# **SAIP2014**

# Tuesday 08 July 2014

## <u>Theoretical</u> - D Les 104 (10:00-10:40)

#### -Conveners: Frederik Scholtz

time	[id] title	presenter
------	------------	-----------

10:00 [22] Higgs quartic coupling, neutrino masses and mixing angles in 2UED models	Prof. CORNELL, Alan
10:20 [23] Evolution of Yukawa Couplings and Quark Flavour Mixings in the 2UED	Mr ABDALGABAR, Ammar

## Theoretical - D Les 104 (11:10-12:10)

#### -Conveners: Alan Cornell

time [id] title	presenter
11:10 [53] Integrability in Large N super Yang-Mills Theory	Prof. DE MELLO KOCH, Robert
11:30 [67] SO(N) restricted Schur polynomials	Mr KEMP, Garreth
11:50 [80] Non Planar Integrability in ABJM	Ms SMITH, Stephanie

## Theoretical - D Les 104 (14:00-15:40)

#### -Conveners: Robert de Mello Koch

time	[id] title	presenter
14:00	[95] Finite N Quiver Gauge Theory	Mr KREYFELT, Rocky
14:20	[321] The Large-N Limit Of Matrix Models And AdS/CFT	Mr MULOKWE, Mbavhalelo
14:40	[340] Saddle point analysis within a vector-like SU(2) 'QCD' model	Mrs JOHNSON, Celeste
	[43] The Provost metric as a systematic means to construct geometric and gravitational duals	Mr VAN ZYL, Hendrik
15:20	[243] Quark-Gluon Plasma Physics from String Theory	Dr MORAD, Razieh

SAIP2014 / Programme Wednesday 09 July 2014

# Wednesday 09 July 2014

# Theoretical - D Les 104 (10:00-10:40)

#### -Conveners: Frederik Scholtz

time [id] title	presenter
10:00 [474] TCP Specialist meeting	

# Theoretical: Theoretical - D Les 104 (11:10-12:10)

#### -Conveners: Azwinndini Muronga

time [id] title	presenter
11:10 [314] Thermodynamics of open quantum systems	Dr SEMIN, Vitalii
11:30 [426] Aliasing in Atomic Clocks	Dr AKHALWAYA, Ismail
11:50 [206] Quantum feedback control of a harmonic oscillator	Ms BASSA, Humairah

## Theoretical: Theoretical - D Les 104 (14:00-15:40)

#### -Conveners: Jean Cleymans

time	[id] title	presenter
14:00	[104] Quantum Networking with Graph States	Prof. TAME, Mark
14:20	[268] Homogeneous Open Quantum Walks on a Line	Dr CABALLAR, Roland Cristopher
	[356] Entanglement of two distant nitrogen-vacancy-center ensembles under the action of squeezed microwave field	Dr TEPER, Natalia
15:00	[93] Efficient Quantum Simulation of Markovian Quantum Dynamics of a Qubit	Mr SWEKE, Ryan
15:20	[37] Quantum Neural Networks - Our brain as a quantum computer?	Ms SCHULD, Maria

SAIP2014 / Programme Thursday 10 July 2014

# Thursday 10 July 2014

## Theoretical: Theoretical - D Les 104 (10:00-10:40)

#### -Conveners: Thomas Konrad

time [id] title		presenter
10:00	[299] Hamiltonian approach to open quantum Brownian motion.	Dr SINAYSKIY, Ilya
10:20	[378] Finite-size key security of Phoenix-Barnett-Chefles 2000 quantum-key-distribution protocol	Dr MAFU, Mhlambululi

## Theoretical: Theoretical - D Les 104 (11:10-12:10)

#### -Conveners: Ilya Sinayskiy

time	[id] title	presenter
11:10	[84] A GPU Based Polyhedral Particle DEM Transport Code	Mr GOVENDER, Nicolin
11:30	[6] Massive Affordable Computing Using ARM Processors in High Energy Physics	SMITH, Joshua Wyatt
11:50	[161] Computer Assisted Proof of the Global Existence of Periodic Orbits in the Rössler System	Dr BOTHA, André

# Theoretical: Theoretical - D Les 104 (14:00-15:40)

### -Conveners: Kristian Müller-Nedebock

time	[id] title	presenter
14:00	[418] Numerical modelling of the generation of Gaussian graph state	Mr NZUZI MBENZA, Lucien
	[173] Computational study of structural, thermal and electronic properties of the chalcopyrites AlAgX2 (X=S,Se,Te)	Mr DONGHO NGUIMDO, Guy Moise
14:40	[171] Structural and Electronic Properties of Fe dopped Technetium Sulphide	Mr ABDULSALAM, Mahmud
15:00	[236] Resonance features of stack of long Josephson junctions	Mr RAHMONOV, Ilhom
15:20	[129] Collider Black-Holes: Preliminary Results and Outlook	Mr CARLSON, Warren

SAIP2014 / Programme Friday 11 July 2014

# **Friday 11 July 2014**

# Theoretical: Theoretical - D Les 104 (10:00-10:40)

#### -Conveners: Daniel Joubert

time [id] title	presenter
10:00 [265] Dynamics of processive and non-processive molecular motors of filaments	n Prof. MÜLLER-NEDEBOCK, Kristian
10:20 [177] Vacuum Energies and Frequency Dependent Interactions	Prof. WEIGEL, Herbert

## Theoretical: Theoretical - D Les 104 (11:10-12:10)

#### -Conveners: Herbert Weigel

time [id] title	presenter
11:10 [223] Compact stars for NITheP internship programme	Prof. MURONGA, Azwinndini
11:30 [417] Particle number dependent discontinuities in density functional derivative	s. Prof. JOUBERT, Daniel
11:50 [148] Josephson Junctions under external radiation: Devil's Staircases and Continued Fractions	Dr SHUKRINOV, Yury