PURDUE UNIVERSITY
DEPARTMENT OF FOOD SCIENCE
Graduate Research Assistantship and Postdoctoral Research Associate Positions

Description
The Department of Food Science at Purdue University has two Graduate Research Assistantship (PhD) and one Postdoctoral Research Associate positions commencing 2016 Spring Semester or thereafter with a focus on the impact of fouling on sustainability of food processing. The project will focus on:

- Fundamental studies in understanding mechanisms of deposit (e.g. fat, dairy, biofilm) formation and removal, with particular emphasis on deposit characterization, measurements and modeling, aiming to find potential mitigation methods toward reduced fouling in food processing.
- Techno-economic-environmental analysis of the impacts of fouling and cleaning on energy use and greenhouse gas emissions of food production, aiming to develop optimal management of clean-in-place process to minimize water consumption and reduce environmental impact.

Successful candidates will conduct:

- Fouling and cleaning experiments using a bench-scale simulator, and further deposit analysis, including but not limited to MRI, XRD and GC.
- Process optimization and life cycle assessment through data reconciliation from different sources (e.g. pilot and/or industrial plants), and computational simulation.

Qualification

Required

- MS degree (for Graduate Research Assistant applicant)/PhD degree (for Postdoctoral Research Associate applicant) in Food Science, Agricultural Engineering, Chemical Engineering, or closely related fields with relevant expertise to Food Engineering
- Strong motivation with ability to work collaboratively as a part of a team
- Desire and ability to publish peer-reviewed journal articles and present at international scientific conferences
- Excellent oral and written communication skills
- Demonstrated record of scholarship
- Postdoctoral Research Associate candidate must have ability to (i) carry out self-initiative and independent research under general supervision, (ii) assist with writing of research proposals to secure external funding, and (iii) support
graduate student research

Preferred
• Research experience in one or more of the following fields: fouling and cleaning, CFD simulation, MRI, process optimization, life cycle assessment
• Deep knowledge in transport phenomena
• Experience in funding opportunity identification and proposal writing
• Experience in mentoring graduate and undergraduate students

Application
Graduate Research Assistant
This assistantship includes an annual salary stipend and tuition waiver for up to 4 years, depending on adequate progress toward a PhD degree and satisfactory performance of assigned duties. Applicants must complete the official University graduate program application at http://www.purdue.edu/gradschool/admissions/how/index.html, and their applications must be approved by the Department graduate committee to be considered for funding. The Department’s graduate application requirements and process can be accessed at https://ag.purdue.edu/foodsci/Pages/grad_application_process.aspx.

Postdoctoral Research Associate
This position is for one year and can be renewed for up to one additional year depending on satisfactory performance of assigned duties. Salary will be commensurate with experience and skills. Applicants should send a CV, cover letter (addressing their qualifications, research interests and experience related to this position), the names and contact information for three references, and copies (unofficial) of undergraduate and graduate transcripts via email to Dr Jen-Yi Huang (huang874@purdue.edu).

All the positions will remain open until filled. For further information, please contact:

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