

# XI Tastes of Nuclear Physics @ UWC <sup>22-24 March 2023</sup>

Let's do Physics!



Bringing Science Together

Hybrid Event @ UWC Physics & Astronomy

Seminar Room 1.35 & PC Lab

Registration Link: <https://rb.gy/5hxxw1>

More info @ <http://nuclear.uwc.ac.za/index.php>

## Wednesday 22<sup>nd</sup> March

Chair: Delia Marshall (UWC)

9:30 – 9:45

Welcome @ UWC

9:45 – 10:30

Quantum Entanglement

Francesco Petruccione (NITheCS/SU)

10:30 – 11:15

MANDELA @ UZ

Sifiso Ntshangase (UZ)

11:15 – 12:00

Photon Entanglement <sup>ZOOM</sup>

Jamie Brown/Julien Bordes (York)

12:00 – 13:00

Lunch Break

Chair: Antoine Bagula (UWC)

13:00 – 13:45

ML Applications to Medicine I

Japie Greeff (NWU)

13:45 – 14:30

ML Applications to Medicine II

Temitope Mapayi (NWU)

14:30 – 15:00

ML Application in Genomics

Fanechka Esterhuysen (PhD, UWC)

15:00 – 15:20

Coffee Break / Next Gen Talks

15:20 – 15:40

Low-Radon Exhalation

Xolisani Ngwadla (MSc, UWC)

15:40 – 16:05

Random Forest Regression

Jeroen Bormans (PhD, SU)

16:05 – 16:30

Evolution of New Magic Numbers

Kanting Motimele (PhD, UWC)

Latest Developments in Nuclear Physics,  
Medicine, Genomics & Astronomy.  
Everyone is Welcome!

## Thursday 23<sup>rd</sup> March

Chair: Japie Greeff (NWU)

9:30 – 10:15

From Fundamental Physics to Life <sup>ZOOM</sup>  
Sciences with Polarized Radioisotopes

Magdalena Kowalska (CERN)

10:15 – 11:00

Nuclear Physics in Medicine <sup>DISCUSSION</sup>

Hein Fourie (Netcare Hospitals)

11:00 – 11:30

MinPET Detectors <sup>ZOOM</sup>

Tiego Mpai (PhD, UJ)

11:30 – 12:00

Nuclear Applications <sup>ZOOM</sup>

David Jenkins (York)

12:00 – 13:00

Lunch Break

Chair: Nikita Bernier (UWC)

13:00 – 13:45

ML on Nuclear Physics <sup>ZOOM</sup>

Morten Hjorth-Jensen (MSU/Oslo)

13:45 – 14:30

MANDELA @ UWC

Elijah Akakpo (PhD, UWC)

14:30 – 15:00

The GAMKA Array

Kobus Lawrie (UWC)

15:00 – 15:20

Coffee Break / Next Gen Talks

15:20 – 15:45

New Collective Structures in <sup>187</sup>Os

Abel Sithole (UZ)

15:45 – 16:10

High-Resolution Coulex of <sup>12</sup>C

Cebo Ngwetsheni (PhD, UWC)

16:10 – 16:35

Collectivity in Triaxial <sup>193</sup>Au

Sinegugu Mthembu (PhD, UWC/TLABS)

16:35 – 17:00

Collective Structures in <sup>186</sup>Os

Linda Mdletshe (UZ)

17:00 – 20:00

Quantum Entanglement Party

## Friday 24<sup>th</sup> March

Chair: David Jenkins (York)

9:15 – 10:00

The Rise of The Machines in Our  
Quest to Understand the Universe

Michelle Lochner (UWC)

10:00 – 10:45

Machine Unlearning:  
The Rise of Hidden Variables

Nico Orce (UWC)

10:45 – 11:30

Gravitational Wave Physics

Alexandre Sevrin (VUB Brussel)

11:30 – 12:15

The Later Stages of Stellar Evolution

David Kilkenny (UWC)

12:15 – 13:00

Machine Learning in Astronomy <sup>ZOOM</sup>

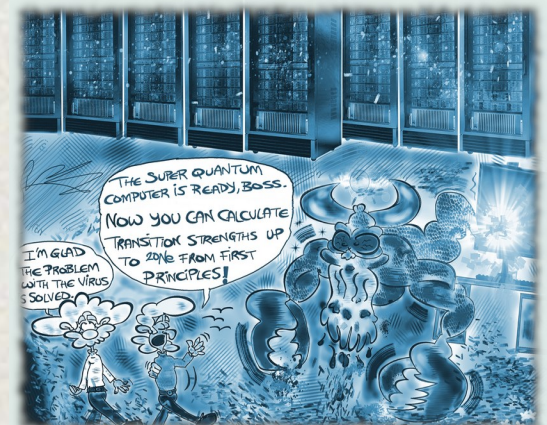
Kevin Pimblett (Hull)

13:00 – 15:00

Lunch Break / STFC Farewell

Chair: Nico Orce (UWC)

Sifiso Ntshangase (UZ)



Kindly allow at least 5 minutes for discussions