

Project idea:

Use of image analysis in flocculation optimization

Teaser: Help Novozymes separate biomass more effectively.

Novozymes has a strong tradition for optimizing its production processes, resulting in sustainable growth and significant improvements in production economy. One such process is the flocculation of biomass prior to its removal from a bacterial culture broth or dewatering of the spent biomass.

The purpose of this project is to investigate the usefulness of image analysis in determining the optimal chemical dosages and conditions for a flocculation process and consider how the technology could be implemented in a production setting.

The project will involve:

- Literature search and review into the application of image analysis in separation processes.

- Flocculation trials and assessments in the laboratory and production that will be conducted in Novozymes facilities and utilize microscopic image analysis (developed in collaboration with ParticleTech).

- An evaluation of how this type of data analysis could be applied in the automation of a flocculation process.

This project involves working and interfacing with actual plant data and will give the candidate the opportunity to work on a project that develops the candidate's soft skills as well as technical competencies. Also, given the collaborative nature of the work the ability to grow your profession network.

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The present proposal from the company is an invitation to collaboration. The project will be planned, scoped and modified in close collaboration with the university supervisor and the master student, in order to get the best possible project. The formal application procedure (and application deadline) for a Helix Lab Fellowship must be followed. All applications will be evaluated by the Helix Lab Board before a Helix Lab Fellowship may be given. Read more on our web-site, Helixlab.dk