

C.J.W. (Vince) Hop Doctoral Candidate Chemical Reactor Engineering
Sustainable Process Engineering Email: c.j.w.hop@tue.nl Phone: 06 51 82 52 85
linkedin.com/in/vince-hop-621b01107



Summary

With my chemical engineering background I am employable in multiple sectors and the combination of my HBO, Masters and PhD experiences make me a divers and valuable asset to your team. It also show that I am eager to learn and keep improving myself.

Skills

English and Dutch	9 out of 10
Matlab	8 out of 10
Microsoft Office	8 out of 10
Computaional Fluid Dynamics	7 out of 10
CAD programs	6 out of 10
Photoshop	6 out of 10

Education

2019-2023	PhD candidate at the Technical University of Eindhoven in the Sustainable Process Engineering group, Subgroup: Chemical Reactor Engineering
2017-2019	Master Chemical Engineering at the Technical University of Eindhoven
2016-2017	Premaster Chemical Engineering and Process Technology at the Technical University of Eindhoven
2012-2016	HBO Scheikundige Technologie at the Avans University of Applied Science

Experience

Master graduation project: A detailed numerical study on the micromixing behavior of turbulent flow fields at low Schmidt numbers. During this project the flow field inside a rotor-stator spinning disc reactor was developed and validated. Also, direct numerical simulations were performed inside a turbulent lid driven cavity. In the lid driven cavity the micromixing simulations were executed at Reynolds numbers of 3200 and Schmidt numbers of 0.5. HBO graduation at Straaltechniek B.V.: Development of an engineering model that calculates the required capacity of heating units, dryers and filtration units for blast and paint halls. These halls were mainly developed for cargo ship section and the model took into account the weather based on the time of the year to maintain constant conditions throughout the year. The model was created and validated in Excel en Matlab. 2nd Minor HBO: Interdisciplinary group project with electrotechniek, werktuigbouwkunde and mechatronica to optimize a fertilizer pilot plant in Hogeschool Zuyd in Heerlen. The goal was to find energy optimization and model them in Matlab Simulink. Secondly, these optimizations needed to be implemented in the plant as a validation, which turned out successful. 1st minor HBO: Sustainability project together with Dupont. Dupont had an excess of heat and wanted to know how to integrate this heat with the city heating of Dordrecht. During this project a technical feasibility study was performed and 4 different possibilities were proposed. 1st internship HBO at Rubia Natural Colors: There was a pilot scale plant to make sustainable color powders from plants and during my internship I made the mass and energy balances of the entire plant. Next to that, I also implemented some process intensification steps to reduce the use of solvents. 12 years as a mechanic in a motorbike workshop as a hobby, I spend on average 8 hours per week repairing and preparing dirt bikes, motor bikes and scooters.

Research outputs

Rotor-stator spinning disc reactor: a study on the use in fermentation processes

Hop, C. J. W., 19 Jun 2023, Eindhoven: Eindhoven University of Technology. 183 p.

Hydrodynamics of a rotor-stator spinning disc reactor: Investigations by Large Eddy Simulation

Hop, C. J. W., Jansen, R., Besten, M., Chaudhuri, A., Baltussen, M. W. & van der Schaaf, J., 3 Mar 2023, In: Physics of Fluids. 35, 3, 21 p., 035105.

Large Eddy Simulations of a complete rotor-stator spinning disc reactor

Hop, C. J. W., Jansen, R., Besten, M., Chaudhuri, A., Baltussen, M. W. & van der Schaaf, J., 15 Nov 2022.

Gas-liquid mass transfer of viscous liquids in a rotor-stator spinning disc reactor

Hop, C. J. W., Chaudhuri, A., Meijer, A. & van der Schaaf, J., 23 Aug 2022.

Transesterification of Triglycerides in a Rotor–Stator Spinning Disc Reactor: Scale-Up and Solid Handling

Chaudhuri, A., Temelli, E. B., Hop, C. J. W., Sureshkumar, V. P. & van der Schaaf, J., 25 May 2022, In: Industrial and Engineering Chemistry Research. 61, 20, p. 6831-6844 14 p.

New design for syngas converting bioreactors

Hop, C. J. W. & van der Schaaf, J., 7 Apr 2022.

A study on the effect of shear on Clostridium autoethanogenum in a rotor-stator spinning disc reactor

Hop, C. J. W., Benschop, M., Zwaan, B. & van der Schaaf, J., 5 Apr 2022.

Gas-liquid behavior of (non-) Newtonian fluids in a multistage spinning disc reactor

Hop, C. J. W., Meijer, A., Chaudhuri, A. & van der Schaaf, J., 21 Sept 2021.