Call of Applications

2 Vacancies for

RESEARCH POSITIONS

The Department of Civil Engineering of the Faculty of Sciences of the University of Coimbra is accepting applications to two (2) vacancies for Research positions in the framework of the Marie Curie Initial Training Network AEOLUS4FUTURE "Efficient Harvesting of the Wind Energy", funded by the Horizon 2020 Framework Programme.

Academic qualifications and profile required:

Eligible candidates to research positions are Early-stage Researchers (ESR). That is, candidates who are in the first four years (full-time equivalent) of their research careers at the date of recruitment by the host institution(September 1st, 2015 as the latest). This is measured from the date when they obtained the degree (Diploma/MSc) which would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate is envisaged. Candidates can be of any nationality, but should not have performed more than 12 months of work or study in the country of the appointment (Portugal) in the 3 years prior to the recruitment date. The candidate should not yet have obtained a doctoral degree. The ESR will have the opportunity to be enrolled in the PhD program 'Steel and mixed construction Technologies'.

The candidates are expected to evidence outstanding performance in the previous studies and are fluent in English. Preference factors are the evidence of ability and initiative to develop research and write scientific publications and experience of participation in research projects.

Work plan: The work programme will encompass the following items: a) research on hybrid steel-steel and on concrete-steel transitions in high rise towers for onshore wind turbines, b) project management support, c) development of research projects, d) development of dissemination and outreach projects and e) drafting of technical and scientific publications. The focus on each item of work plan will be tailored according to the skills of the winning candidates.

Supervision: Prof. Doutor Luis Simões da Silva e Prof. Doutor Carlos Rebelo

Legislation and regulations: The grant contract is ruled by the Grant Agreement. The ESR contracts are for maximum 36 months.

Location: The work is to be conducted at the Department of Civil Engineering of the University of Coimbra with short term secondments (typically up to three months) in an European country partner in the project.

Total remuneration costs (salary, social security contributions, taxes and other costs included in the remuneration under the employment contract) calculated on the basis of 12 monthly fees for living allowance (2521€/month), mobility allowance (600€/month) and family allowance when relevant (500€/month) up to an annual total of 43.452 €.

Selection method: The ranking of candidates will be based on the evaluation of their curriculum vitae, motivation letter, copies of publications representative of previous studies (typically Master Thesis) and research (typically papers in scientific journals). Pre-selected candidates will be invited for an individual interview in the final stage of the selection process.

Selection Committee: President Prof. Doutor Luis Simões da Silva, 1st Member: Prof. Doutor Carlos Rebelo, 2nd Member: Prof. Doutor Aldina Santiago,Surrogate: Prof. Doutor Rui Simões.

Notification of results: Candidates will be notified by email.

Application submission: Deadline for submission of applications is 15th March 17:00 (GMT). Submissions are made by email mentioning the reference "AEOLUS4FUTURE". The application materials should include the *curriculum vitae*, copies or links to publications, motivation letter and (optionally) up to two letters of recommendation. The applications should be submitted by email to: mmrodrigues@dec.uc.pt with cc: crebelo@dec.uc.pt

ANNEX: Short description of the project

As wind energy is considered one of the most promising renewable energy resources, energy production technologies relying on wind energy are currently flourishing under the EU ambitious plan for 2020. Market demands to prepare a generation of researchers within the EU that are able to face the challenge of fulfilling the EU ambitious plan, to sustain the production of wind energy and to innovate and promote wind energy systems (WES) for the future needs, are clearly met in AEOLUS4FUTURE. The primary research aim is to develop a sustainable WES for a variety of EU needs. There are a number of detailed scientific and technical issues that will be addressed by the project starting from identifying the wind energy potential (off-shore and on-shore, including the built environment) to the design of a sustainable and highly efficient WES. Also the new challenging load conditions imposed on wind farms located on places where existing type of wind turbine towers are not suitable require the development of new type of support structures for wind energy converters. This fosters new structural concepts taking advantage of high performance materials e.g. high strength steel and novel maintenance free fasteners. In addition, while most research efforts and practical applications of wind energy have focused on large-scale wind installations in remote offshore or onshore areas, much less attention has been given to wind energy installations near buildings. The project has a major training aim to create technical experts who will be able to lead the necessary industrial developments in the WES, and have a broad overview of a new and emerging multi-disciplinary field. The project will thus enable a number of young scientists and engineers to obtain high level training in various technical aspects of the problem, to gain an overall understanding of how this work fits into the wider EU Directives and plans for the future and in doing so to improve their career prospects.

Participant Institutions are: Luleå University of Technology; University of Birmingham; University of Coimbra; University of Florence/CRIACIV; Eindhoven University of Technology; Von Karman Institute for Fluid Dynamics; Rühr University Bochum; Leibniz University Hannover; Siemens Insdustry Software NV;

Senvion; University of Belgrade UBFCE; Ss. Cyril and Methodiys University – Skopje; ANSYS, Inc.; Germanischer Lloyd Industrial Services GmbH, Martifer Construções Metalomecanicas SA.