

63rd ANNUAL CONFERENCE OF THE SA INSTITUTE OF PHYSICS

Tuesday 26 June 2018

Applied Physics (10:00-11:00)

-Conveners: phil ferrer

time	[id] title	presenter
10:00	[103] Spectral Resource Management based on VCSEL Wavelength Switching and Allocation	Ms DLAMINI, Phumla
10:20	[16] Aerosol and cloud studies using LIDAR, satellite and model data in South Africa	Dr SHIKWAMBANA, Lerato
10:40	[11] A predictive approach for vibration analysis in underground mining operation	Prof. MULABA - BAFUBIANDI, Antoine Floribert

Applied Physics (11:20-13:00)

-Conveners: Aletta Karsten

time	[id] title	presenter
11:20	[212] Enhanced photocatalytic degradation of methyl violet on TiO ₂ /N-MWCNTs	Ms MATHEBULA, Xiluva
11:40	[344] Closed loop feedback control of an external cavity diode laser for laser cooling application	Mr OPEOLU, Victory
12:00	[178] Real-time Vibration Sensing in Renewable Energy Wind Turbine Blades Using a Polarization Based Optical Fibre Device	Mr WASSIN, Shukree
12:20	[189] Directly Modulated 850 nm Multimode VCSEL Performance Analysis for Short Reach Optical Communications	Dr ISOE, George
12:40	[269] Development and characterization of a micro-controller based two photon correlation interferometer	Dr GOVENDER, Kessie

Wednesday 27 June 2018

Applied Physics (10:00-11:00)

-Conveners: Mmantsae Diale

time	[id] title	presenter
10:00	[24] A preliminary study of the impact of metal-induced CT artifacts on Monte Carlo dose calculations in a pelvic prosthesis phantom	Dr ADE, Nicholas
10:20	[50] Photodynamic Therapy using Sulfonated Aluminum Phthalocyanine Mix for the eradication of Cervical Cancer, An in vitro Study	Mr CHIZENGA, Elvin
10:40	[305] ANALYSIS OF TYPE 1 DIABETES WITH MACHINE LEARNING METHODS	Ms MANAKA, Thokozile

Applied Physics (11:20-13:00)

-Conveners: phil ferrer

time	[id] title	presenter
11:20	[102] Corrosive Sulphur in Transformers	Ms NAICKER, Sharlene-Asia
11:40	[133] Wireless Mesh Data Communications and Reliability Analysis for Anti-theft Application Deployment in Educational Institutions	Mr VAN RENSBURG, Roger
12:00	[294] Flame retardants in City of Johannesburg EMS fire fighters bunker gear	Mr MOKOANA, Vincent
12:20	[347] Experimental thermal performance of a domestic latent heat medium temperature storage system during charging	Mr LENTSWE, Katlego
12:40	[240] Analyses of the Pore Structure Formation of Activated Carbon from Compaction of Plant Biomass Waste for Electrochemical Device Electrodes	Mr TJEBANE, Tjatji

Applied Physics (14:00-15:20)

-Conveners: Shukree Wassin

time	[id] title	presenter
14:00	[420] Applied Physics Division Meeting	Dr FERRER, phil
14:40	[158] Synthesis of MXene nanoribbons with Onion-like carbons for supercapacitors	Mr HABIB, Irfan
15:00	[354] Effects of Ion Implantation on Energy Storage Properties of Bulk Molybdenum Disulphide	Mr MWONGA, Patrick

Applied Physics (15:40-17:00)

-Conveners: Timothy Gibbon

time	[id] title	presenter
15:40	[15] A scheme to analyze the decay time of rare earth ions using a square wave technique	Dr TIWARI, S P
16:00	[19] Upconversion luminescence of NaGdF ₄ : Yb ³⁺ , Ho ³⁺ phosphors for potential biomedical applications	Dr SHARMA, ASHWINI

16:20	[245] The MinPET diamond discovery technique – an update	Mr NEMAKHAVHANI, Thendo Emmanuel
16:40	[214] Temperature-dependent gas sensing study of chemically prepared CeO ₂ -CuO nanoparticles	Ms OOSTHUIZEN, Dina N.

Thursday 28 June 2018

Applied Physics: PHYSICS IN INDUSTRY (10:00-11:00)

-Conveners: Brian Masara

time	[id] title	presenter
10:00	[414] Physics in Industry: Overview	Mr MASARA, Brian
10:10	[415] Physics in Industry: Nanotechnology	Prof. NTWAEABORWA, Odireleng
10:35	[417] Physics in Industry: Photovoltaics	Prof. VAN DYK, Ernest

Applied Physics: PHYSICS IN INDUSTRY (11:20-13:00)

-Conveners: Brian Masara

time	[id] title	presenter
11:20	[418] Physics in Industry: Nuclear	Dr MKHOSI, M
11:45	[416] Physics in Industry: Photonics	Dr NAIDOO, Darryl
12:10	[423] Partnership Opportunities in Hosting Business/Industry Events, Meetings and Conferences	SA NATIONAL CONVENTION BUREAU
12:35	[419] Physics in Industry: Discussion	Dr USMAN, Iyabo

Friday 29 June 2018

Applied Physics (10:00-11:00)

-Conveners: Trevor Derry

time	[id] title	presenter
10:00	[64] Experimental and numerical study of a cavity and hot mirror receiver of the parabolic trough collector	Mr MOHAMAD, Khaled
10:20	[228] Assessing opportunities in highly efficient perovskite solar cells	Dr DIALE, Mmantsae
10:40	[248] UNDERSTANDING THE ELECTRONIC AND OPTICAL PROPERTIES OF TIO ₂ ANATASE (100) AND (001) SURFACES DOPED AND CO-DOPED WITH SILVER AND CARBON FOR APPLICATION IN DYE-SENSITIZED SOLAR CELL	Dr MALUTA, Nnditshedzeni Eric

Applied Physics (11:20-13:00)

-Conveners: Alan Matthews

time	[id] title	presenter
11:20	[316] Non-specialist lecture: The new edition of the International System of Units: Introducing the SI Redefined: Counting Atoms, Single-Electron Tunnelling and Optical Atomic Clocks	Dr LOUW, Wynand
12:00	[237] Employing Fast Neutron Radiography (FNR) to determine the Hydraulic Conductivity (k) of sand via Darcy's Law and Gardner's Equation	Mr DANIELS, Graham
12:20	[257] Precursor Kibble (Watt) balance for the revision of the kilogram for South Africa	Mr MAMETJA, Thapelo