

# Motion Masterclass

9 and 10 May 2023

Cost per delegate R1950

Africa Automation Technology Fair

Gallagher Convention Centre, Johannesburg

**eNtsa**  
INNOVATION THROUGH ENGINEERING

*presented by Etienne Phillips*

eNtsa in partnership with the Africa Automation Technology Fair 2023 will be hosting a Motion Masterclass at a 70% discount on cost per delegate!

This course is an introductory workshop that covers the use of servo motors and all related power transmission components in a variety of industrial automation applications.

## About the presenter

Etienne has more than a 11 years' experience in PLC programming and high precision motion control. He obtained his Engineering degree from Wits University.

His skillset includes:

Design, implementation and optimisation of motion control systems, kinematics, control system algorithms, hydraulics and software.

## PROGRAMME

The following daily programme can be expected for the course:

09:00 - 09:25	Registration
09:25 - 09:30	Welcome and introductions
09:30 - 11:30	Training session 1
11:30 - 12:00	Break / Leg stretch
12:00 - 13:30	Training session 2
13:30 - 14:00	Final Questions
14:00	End

## TOPICS TO BE COVERED

1. History and Roadmap
2. Motors and Couplings
3. Feedback systems
4. Drivers
5. Motion Control
6. Servor motor sizing
7. Recap

## ENTSAs TRAINING ACADEMY



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[www.entsaengineering.co.za](http://www.entsaengineering.co.za)



041 504 3608

# Introduction to 3D Printing

9 and 10 May 2023

Cost per delegate R4800

Africa Automation Technology Fair

Gallagher Convention Centre, Johannesburg

**eNtsa**  
INNOVATION THROUGH ENGINEERING

*presented by Dr Sean Poole*

eNtsa in partnership with the Africa Automation Technology Fair 2023 will be hosting a Introduction to 3D Printing course at a 60% discount on cost per delegate and also receive a 3D Printer and 1 roll of filament!

This practical workshop aims to equip delegates with basic knowledge and practical skills required to start the journey within the additive manufacturing space. It offers insight into additive manufacturing and 3D Printing and includes significant practical exercises.

## About the presenter

Dr Poole is a Mechanical Engineer who acquired his Master's and Doctorate Degree through Nelson Mandela University.

His research brought him to 3D Print wind turbine blades which lead him to owning and running multiple 3D printing companies called Provolution, EC3D and Bush indaba.

## PROGRAMME

09:00 – 09:25	Registration
09:25 – 09:30	Welcome and Introductions
09:30 – 11:30	Training session 1
11:30 – 12:00	Break / Leg stretch
12:00 – 14:00	Training session 2
14:00 – 14:30	Questions and Closing
14:30	End

## TOPICS TO BE COVERED

- Overview
- Technologies
- Basic CAD Modelling
- Basic Mesh Editing
- Design for AM
- 3D Scanning
- G-code Editing
- Mesh
- Slicer
- Setup for FDM
- Practical

## ENTSAs TRAINING ACADEMY



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# Safety System Integration & Design

10 and 11 May 2023

Cost per delegate R1200

Africa Automation Technology Fair

Gallagher Convention Centre, Johannesburg

**eNtsa**  
INNOVATION THROUGH ENGINEERING

*presented by Craig Cuff*

eNtsa in partnership with the Africa Automation Technology Fair 2023 will be hosting a Safety System Integration & Design course at a 80% discount on the cost per delegate!

This workshop offers insight into the identification of hazards and risk and how safety systems should be integrated into the design of equipment and processes.

## About the presenter

Craig has 26 years working experience and is an Electrical Engineer and is a CERTIFIED MACHINE SAFETY EXPERT amongst other qualifications. He owns Prime Automation which is the sole 'Channel Partner' for Pilz Safety Products and training.

## PROGRAMME

The following daily programme can be expected for the course:

09:30 – 09:55	Registration
09:55 – 10:00	Welcome and introductions
10:00 – 12:00	Training session 1
12:00 – 12:15	Break / Leg stretch
12:15 – 14:15	Training session 2
14:15 – 14:30	Final Questions and Closing

## TOPICS TO BE COVERED

- Why should machines be safe?
- Introduction to machinery safety
- What is Risk/Harm?
- What are hazards?
- How to do a risk assessment
- Risk reduction
- Importance of a fail safe control system
- History of automation
- Safety components and numbering conventions
- Safety Component overview
- Positive guided relays
- Wiring examples
- ISO 13849 Architecture examples
- Final examples (home study)

## ENTSAs TRAINING ACADEMY



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