

SAPII Summer school, 3-5 septembre 2018, Liège



Venue: Liège complexe Opéra, Salle Pousseur

https://www.campus.uliege.be/cms/c_5878408/en/o2-complexe-opera-amphitheatres

Monday 03.09

8:45: Registration

9:30 – 10:15: Welcome and Introduction to Process Integration (PI) (ULiège, MEFOS)

10:15 – 11:00: PI: a systematic approach; Design and off-design models (LTU)

11:00 – 12:15: Flowsheeting as a simulation tool + *Exercise* (ULiège, MEFOS)

12:15: Lunch

13:15 – 13:30: *Correction of flowsheeting exercise* (MEFOS)

13:30 – 15:00: Basic elements of Pinch Analysis (LTU)

15:00: Coffee Break

15:30 – 16:00: *Exercise: Data extraction for pinch analysis* (LTU)

16:00 – 16:45: **Industrial application:** Integrated conceptual design of heating system (LKAB)

16:45 – 17:30: **Industrial application:** Application of Pinch Analysis on galvanizing line: case study (AM)

17:30 – 17:45: *Introduction to on-line platform exercises* (ULiège)

Tuesday 04.09

8:30 – 10:00: Heat integration: Data Extraction, Utilities and Other Targets, Integration with CHP plants (LTU)

10:00: Coffee break

10:30 – 11:15: *Exercise: Pinch analysis and grand composite curve* (LTU)

11:15 – 12:00: Heat integration in batch & variable processes (AM)

12:00: Lunch

13:00 – 13:15: *Correction of on-line exercises* (All)

13:15 – 14:00: Applied tools for Process integration (MEFOS)

14:00 – 14:45: **Industrial application:** Electric steelmaking model (Höganäs)

14:45 – 16:00: *Exercise Mathematical programming* (MEFOS)

15:15: Coffee Break

16:00 – 16:45: **Industrial application:** Reclaiming Zinc-containing sludge from settling ponds (SSAB)

16:45 – 17:30: Data validation and reconciliation (ULiège)

19:00: Social event: Beer-tasting & Dinner

Wednesday 05-09

8:00: Shuttle bus leaving from Opera to Sart-Tilman Campus

8:30 – 10:00: *Exercise: Data Validation and Reconciliation* (ULiège)

10:00: Coffee break

10:20 – 11:00: Lab visit: Hall of Chemical engineering (ULiège)

11:00 – 11:50: Lab visit: Thermodynamic department and Organic Rankine cycles (ULiège)

11:50: Lunch

12:45: Shuttle bus from Sart-Tilman Campus to Opera

13:15 – 14:30: Integration of Carbon capture, re-use and storage (ULiège)

14:30 – 15:15: *Exercise: Process integration with carbon capture* (ULiège)

15:15: Coffee break

15:45 – 16:30: **Panel discussion:** barriers and drivers for process integration. Panel guests: D. Gauthier, L. Chefneux, Ph. Lingebrant, S. Salamé

16:30: Wrap-up (MEFOS) & farewell drink



Successful Application of Process Integration in the Industry

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