College of Engineering
Summer Research Experience for Undergraduates Program

Request for an Engineering Student for Summer 2013 Research

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

Massachusetts Governor Deval Patrick has a goal to see more than 1000 wind turbines erected throughout the state. The state’s high population density means that many of these turbines will be close to residences, schools, and businesses. There is a great deal of concern over the infrasound emissions from wind turbines and the potential impacts of these emissions on human health.

Brief description of what the student will be doing:

CASA, through the Paros endowment for measurement science, has sensors specifically designed to measure infrasound emissions. This project will have the student using the sensors in field experiments to: (i) determine how best to measure and analyze wind turbine infrasound emissions, and (ii) present to other wind energy researchers both at UMass and elsewhere the results of the field experiments in terms of wind turbine infrasound characteristics and levels.

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

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

The student must have had courses in signals and systems and must have a good working knowledge of frequency analysis techniques. Matlab programming skills and facility with UNIX are required. C-programming skills are desirable. The student must also be willing to travel either on their own or with CASA staff to local wind turbine sites to conduct field experiments.

Did you mentor a student last summer in the College REU Program?  Yes___X__ No ____

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):

Last summer’s REU helped in the design, construction, and testing of the portable infrasound data logging and analysis setup that will be used by the REU selected for this project.

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