

# AMEDEO CERUTI

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## EDUCATION

Sep. 2019 –  
Oct. 2021

**M. Sc. Chemical Engineering,**  
Technical University of Munich (TUM) – Munich, Germany

2014 – 2019

**B. Sc. Chemical Engineering,**  
Polytechnic University of Catalonia BarcelonaTech (UPC) –  
Barcelona, Spain

## EXPERIENCE

Nov. 2020 –  
Today

Master thesis, **Chair of Process Systems Engineering (AVT RWTH Aachen University)** – Prof. Mitsos

- Topic: Bayesian Optimization und Diffusion Maps for autonomous decision making in chemistry.
- Optimized reaction systems with data-driven machine learning methods.
- On-going cooperation with research groups of RWTH Aachen, University of Cambridge and Johns Hopkins University.

Feb. 2020 –  
Today

Student Research Assistant, **Institute for Machine Tools and Industrial Management (IWB TUM)** – Prof. Reinhart

- Developed and optimized cell finishing processes for novel Lithium-ion batteries.
- Coauthored a conference paper for the „54th CIRP Conference on Manufacturing Systems“ (under review as of February 2021).

May-Sep. 2020

Research Project, **Chair for Technical Chemistry 1 (TC1 TUM)** – Prof. Hinrichsen

- Modeled a three-phase chemo-enzymatic reaction system for the epoxidation of oleic acid and its downstream process.

Feb.-June 2019

Bachelor thesis, **Isophytol Cluster (BASF)** | Ludwigshafen, Germany

- Title: „Application of a soft sensor for distillate composition estimation to a dividing wall column control system“.

- Applied data-driven models to a dividing wall distillation column.

Oct. 2018 –  
Feb. 2019      Research Internship, **Cetaqua - Water Technology Centre (SUEZ)** – Barcelona, Spain

- Developed an indicator framework to assess the circular economy of the industrial water cycle in Spanish municipalities.
- Calculated the carbon footprint of the company according to ISO 14064 in collaboration with external consultants.

Jul.-Oct. 2018      Internship, **Innovative and Prototype Solutions (BASF)** – Ludwigshafen, Germany

- Automated design and multi-objective optimization of pressure vessels in accordance with DIN EN 13445 and AD-2000.

## LANGUAGES

<b>Spanish</b>	First language
<b>German</b>	First language
<b>Italian</b>	First language
<b>Catalan</b>	First language
<b>English</b>	Proficient

## SOFTWARE SKILLS

<b>Languages</b>	Python, MATLAB, R, VBA
<b>CAD</b>	SolidWorks, Inventor
<b>CAE</b>	Aspen Plus, ANSYS, CAPE-OPEN interface standard
<b>Optimization</b>	Pyomo, GAMS, SIEMENS HEEDS

## OTHER PROJECTS

2020	Participated in the „ <i>Gaussian Process Summer School</i> “ at Sheffield University.
2019	Organized the „ <i>PSE Summer School</i> “ in Barcelona, Spain.
2017-2018	President, UPC AIChE Student Chapter <ul style="list-style-type: none"> <li>• Managed a student organization with more than 20 members.</li> </ul>
2017	Attended the „ <i>10th World Congress of Chemical Engineering</i> “ in Barcelona, Spain
2014-2016	Professional Water Polo player in Spain