PhD Scholarship in Process Control

Process controllability analysis based on passivity

The Project

Based on the concept of passive systems, this project aims to develop a new quantitative measure for dynamic controllability for design of plantwide process systems. Integration of process design and control has been widely recognized as an effective approach to improving process performance to meet increased economic, safety and environmental demands. Controllability evaluation plays an important role in this approach. The outcome of this research will be an easy to use controllability analysis method for nonlinear plantwide multi-unit systems, which can be used in early stages of process design to explore better opportunities for process improvements. The project is funded by the Australian Research Council.

The Applicant

Applicants should have a first class honours degree or a good second class division 1 or a masters degree in any of the disciplines of engineering (preferably chemical engineering) or mathematics with a strong mathematics and/or control theory background and an interest in process control.

Academic Supervisors:

Dr. Jie Bao (School of Chemical Engineering & Industrial Chemistry, UNSW)
Prof. Peter Lee (Division of Engineering, Science & Computing, Curtin University of Technology)

The Scholarship

The value of the stipend is up to $22,000 tax free per year (depending on the experience and skills of the applicant) for a period of three years for a PhD program (2005 - 2007) or two years for a Masters by Research program. This scholarship may alternatively provide a top-up if the successful applicant is also awarded an APA or IPRS scholarship. Successful applicants may also receive a top-up of $8,000 teaching fellowship (taxable) per annum provided they undertake tutorial commitments. The successful applicant is expected to commence from Session 1, 2005 (March 2005) or soon after. Applications (including a resume, a full transcript of all subjects undertaken, and the names and contact details of 2 academic referees) should be forwarded to

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Review of applications will begin 10 January 2005 and will continue until the position is filled.