Smart Wastewater Treatment Plant / Water Resource Recovery Facility

Everyday Design-level Cloudbursts

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PhD Student
Data-driven optimization of WWTP/WRRF

• Develop new algorithm for online detection of faults/irregularities through data analysis
  Can we find out if something is wrong in the plant by looking at the available data?

• Setup and calibrate full Activated Sludge Model using online data for calibration
  What is better for optimizing a plant? The good-old heavy ASM model? Or a simple fast online model?

• Other ideas? 😊

Requirements:
Modeling (12104), Wastewater (12110)
+ R, Python or Matlab

External collaboration:
KRÜGER VEOLIA
Detection of equipment failure by data-driven set point tracking

• WWTP plants are slow to respond to new set-point
  *Can we find out, what is the “normal response” of a plant when we change something in its operation?*

• Can we identify malfunctioning in plants based on “abnormal” behaviours?
  *Can the data tell us if something goes wrong?*

Anna Katrine Vangsgaard
Process Engineer at Krüger A/S

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