



LinkedIn: [linkedin.com/in/quintin-de-jongh/](https://www.linkedin.com/in/quintin-de-jongh/)
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Summary

Organized and ambitious mechanical engineer with a passion for design and advanced manufacturing. Seeking to use machine-element design and research skills to develop cutting-edge machinery and procedures. Designed and built a state-of-the-art mechanical polishing process and machine at the University of Cape Town in six months, saving 20% of the budget for manufacture. Convened a third-year mechanical engineering course of 120 students, educating on advanced and conventional manufacturing techniques.

Education

○ **MASTER OF SCIENCE IN MECHANICAL ENGINEERING**
2021 - 2022
University of Cape Town
Overall Grade: Distinction: A+ (Summa Cum Laude)
Dissertation Title: "Flexible Media Polishing Machine for Ti-6Al-4V Components"

○ **BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING**
2016 - 2020
University of Cape Town
Overall Grade: A-
Dean's Merit List for the 2017 Academic Year.
Certificate of Merit for Exceptional Performance in Computer Science Course
Extracurricular activities: UCT Football

Professional Experience

○ **LECTURER**
March 2022 - Present
University of Cape Town

- Convened, examined and prepared course content for classes of 120 students.
- Increased the overall course grade average by 10% from the previous year's class.
- Managed and trained four tutors in both student assistance and course administration.

○ **GRADUATE ENGINEER**
March 2022 - Present
BMEC Technologies

- Assisted with professional mechanical designs through multiple revisions.
- Developed a PDF report generator and associated widget using Flutter/Dart.
- Learned PCB design through the use of CircuitStudio and an applicable project.
- Aided in assembling multiple electro-mechanical controllers for use on industrial farms.

TEACHING ASSISTANT AND TUTOR

February 2021 - June 2022

University of Cape Town

- Created course content for assessment of a materials selection software.
- Tutored seven different exit-level engineering courses over a year and a half.
- Assisted with course administration and marking.

Journal Publications

International Journal of Advanced Manufacturing Technology

August 2022

"Spring-Dashpot Vibrational Model for the Investigation of Viscoelasticity in Gelatinous Abrasive Media and Subsequent Control of Parameters for the Blast Polishing of Ti-6Al-4V Alloy"

Journal of the Brazilian Society of Mechanical Sciences and Engineering

May 2022

"Polishing of a Selective Electron Beam Melting Processed Tungsten Carbide Punch through High Velocity Impinging of Flexible Media"

International Journal of Advanced Manufacturing Technology

May 2021

"A study on intelligent grinding systems with industrial perspective"

Skills

SOLIDWORKS  100%

- Designed and modeled a micron scale polishing machine with multiple mechanical sub-assemblies.
- Developed a wearable accessory holder (worn on arm) as well as appropriate accessories with complex curvature and mechanical features (annular and cantilever clips, screw fastening systems).

MATLAB  80%

- Created an analytical-empirical model of the damped interaction between a diamond coated gelatinous abrasive and rough surface.
- Produced a MATLAB application (GUI and scripts) and associated MS Access database for the live prediction and improvement of surface grinding process parameters.

DAQ (Dewesoft and LabVIEW)  70%

- Gathered experimental data for both a surface grinding and micro-polishing process.
- Created experimental plans and GUIs for data acquisition of surface-grinding and micro-polishing processes.

MS Office  90%

- Years of experience using Word, Access, Excel, Powerpoint, Outlook, Teams and OneNote.

Research | Report and Academic Writing  100%

- Involved in six academic publications over the course of a year and a half.
- Completed two academic research projects in advanced manufacturing, achieving A+ grades in both.

Python  65%

- Tutored courses involving the development of vibrational and simulation models using python.
- Completed multiple short courses including Python fundamentals, OOP and OOP design, data structures, and algorithms.
- Achieved a grade of 93% (top 2%) for CSC1017F at UCT.