

Developing self-optimising processes via Bayesian optimisation and machine learning

Dr Antonio del Rio Chanona

You will develop methodologies to design and operate self-optimising chemical processes by combining Bayesian optimisation (BO) with machine learning (ML). The aim is to efficiently explore and improve process conditions under uncertainty, using BO to guide experiments and simulations towards optimal performance, while applying ML models to capture complex system behaviour and enable faster decision-making. You will develop and strengthen programming skills (Python) as well as gain theoretical and practical knowledge in optimisation, data science, and machine learning for process systems engineering.