTESSA's vision is that the project results will lead to large improvements of tracer transport in all atmospheric models.

Our main office is located at Kjeller, just outside Oslo. We have extensive collaboration with national and international research institutes and universities, so travel activities are to be expected as part of the work. Details about NILU can be found at www.nilu.no.

Informal enquiries about the available position should be directed to the members of the search committee: senior scientists Massimo Cassiani (mc@nilu.no) and Andreas Stohl (ast@nilu.no).

Application, CV, scanned copies of certificates and degrees (including all higher education/university levels) and names of contacts for recommendation letters should be sent as one complete pdf-file to NILU (nilu@nilu.no) as soon as possible and no later than 10 July 2016.