

ALDO JUAN ROOS



SENIOR MECHANICAL ENGINEER

CONTACT

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- Valkenswaard, Netherlands
- Afrikaans, English, Dutch
- www.aldojuanroos.com
- No Visa required

EDUCATION

BACHELOR'S DEGREE,
Mechanical Engineering (Hons)
North West University: Potchefstroom
Jan 2014 — Nov 2018

MASTERS DEGREE,
MBA
IU of Applied Science
Sept 2023 — Dec 2025

PRINCE2/PMP PRACTITIONER:
PROJECT MANAGEMENT,
AXELOS
2024

LEAN SIX SIGMA: GREEN & BLACK BELT, LEAN, PROCESS, RISK, OPEX EXPERT
Six Sigma Academy Amsterdam
2023 - 2025

SKILLS

| Technical

- Matlab (Simulink) and EES
- SQL, Python, JavaScript, VBA, etc.
- CAD - Solidworks, Siemens NX/UG, Rhino 3D, Fusion 360
- ERP - MKG
- Adobe Photoshop

SUMMARY

I am a detail oriented Mechanical Engineer, who thrives in a challenging environment and enjoys working on innovative projects. I have a good track record of successfully applying sound engineering principles, leading to efficient designs and lean systems. I believe anything is possible, given enough effort and a "can do" attitude. I enjoy working with people, and I strongly believe that team collaboration = effective results.

I am an extrovert. My hobbies include building/fixing cars and motorcycles, Mountain biking, fishing, drone flying, traveling and coding. I am a huge Star Wars & The office fan. I think I have a good sense of humor, but my wife thinks otherwise.

WORK EXPERIENCE

SENIOR MANUFACTURING ENGINEER

ELEO | July 2024 — Current

ELEO is an innovative startup company servicing the off-highway energy pack market. With Yanmar as main stakeholder, who is one of the world's leading ICE manufacturers, Eleo is developing the future platform for construction vehicles to go full electric. My role includes the following:

- The design and manufacturing of precision tooling, grippers, structural supports, alignment tooling and MFE designing enhancements.
- Providing process improvements and design enhancements to ensure efficient manufacturability in designs.
- Project lead on production line Automation project for manufacturing Line.
- Development of Test plans and designing test setups for KPI targets.
- Support of design of manufacturing equipment to be introduced.
- Design and development of manufacturing line, from start-up to scale-up.

3D OPTICS APPLICATIONS ENGINEER

META (Facebook) | Jan 2023 — June 2024

Meta's Reality Labs division is a market leader in the AR/VR, with an 80% market share. Also responsible for devices such as Meta Quest 2, Quest Pro, Ray-Ban Stories etc. Key Roles and Responsibilities:

- Extensive development of slicing algorithm for 3D Optics printing.
- Manipulate fluid dynamic properties of the 7 (picolitre) droplets and optimize designs accordingly, to be able to print optically clear lenses to be used in Meta's future AR/VR products.
- Responsible for R&D for NPI and 3D printing of optics with integrated electronic systems.
- Developed functional diagnostics system to measure deviation of input vs output of Inkjet printers. (Measurement-Analysis-Input loop)
- Technical lead support on Pre-Production line of 17 operators, producing 24/7. (Produced 40 000 units in 3 months)
- Development and improvement of processes according to Lean Six Sigma principles for production line.
- Partially responsible for Optical Metrology, and introduction of Quality system processes for pre-production line.
- Design and analysis of parts for Femto-laser, and operation thereof.

Reason for leaving: Due to Meta's worldwide layoffs in Q1 2024, they did not renew any contracts in The Netherlands.

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SKILLS

| Professional

PRINCE 2 – Project Management

Six Sigma Expert – Black belt

Lean Management Expert

Certified Risk Management – FMEA

ISO 31000

Certified OPEX Expert

Cross functional teamwork

Supplier vetting and management

REFERENCES

Guido Groet

Meta (Facebook)
Manager AdOpt Team
T: +31 61 089 3062 (PT)(+8 UTC)

Sven Breedt

Grinding Techniques
Process Specialist
T: +27 79 025 9101
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Dimitrios Kaparos Tsafos

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Project Manager
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Deon Beukes

Meta
Production Engineer
T: +31 61 965 9195
E: Deonbeukes94@gmail.com

WORK EXPERIENCE CONTINUED

PROCESS INDUSTRIALIZATION ENGINEER

ASML via WEB Eindhoven | May 2022 — Jan 2023

ASML leads in semiconductor manufacturing technology worldwide:

My responsibilities included:

- Coordinated FMEA and AVAS sessions.
- DDF creation for in field diagnostics and troubleshooting.
- R&D Design review and optimization (Hardware).
- Risk assessments for projects.
- Creation and improvement of procedures (service mix) in Beam transport and Source Functional Cluster (FC-072).
- Driving team collaboration improvement initiative 50 team members.
- Learning and implementing the fundamentals of the V model.
- Working in large cross-functional teams to realize project goals.
- Cross functional stakeholder management (CSE, PE, Functional, HW, SW).
- Industrialization process optimization (CCBs, PCC)
- Cycle time analysis

Reason for leaving: My contract included a no limit non-compete clause, which restricted my potential career growth.

