

Dr.-Ing. Mariano Nicolas Cruz Bournazou

Current positions:

- Head of the KIWI-biolab, Chair of Bioprocess Engineering, TU-Berlin.
- Modeling Expert at DataHow A.G.



Dr. Nicolas Cruz has a Bachelor in Chemical Engineering and a PhD in the field Model Based Optimization of Bioprocesses from the TU Berlin. His international experience includes research stays in Texas A&M (process control laboratory, Prof. Kravaris) and ETH Zurich (Morbidelli group). The research of Dr. Cruz is focused in the fields of bioprocess digitalization, model-based tools for biotechnology and biopharma, High Throughput Bioprocess Development, and autonomous biolabs. In the recent years his research has pushed the integration of model-based methods and High Throughput experiments to accelerate bioprocess development. The most relevant results include the first adaptive algorithms for online optimal redesign of parallel experiments and novel hybrid (Machine Learning and dynamical modelling) tools for bioprocess engineering. The driving force of his research is the conviction that robotic systems need proper digital tools, models, and algorithms to fully exploit its capabilities in bioprocess development and biomanufacturing.