### **SAIP2023**

### Tuesday 04 July 2023

Physics for Development, Education and Outreach (10:00-10:40)

Physics for Development, Education and Outreach (11:00-12:00)

**Physics for Development, Education and Outreach** (14:00-15:20)

### Wednesday 05 July 2023

#### **Physics for Development, Education and Outreach** (09:40-10:40)

#### -Conveners: Mark Herbert

time	[id] title	presenter
	[67] DEVELOPING GRADE 12 LEARNERS CONCEPTUAL UNDERSTANDING OF CHEMICAL EQUILIBRIUM USING PROBLEM-BASED LEARNING	Ms MAMABOLO, Prudence Modjadji
	[84] The case for using diagrams to navigate between multiple representations in physics in order to improve conceptual understanding	WILLIAMS, Jennifer
10:20	[219] Vectors in Physics: Challenges for First-Year University Entering Students	NEKHUBVI, vhutshilo 1st mountaineer

#### Physics for Development, Education and Outreach (11:00-12:00)

#### -Conveners: Jennifer Williams

time	[id] title	presenter
	[238] Improving novice Physical Sciences teachers learning and understanding of basic dynamics by multiple representation in physics	Dr HERBERT, Mark
11:20	[180] Biogas upgrading and bottling	MAPANTSELA, Yolanda
	[331] The need for an integrated approach to physics/science capacity building in South Africa, SADC region, and Africa	Prof. MURONGA, Azwinndini

#### Physics for Development, Education and Outreach (14:00-15:00)

#### -Conveners: MAKONDELELE NETSIANDA

time [ic	d] title	presenter
14:00 [8:	3] Surreptitiously feeding education theory to physics students	WILLIAMS, Jennifer
	37] First year mainstream physics students' conceptions about Kinematics osition and displacement concepts	Dr HERBERT, Mark
14:40 [2	02] Low-cost methods and devices to measure the heat capacity of gases.	Dr MARIOLA, Marco

#### Physics for Development, Education and Outreach (15:20-17:40)

#### -Conveners: molamo Letsoalo

time	[id] title	presenter
15:20	[30] Evaluating Essential Skills	Dr FISH, Derek
15:40	[243] Re-Positioning the Department of Physics and Astronomy at UWC for Natural and Physical Sciences teachers training and development	Dr HERBERT, Mark
16:00	[85] Intentional design of learning material for high school physics teaching based on physics education research	WILLIAMS, Jennifer
16:20	[31] Studying the other 95 %: free-choice learning evaluation for Physics.	FISH, Derek
	[257] Repositioning the Department of Physics and Astronomy at the University of the Western Cape for Learners Programme	AUDU, Bako Nyikun
17:00	[204] Educational device for Electrochemical Impedance Spectroscopy	Dr MARIOLA, Marco

# Thursday 06 July 2023

#### Physics for Development, Education and Outreach: PHYSICS IN INDUSTRY DAY (09:40-10:40)

time	[id] title	presenter
	[371] Nanoscience innovations: On the trapping of cold neutrons in nano-scaled Fabry-Perot resonating cavities & neutron lifetime considerations	Prof. MAAZA, Malik

#### Physics for Development, Education and Outreach: PHYSICS IN INDUSTRY DAY (11:00-12:00)

time [id] title	presenter
11:00 [372] Intellectual Property, Innovation Management and Innovation Support in South Africa	the Role of NIPMO in Mr JASE, Thabang

#### Physics for Development, Education and Outreach: PHYSICS IN INDUSTRY DAY (14:00-15:20)

#### -Conveners: Azwinndini Muronga

time [id] title	presenter
14:00 [373] Innovation and Technology Transfer	Prof. MUDALI, Pragasen
14:40 [366] Physics in Business: survival in the jungle	GLEDHILL, Irvy (Igle)

# Friday 07 July 2023

#### Physics for Development, Education and Outreach: SAIP BIRTHDAY CELEBRATION (09:40-10:40)

#### -Conveners: Irvy (Igle) Gledhill

time	[id] title	presenter
09:40	[48] A review of the South African Institute of Physics (SAIP) roles in Physics for development, Education, and Outreach: Hindsight, foresight, and opportunities for South Africa through the hub-and-spoke model	MASARA, Brian CHITHAMBO, Makaiko

### <u>Physics for Development, Education and Outreach: REVIEW OF SAIP TEACHER DEVELOPMENT PROGRAMME</u> (11:00-12:20)