



*Consolato Generale d'Italia
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Francesco Pietra
Aerospace Engineer



UNIVERSITY OF THE
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Francesco Pietra holds an MSc in Aerospace Engineering from the University of Pisa, Italy, as well as an MEng in Mechanical Engineering from the European School of Computer Aided Engineering Technology (ESoCAET) in Munich, Germany. He is currently pursuing a PhD in Mechanical Engineering at the University of the Witwatersrand, South Africa. He is a Lecturer at the University of the Witwatersrand, in the **School of Mechanical, Industrial and Aeronautical Engineering**.

His research focuses primarily on **Finite Element Analysis** using ANSYS software. He specialises in **Non-Linear Simulations** (e.g., large deformations, non-linear materials, contacts) and **Dynamic Simulations**, both linear (vibrations) and explicit (LS-Dyna). He also explores the **Sport of Archery**, investigating the correlation between an athlete's physical sensations during shooting and the structural design of the bow.

He is currently a nationally certified First Level Archery Coach and an internationally certified Archery Judge.

INNOVATION: *The approach to studying Archery from both a performance perspective and the archer's point of view is original and holds the potential to revolutionise the design of sporting archery equipment. In time, this research and the methodology developed could benefit a range of other sports as well.*

An Archery Laboratory has been established within the School of Mechanical, Industrial and Aeronautical Engineering to support the study and analysis of archery equipment performance.