

## Computational Physics and High Performance Computing

08:00 – 17:00

Winter School

12 July 2011

*Programme*

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08:00 – 08:30      Registration

08:30 – 08:45      Welcome and Opening : Chair of the Physics Department, UNISA

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### Session A : Computational Approaches in Physics Tuition

Chair : Prof. I. Basson

08:45 – 09:30      Speaker : Prof. Wolfgang Christian      (Davidson College - USA)  
Lecture : Computational Physics And The Physics Curriculum

09:30 – 09:45      Discussion

09:45 – 10:30      Speaker : Prof. Fransisco Esquembre      (University of Murcia - Spain)  
Lecture : Easy Java Simulations: A Computational Tool For Science Education  
and Research

10:30 – 10:40      Discussion

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10:40 – 11:00      Tea Break

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**Session B : Computational Approaches in Theoretical Physics****Chair : Prof. A. Botha**

11:00 – 11:45      Speaker : Dr. Debashish Mukherji      (Max-Planck Institute - Germany)  
Lecture : Molecular Dynamics Simulations : An experimental laboratory  
for a computational physicist.

11:45 – 12:00      Discussion

12:00 – 12:45      Speaker : Prof. Moritz Braun      (University of South Africa – RSA)  
Lecture : Using Python in Computational Physics

12:45 – 13:00      Discussion

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13:00 – 14:00      Lunch Break

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**Session C : High Performance Computing in Physics****Chair : Prof. M. L. Lekala**

14:00 – 14:40      Speaker : Prof. Enrico Lombardi      (University of South Africa – RSA)  
Lecture : High Performance Computing in Solid State Physics

14:40 – 14:50      Discussion

14:50 – 15:30      Speaker : Dr. Daniel Moeketsi      (Center for High Performance Computing – RSA)  
Lecture : Overview of the Center for High Performance Computing

15:30 – 15:40      Discussion

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15:40 – 16:00      Tea Break

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16:00 – 16:45      Speaker : Dr. Daniel Moeketsi      (Center for High Performance Computing – RSA)  
Lecture : Practical demonstrations on the use of the CHPC Cluster.

16:45 – 17:00      Discussion

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18:30 – 21:00      Welcoming Function !!!      Welcoming Function !!!      Welcoming Function !!!

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