



WE HEREBY INVITE YOU TO THE PROSYS RESEARCH SEMINAR 2019

With guest speakers from Freesense ApS, Novo Nordisk A/S, and PALL

Friday, 25 October 2019

We are organizing the fourth PROSYS Research Seminar. The seminar aims to provide an informal networking platform, where we can share with you the latest developments and highlights from our research activities, which include resource recovery, biocatalysis, fermentation technology, separation processes, mathematical modelling and computational fluid dynamics (CFD), and Process Systems Engineering (PSE) for process synthesis, design, operation, control and optimization.

The Research Seminar will give an opportunity to learn about the ongoing projects within the centre, and also to meet and discuss in an informal way with the PhD students, postdocs, senior researchers and faculty members of the centre during the poster sessions. This year, special focus will be on the new faculty members that have joined the centre. Furthermore, we hope to provide our industrial stakeholders with the opportunity to connect with colleagues across different industries.

Participation in this event is free, but registration to the event is mandatory in view of logistical arrangements.

**For registration, please contact Mrs Gitte Læssøe: gnie@kt.dtu.dk
Registration deadline is 1 October 2019.**

We look forward to meeting you at DTU this autumn at the PROSYS Research Seminar.

Kind regards

Prof. Krist V. Gernaey



Process and Systems Engineering Center (PROSYS)

Research Seminar, 25 October 2019

Anker Engelunds Vej 1, Building 101A – 1st Floor, Meeting Room 1, Kgs. Lyngby, Denmark

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| 8:30 – 9:00 | Registration and Breakfast |
| 9:00 – 9:20 | Welcome by Prof. Krist V. Gernaey
<i>Overview about the Process and Systems Engineering Center (PROSYS)</i> |
| 9:20 – 9:50 | CEO Tue Rasmussen – Freesense ApS
<i>"Know your unknowns: Data-based fermentation mapping with flow-following sensor devices"</i> |
| | Research Project presentations |
| 9:50 – 10:10 | Gisela Nadal Rey/Jonas Bisgaard (PhD stud.), PROSYS
<i>"Characterisation and modelling of gradients in bioreactors"</i> |
| 10:10 – 10:30 | Rasmus Fjordbak Nielsen (PhD stud.) /Carina Gargalo (postdoc), PROSYS
<i>"Machine learning and AI for advanced sensor data treatment"</i> |
| 10:30 – 10:50 | Coffee Break (Introduction to Posters) |
| 10:50 – 11:10 | Ziran Su/Sigyn Björk Sigurdardóttir (PhD stud.), PROSYS
<i>"Membrane Bioreactors for production of oligosaccharides"</i> |
| 11:10 – 11:20 | Henrik Sander Marke (PhD stud.), PROSYS
<i>"Dynamic filtration as a strategy to remove fouling"</i> |
| 11:20 – 11:30 | Nikolaus Vollmer (PhD stud.), PROSYS
<i>"Process design, optimization and supply chain analysis for biotechnological production of xylitol"</i> |
| 11:30 – 12:00 | Scientific Director Ernst Broberg Hansen, CMC API Development, Novo Nordisk A/S
<i>"Chemical Engineering in biopharmaceutical process Development"</i> |
| 12:00 – 14:00 | Lunch - Poster session – Networking |
| 14:00 – 14:30 | Senior Scientist, Ph.D, Alexandra Guerra, PALL
<i>"Numerical simulations to support process characterization in continuous multicolumn chromatography"</i> |
| 14:30 – 14:45 | Final remarks |