College of Engineering
Summer Research Experience for Undergraduates Program

Request for an Engineering Student for Summer 2013 Research

Faculty Name: Sergio F. Brena and Matthew Lackner

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Brief description of Summer Research Project (please explain the interdisciplinary nature of this project).

The project will involve analyzing multiple rotor wind turbines including the effects of foundation flexibility. This project builds upon an ongoing effort between Drs. Brena and Lackner that focuses on the feasibility of wind turbines containing multiple rotors. The current project is supported by an Armstrong Fund grant. The student will interact with a graduate student currently working on the project and will expand the analyses to cases involving foundation flexibility.

Brief description of what the student will be doing:

The student will create and analyze computer models of the wind turbine system that incorporate the effects of foundation flexibility. These models will be analyzed using commercially available software available in the College of Engineering.

Is this a CASA-related project? Yes ___ No X

Preferred background of student (major(s), class, GPA, pre-requisites, etc.):

Student with background in Civil Engineering and familiar with the use of computer analysis software is required. The student will be using SAP2000 for the structural analysis of the wind turbine.

Did you mentor a student last summer in the College REU Program? Yes____ No X__

If yes, please describe the outcomes for that student (i.e. Honor’s thesis, conference presentations, manuscripts, papers, etc. Describe accomplishments to date as well as plans for the spring semester if the work has continued):

Please return this form to: lrobidou@ecs.umass.edu by February 1, 2013