MECHANICAL DESIGN ENGINEER

Pratley | Oct 2019 – Apr 2022

Pratley is the first and only South African company to have a product on the Moon. Developers of the first ever Epoxy glue putty.

My main responsibilities where:

- Conceptual designs, rapid prototyping, development and testing, costing, production line setup and implementation of procedures for 3 new product ranges per year (approximately 147 individual parts).
- Research, Development and Design of market leading product ranges (Design Engineer for a patented product – [Pratley Ex d Enviro Box](#)).
- International product certification (IECEX, ATEX, UL, BS, SABS, SANS)
- Product FEM analysis, dynamic testing, improvement and optimization.
- Improving and maintaining quality standards in products/production.
- In my free time (covid period) I developed and built websites for Pratley (www.pratley.com and all subdivisions of Pratley).

Reason for Leaving: Decided to Immigrate to The Netherlands

MECHANICAL PROJECT DESIGN ENGINEER

Betterect Engineering | Jan 2019 — Sept 2019

Betterect specializes in Manufacturing and Erection of steel structures for the mining Industry. Betterect builds plants for Anglo Gold and Sibanye Stillwater, among others. My main responsibilities at this company:

- Ensuring project designs are manufacturable, after sign-off, guiding the project through the phases of fabrication.
- Project estimation and design optimization through costing analysis.
- Project Resource Co-ordination and supply chain liaison for team members and resources allocation.
- Project resource allocation management and planning. Ensuring effective resource utilization, to ensure KPI's of project is met.
- Introducing safety standards in factory environment and on-site project.
- Team project planning and management (6 people per project on 3 different projects).

Reason for leaving: I wanted to move away from the mining industry.

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REFERENCES

Pieter Tolmay

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Workshop Manager
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E: Pieter.tolmay@nwu.ac.za

WORK EXPERIENCE CONTINUED

WORKING WHILE STUDYING / INTERNSHIPS

PPE Technologies/Barbrook Mine/North-West University of Potchefstroom | 2016 — 2018 (**Internships/Student Mentoring**)

During my time at PPE Technologies, I worked at Sappi Ngodwana, the largest paper plant in Africa. I also did Part time Internship work for Barbrook and Nkomati Mine. Before this, I worked for approximately 3 years part time as a student mentor/facilitator at the North-West University.

My responsibilities were:

- Mechanical Engineering design and optimization.
- FMEA on existing structures and components.
- FEM analysis on Engineering components for design optimization.
- Draughting of mechanical drawings, engineering calculations and equipment testing reports.
- Mentor and Instructor in the training workshop. Training +- 380 students per year on how to operate a milling machine and a lathe.
- FIAP Mentor for first year students. Project planning and management.
- Stress and flow Simulations for feasibility studies of large-scale implementation of new mining equipment.
- Engineering Design, validating, optimizing and testing of Mining equipment.

PROFESSIONAL DEVELOPMENT

LEAN SIX SIGMA: GREEN & BLACK BELT

SIX SIGMA ACADEMY AMSTERDAM
[LSS - Green Belt](#), [LSS - Black Belt](#)
April 2024

EX MANUFACTURE, INSPECTION & REPAIR

EXPLOLABS
4 May 2021

SOLIDWORKS ASSOCIATE

DASSAULT SYSTEMS
[C-VXE9427A2R](#)
29 April 2014

PRINCE2 PRACTITIONER: PROJECT MANAGEMENT

AXELOS
[GR656323477AR](#)
March 2024

LEAN MANAGEMENT & MANUFACTURING EXPERT

SIX SIGMA ACADEMY AMSTERDAM
[Lean Management](#)
April 2024

CERTIFIED PROCESS IMPROVEMENT AND PROCESS MAPPING EXPERT

SIX SIGMA ACADEMY AMSTERDAM
[Process Expert](#)
July 2024

RISK MANAGEMENT – FMEA ISO 31000 EXPERT

SIX SIGMA ACADEMY AMSTERDAM
[Risk Management Expert](#)
March 2025

PATENTS & ACHIEVEMENTS

DESIGN PATENT ON WORLD FIRST PRODUCT

Pratley / Krugersdorp / South Africa / 2022
[Pratley Flameproof Ex d Envirobox](#)

OPERATIONAL EXCELLENCE (OPEX) EXPERT

SIX SIGMA ACADEMY AMSTERDAM
[OPEX Expert](#)
March 2025