

SAIP2022

Monday 04 July 2022

Theoretical and Computational Physics: High Energy Theories and DFT - Zoom Platform (11:30-13:00)

-Conveners: Thomas Konrad

| time | [id] title | presenter |
|-------|---|-------------------------------|
| 11:30 | [17] 5D MSSM at Two loop | CORNELL, Alan |
| 11:45 | [15] Black holes and nilmanifolds: quasinormal modes as fingerprints of extra dimensions | CHRYSOSTOMOU, Anna |
| 12:00 | [166] Rapidity Distributions of Pb+Pb and Au+Au from the microscopic Ultra-relativistic Quantum Molecular Dynamics (UrQMD 3.3) model | NEMAKHAVHANI, Thendo Emmanuel |
| 12:15 | [242] First principle' study of the properties of the Titanium based alloys (Ti doped with Mo, Mg, Zr, Ta and Si) for biomedical applications | MABEBA, Kobe |
| 12:30 | [54] The QCD Equation of State in Small Systems | HOROWITZ, William |
| 12:45 | [76] An Introduction to Lattice QCD: The Metropolis Algorithm and the Anharmonic Oscillator | Mr NGWENYA, Blessed Arthur |

Theoretical and Computational Physics: Quantum session - Zoom Platform (15:00-16:30)

-Conveners: Alan Cornell

| time | [id] title | presenter |
|-------|---|-----------------------------|
| 15:00 | [225] Statistical thermal models for particle reproduction in heavy ion collisions | Mr SITHOLE, Kudzai |
| 15:15 | [253] Quantum key distribution protocol implemented with biphotons | SEKGA, Comfort |
| 15:30 | [324] Quantum-optical description of sum-frequency generation in terms of spatial light modes | Ms PERMAUL, Tanita |
| 15:45 | [86] Measurement-Based Quantum Network Coding on a Noisy Superconducting Processor | RALL, Hjalmar |
| 16:00 | [333] A verification scheme for universal quantum computers | Dr SEGIREDDY, Anirudh Reddy |

Tuesday 05 July 2022

Theoretical and Computational Physics: Gravity and machine learning - Zoom Platform (11:30-13:00)

-Conveners: Alan Cornell

| time | [id] title | presenter |
|-------|---|---------------------------|
| 11:30 | [31] Matters of the $R_h=ct$ universe | ABEBE, Amare |
| 11:45 | [325] Is gravity quantised? | MAHARAJ, Shamik |
| 12:00 | [175] Quantum spectrum of tachyonic black holes in a brane-anti-brane system | Prof. BEESHAM, Aroonkumar |
| 12:15 | [111] The Physics of Core-Collapse Supernovae | Ms NZUZA, Wandile |
| 12:45 | [289] Anomaly Detection on the high throughput network of the ATLAS TDAQ system | PHIRI, Mitchell |

Theoretical and Computational Physics: Quantum related - Zoom Platform (15:00-16:30)

-Conveners: Azwinndini Muronga

| time | [id] title | presenter |
|-------|--|---------------------------|
| 15:00 | [329] Control of quantum systems by quantum systems | KONRAD, Thomas |
| 15:15 | [328] Wigner functionals in Quantum optics | DURGAPERSADH, Akshay |
| 15:30 | [335] A generalised approach to measurement-based feedback Control of a Quantum System in a Harmonic Potential | ROUILLARD, Amy |
| 15:45 | [200] A new Bell inequality for measuring entanglement in relativistic frames. | HARTMAN, Jonathan |
| 16:00 | [120] Cavity QED based open quantum walks | ZUNGU, Ayanda |
| 16:15 | [342] Higher order relativistic dissipative fluid dynamics for heavy ion collisions and astrophysics | Prof. MURONGA, Azwinndini |

Thursday 07 July 2022

Theoretical and Computational Physics - Zoom Platform (11:30-13:00)

Theoretical and Computational Physics - Zoom Platform (15:00-16:30)

Friday 08 July 2022

Theoretical and Computational Physics - Zoom Platform (11:30-13:00)