

## Researcher Excellence Grant (REG)

### APPLICATIONS ARE INVITED – Excellent Researcher in Atmospheric Simulation

**ROLE OF THE REG-RESEARCHER:** The REG-Researcher is required to develop the existing environmental wind tunnel simulator(s), at University of Aarhus, for the study of ground based terrestrial meteorological sensor systems, specifically wind flow, temperature and pressure sensors. The activities will be devoted to best adapt the existing facility to the JRP objectives, bringing a substantial advantage in terms of control capabilities and traceability of the generated quantities/conditions. This will involve adjusting newly installed laser sensing instrumentation and modifying a wide range of environmental sensor and control systems. The work should also lead to recommendations regarding future aerosol sensing technologies, thus extending the JRPs objectives. Some of the challenges to the REG-Researcher include developing methods to precisely calibrate and control the environmental parameters within the wind tunnel facility. The REG-Researcher is encouraged to publish at least two peer reviewed scientific papers.

**RESEARCHER REQUIREMENTS:** The REG-Researcher must have at least 4 years of relevant experience (preferably a PhD) with experience of laboratory work and data analysis and preferably some knowledge of atmospheric, metrology and laboratory simulators.

**PROJECT LOCATION:** The Home Organisation is the University of Aarhus and is located in Aarhus, Denmark

**DURATION:** The duration is 12 months. Earliest start date is December 2011; with completion before the JRP end date which is likely to be 31<sup>st</sup> May 2014

**ALLOWANCES:** The exact allowances for your situation can be found by using the "EMRP Researcher Grant Calculator" spreadsheet available at [www.emrponline.eu/edocs/grantcalculator.xls](http://www.emrponline.eu/edocs/grantcalculator.xls) Typically a monthly salary allowance of 4525 € or 6783 € (dependent on experience), plus contributions to training, travel, consumables, and the Home Organisation's overheads. Additional allowances are available where a Guestworking Organisation is included in the application. Note that some allowances have a country correction applied.

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### RELATED JRP (each REG is linked to a Joint Research Project of the EMRP)

**PROJECT TITLE:** ENV07 – Metrology for pressure, temperature, humidity and airspeed in the atmosphere - METEOMET  
EURAMET projects webpage: [http://www.euramet.org/index.php?id=emrp\\_call\\_2010](http://www.euramet.org/index.php?id=emrp_call_2010)  
JRP webpage: [www.meteomet.org](http://www.meteomet.org)

**PROJECT DESCRIPTION:** This JRP is focused on the traceability of measurements involved in climate changes: surface and upper air measurements of temperature, pressure, humidity, wind speed and direction, solar irradiance and reciprocal influences between measurands. It responds to the needs expressed by several different climate data users and organizations for new stable and traceable measurement standards, protocols, sensors and calibration procedures, uncertainty-evaluation methods, to enhance data reliability and reduce uncertainties in climate models.

The JRP aims to:

- Develop and test of novel instruments as TDLAS hygrometers, microwave quasi-spherical hygrometers, innovative multisensors for free-space non-contact atmospheric measurements, ultrasonic anemometers, novel methods for GPS and Galileo-based measurements, traceability of radiosonde-based measurements
- Develop improved calibration procedures and facilities for laboratory and in situ simultaneous calibration of temperature, humidity and pressure sensors in weather stations also for special purposes, under extreme environmental conditions
- Assess historical temperature measurement data with respect to the used techniques (procedures and instruments) and evaluation of the consistency of contemporary and historical data

The related JRP outlines a unique European wind tunnel facility in which the environmental conditions (temperature, pressure, composition, wind speed etc..) can be controlled such that detailed testing and calibration of meteorological sensors can be performed. There is also the capability of testing sensors under extreme environmental conditions to complement and support field testing. Importantly quantitative comparison can be made between different measurement techniques and sensor types.

The REG-Researcher may have the opportunity to work with planetary scientists at AU and collaborate with the other institutes involved in the JRP as well as interact with agencies such as ESA and NASA.

### APPLICATION

**ADVERT REFERENCE:** ENV07-REG3

**CLOSING DATE:** The closing date is 23:59 CET on Friday 6th May 2011

**INTERVIEW DATES:** If interviews are required they will take place between 27th May and 13th June 2011

**APPLICATION:** All applications must be submitted via [www.emrponline.eu/apply.html](http://www.emrponline.eu/apply.html)

REG applications should be made jointly by the REG-Researcher and the Home Organisation. An application consists of a Research Schedule (a description of the work to be undertaken), CV, cover letter, and excel datasheet.

**ELIGIBILITY:** Full eligibility criteria are given here: [www.emrponline.eu/edocs/eligibility.pdf](http://www.emrponline.eu/edocs/eligibility.pdf) Typically; the REG-Researcher must have at least 4 years of relevant experience, and the right to work in the country of the Home Organisation; the Home Organisation must be located in an EU Member State or a country associated to the Seventh Framework Programme; the Guestworking Organisation (if included) must be an NMI or DI participating in the JRP, and be in a different country to the Home Organisation.

### THE AIM OF EMRP RESEARCHER EXCELLENCE GRANTS

“To enlarge the number of organisations with capacities closely relating to metrology” within the EU Member States and FP7 associated countries.

The EMRP provides REG-Researcher Excellence Grants (REGs) to support the involvement of high quality REG-Researchers and to open the JRPs to the best science.

\* From: *Decision No 912/2009/EC*, Official Journal of the European Union, 30 September 2009, L257, p12  
available from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:257:0012:0025:EN:PDF>