

PROGRAM: 6th ALC WORKSHOP 2013

Thursday, 21 November

10:00 – 17:00	Arrive at Venue
18:20 – 18:30	Group Photo outside Conference Venue
18:30 – 22:00	Opening Proceedings “Towards the all-digital control of light.” – Prof Andrew Forbes Dinner (Conference Venue)

Friday, 22 November

07:00 – 08:00	Breakfast (Manor House Restaurant)
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Session 1 *Chair: Erich Rohwer*

			Abstract
08:00 – 08:10	Welcome Address	Prof Eugene Cloete, Vice-Rector Research & Innovation, US.	
08:10 – 09:00	Ultrafast Charge Transfer Dynamics in Dye Sensitized Solar Cells.	Prof Heinrich Schworer	INV 01
09:00 – 09:20	The Role of Low Intensity Laser Irradiation at 660 nm on the Expression of Genes involved in the Extracellular Matrix in Wounded and Diabetic Wounded Fibroblasts.	<u>S. M Ayuk</u> , N. N.Hourel and H. Abrahamse	T1
09:20 – 09:40	Combined effects of low intensity laser irradiation and mixed sulfonated Zinc- Phthalocyanine in promoting death in breast cancer cells (MCF-7).	<u>I. Mfouo-Tynga</u> , N. N. Hourel and H. Abrahamse	T2
09:40 – 10:00	Study the effect of gold nanoparticles on the efficiency of photodynamic therapy (PDT) on two human cancerous cell lines.	<u>A. El-Hussein</u> , I.Tynga and H. Abrahamse	T3
10:00 – 10:20	The SpecUP educational spectrophotometer.	J.A. Nöthling and <u>P.B.C. Forbes</u>	T4
10:20 – 10:40	Tea		

Session 2 **Chair: Andrew Leitch**

			Abstract
10:40 – 11:30	From Time-Resolved Raman Spectroscopy to Spatially Offset Raman Spectroscopy	Dr Tony Parker	INV 02
11:30 – 11:50	Supercontinuum generation by high order modes in photonic crystal fibers.	<u>A. Ben Salem</u> , A. Trichili, R. Cherif, M. Zghal, D. Spangenberg, A.M. Heidt, E.G. Rohwer, D. Naidoo and A. Forbes	T5
11:50 – 12:10	Mode Coupling in Few Optical Mode Fibers.	<u>A. Trichili</u> , A. Ben Salem, R. Cherif, M. Zghal, A. Forbes, E. Rohwer	T6
12:10 – 12:30	Modelling and simulation of an erbium ytterbium co-doped distributed feedback fiber laser.	<u>Justice Sompo Mpoyo</u> , Rodolfo Martinez	T7
12:30 – 12:50	Prototype development of a quasi-static and dynamic perturbation sensor using fibre Bragg gratings.	<u>JJM Kaboko</u> , <u>S. Mukarugina</u> , R.Martinez	T8
12:50 – 14:00	Lunch (Conference venue)		

Session 3 **Chair: Andrew Forbes**

			Abstract
14:00 – 14:50	Excited DNA	Prof Tony Parker	INV 03
14:50 – 15:10	Parameter study of a mini TEA CO2 laser preionized by surface-wire corona discharge.	<u>F. Kyeyune</u> , H.M. von Bergmann and E.G. Rohwer	T9
15:10 – 15:30	Measurements of electric field induced second harmonic signals in transmission and in reflection from the Si/SiO2 interface of a thin silicon membrane.	<u>W. I. Ndebeka</u> , P. H. Neethling, C. M. Steenkamp, H. Stafast, and E. G. Rohwer	T10
15:30 – 15:50	Refractive index measurement by optical path length variation using Michelson's interferometer.	<u>N.J. Suliali</u> , E.G. Rohwer, P.H. Neethling and P. Baricholo	T11
15:50 – 16:10	Tea		

16:10 – 16:30	Effect of annealing on the structure of Y ₃ (Al,Ga)5O ₁₂ :Tb thin films grown by PLD technique.	<u>A. Yousif</u> , H.C Swart, O.M Ntwaeborwa and M M Duvenhage	T12
16:30 – 16:50	Laser induced excitations in SrF ₂ :Eu ³⁺ nanophosphor.	<u>M.Y.A Yagoub</u> , H.C. Swart and E. Coetsee	T13
16:50 – 17:10	A report on the upgrade of the CSIR Mobile LIDAR system.	<u>L. Shikwambana</u> and V. Sivakumar	T14
17:10 – 17:30	ALC Student Chapter OSA - meeting		
17:30 – 18:30	Wine Tasting		
19:30 – 22:00	Dinner (Lifestyle Clubhouse)		

Saturday, 23 November

07:00 – 08:00 Breakfast (Manor House Restaurant)

Session 4 Chair: Ernest van Dyk

			Abstract
08:10 – 09:00	Ultrafast dynamics of excited states in molecular crystals: The case of tetracene ultrathin single crystals.	Dr Zephania Birech	INV 04
09:00 – 09:20	Digital signal processing (DSP) procedures for an externally modulated laser carrier signal in a direct detection optical communication link.	<u>T.V. Chabata</u> , E. Rotich, R.R.G. Gamatham, A.W.R. Leitch, and T.B. Gibbon	T15
09:20 – 09:40	Characterisation of concentrator photovoltaic cells using LBIC imaging technique.	<u>N.Kwarikunda</u> , E.E. van Dyk, F.J. Vorster and W. Okullo	T16
09:40 – 10:00	Surface Brillouin scattering in NbN thin films.	<u>J.M. Kuria</u> , D.M. Wamwangi and J.D. Comins	T17
10:00 – 10:20	An African Laser Shock Peening Initiative.	<u>D. Glaser</u> , <u>R.D. Bedekar</u> , C. Polese, B. Masina	T18
10:20 – 10:40	Tea		

Session 5 **Chair: Hendrik Swart**

			Abstract
10:40 – 11:00	Microhardness of AA1200 laser coated with (Zr+Mo+Stellite 6).	<u>D.I. Adebisi</u> , S.L. Pityana and A.P.I. Popoola	T19
11:00 – 11:20	Mechanical and microstructural characteristics of laser assisted cold sprayed 410L stainless steel coatings.	<u>E. O. Olakanmi</u> , M. Tlotleng, T. Mathebula, K. Malabi, H Burger and M. Doyoyo	T20
11:20 – 12:10	1,2,3 infinity: High-dimensional quantum entanglement made easy.	Prof Andrew Forbes	INV 05
12:10 -12:45	Conclusion: Certificates and Awards		
12:45 – 13:30	Lunch (Conference venue)		
13:30 – 22:00	Excursion to the Waterfront, Cape Town		

Sunday, 13 November

07:00 – 08:00	Breakfast (Manor House Restaurant)
08:30 – 12:00	Departure for Airport