

## Session Program

6–10 Jul 2026



# SAIP2026

## *Photonics*

University of the Western Cape

## Tuesday 7 July

09:30

### Photonics: Quantum photonics

Session | Location: University of the Western Cape, Lecture Hall DL1 | Convener: Angela Dudley

09:30–09:50

#### Spatially multiplexed single-photon sources based on binary-tree multiplexers with optimized structure

Speaker

Ms Noxolo Felicia Vilakazi

09:50–10:10

#### Quantum surface plasmon resonance (SPR) for healing plants

Speaker

Patrick Kinsey

10:30

11:00

### Photonics: Structured light & computational optics

Session | Location: University of the Western Cape, Lecture Hall DL1 | Convener: Prof. Tjaart Krüger

11:00–11:20

#### Fractional optical skyrmions

Speaker

Dr Ram Nandan Kumar

11:20–11:40

#### Single-step shaping of space, time and polarization and the robustness of space-time vector beams in complex media

Speaker

Kelsey Everts

11:40–12:00

#### Nonlinear wave mixing: from optical elements to artificial neurons

Speaker

Nikisha Baboolal

12:00–12:20

#### Deep diffractive optical neural networks for classifying orthogonal and non-orthogonal modes of light

Speaker

Nikita Azevedo

12:40

14:40

### Photonics: Biophotonics & optical biosensing

Session | Location: University of the Western Cape, Lecture Hall DL1 | Convener: Christine Margarete Steenkamp

14:40–15:00

#### Detection of HIV in Clinical Plasma Samples via a Custom-Built Surface Plasmon Resonance Using an Anti-gp120 Monoclonal Antibody

Speaker

Dr Masixole Yvonne Lugongolo

15:00–15:20

#### SPR resonance angle shifts as a function of biomarker concentration

Speaker  
sipho Chauke

15:40–16:00

**Photostability analysis of Aspirin tablets using Raman spectroscopy: A detection method for screening substandard and falsified medication.**

Speaker  
Dr Lebogang Thobakgale

16:00

## Wednesday 8 July

09:30

### Photonics: Microscopy & imaging

Session | Location: University of the Western Cape, Lecture Hall DL1 | Convener: Saturnin Ombinda-Lemboumba

09:30–09:50

#### Temporal shaping of supercontinuum pulses for improved axial resolution in optical coherence tomography

Speaker

Eugene Fouche

09:50–10:10

#### Single-Shot Optical Quadrature Microscopy Integrated With Optical Tweezing for Live-Cell Quantitative Phase Imaging

Speaker

Calvin Groenewald

10:10–10:30

#### Holographically shaped optical fields for manipulating complex biological specimens

Speaker

Le Roi Du Plessis

10:30

11:00

### Photonics: Microscopy, applied & fibres

Session | Location: University of the Western Cape, Lecture Hall DL1 | Convener: Gurthwin Bosman

11:00–11:20

#### Two-Photon Light-Sheet Microscopy with Multi-View Deconvolution

Speaker

Jacques Buys

11:20–11:40

#### Parameter study and optimization of real-time single-particle tracking

Speakers

Jessica Wells, Jessica Wells

11:40–12:00

#### Interferometric Optical Fibre Based Non-destructive Evaluation of Concrete Compressive Strength

Speaker

Mr Sandisiwe Bangani

12:00–12:20

#### Simulation of a Self-Homodyne Subcarrier-Multiplexed Intermediate-Frequency-over-Fibre System for 5G Small Cell Fronthaul

Speaker

Lilian Mutia

12:40

14:50

### Photonics: Photonics Division Meeting

Session | Location: University of the Western Cape, Lecture Hall DL1

14:50–15:10

#### Tuning ITO nonlinearities towards telecom wavelengths

**Speaker**

Wagner Tavares Buono

15:10–16:10

**Photonics Division Meeting**

16:10

# Thursday 9 July

|       |                                                                                          |
|-------|------------------------------------------------------------------------------------------|
| 09:30 | <b>Photonics</b><br>Session   Location: University of the Western Cape, Lecture Hall DL1 |
| 10:30 |                                                                                          |
| 11:00 | <b>Photonics</b><br>Session   Location: University of the Western Cape, Lecture Hall DL1 |
| 12:40 |                                                                                          |
| 14:40 | <b>Photonics</b><br>Session   Location: University of the Western Cape, Lecture Hall DL1 |
| 16:00 |                                                                                          |
| 16:30 | <b>Photonics</b><br>Session   Location: University of the Western Cape, Lecture Hall DL1 |
| 17:30 |                                                                                          |

Friday 10 July

09:30  
10:30  
11:00  
12:40

**Photonics**  
Session | Location: University of the Western Cape, Lecture Hall DL1

**Photonics**  
Session | Location: University of the Western Cape, Lecture Hall DL1