Computational Physics and High Performance Computing

Winter School
08:00 – 17:00 12 July 2011

Programme

08:00 – 08:30 Registration
08:30 – 08:45 Welcome and Opening: Chair of the Physics Department, UNISA

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. Francisco Esquembre (University of Murcia - Spain)
Lecture: Easy Java Simulations: A Computational Tool For Science Education and Research
10:30 – 10:40 Discussion

10:40 – 11:00 Tea Break
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

13:00 – 14:00  Lunch Break

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

15:40 – 16:00  Tea Break

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

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