

PROGRAM - HPC09

Wednesday 21 January 2009			
9:00 – 10:30	Registration		
10:30-11:00	Opening		
Theoretical Lectures: Introduction			
11:00-11:45	Introduction to HPC and Cluster Computing	L. Heltai	(note)
11:45-12:30	Overview of the Linux OS	L. Heltai	(note)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Introduction to Linux	H.Seyed-Allaei	
15:00-15:45	Free Practice		
15:45-16:15	Break		
16:15-17:15	Textual Editors in Linux – Vi & Emacs	L. Heltai	
17:15-18:00	Free Practice		

Thursday 22 January 2009			
Theoretical Lectures: Using Linux Efficiently			
9:00 – 10:00	Tools for Linux Workstations	L. Heltai	(note , Audio)
10:00-10:45	Bash Scripting	M. Siahatgar	(note , Audio)
10:45-11:15	Break		
11:15-12:30	Subversion	L. Heltai	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Creation of a Subversion Repository	L. Heltai	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Bash Scripting Exercises	M. Siahatgar	
17:15-18:00	Free Practice		

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Saturday 24 January 2009			
Theoretical Lectures: Compilers			
9:00 – 10:30	Floating Point Numbers	L. Heltai	(note , Audio)
10:30-11:00	Break		
11:00-12:30	From Source Code to Executables	E. Nedaee	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Installation of Compilers	M. Siahatgar	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Exercises on Compilers and IEEE Floating Point Format	E. Nedaee	
17:15-18:00	Free Practice		

Sunday 25 January 2009			
Theoretical Lectures: Mini MPI Cluster			
9:00 – 10:30	Introduction to Linux - Server Side	E. Nedaee	(Audio)
10:30-11:00	Break		
11:00-12:30	Basic Concepts of Clustering and MPI	L. Heltai	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Setup NFS Server for a Mini MPI Cluster	E. Nedaee	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Install MPI Library and Run Simple Banchmark	L. Heltai	
17:15-18:00	Free Practice		

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Monday 26 January 2009			
Theoretical Lectures: HPC and MPI – Part I			
9:00 – 10:30	Introduction to MPI – Part I	L. Heltai	(note , Audio)
10:30-11:00	Break		
11:00-12:30	Introduction to HPC Architectures	S. Cozzini	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	MPI Exercises – Part I	E. Nedaace	
15:00-15:45	Free Practice		
15:45-17:15	Break		
17:15-18:00	Free Practice		

Tuesday 27 January 2009			
Theoretical Lectures: HPC and MPI – Part II			
9:00 – 10:30	Introduction to MPI – Part II	L. Heltai	(note , Audio)
10:30-11:00	Break		
11:00-12:30	Introduction to Open MP	S. Cozzini	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	MPI Exercises – Part II	E. Nedaace	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Open MP Exercises	L. Heltai	
17:15-18:00	Free Practice		

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Wednesday 28 January 2009			
Theoretical Lectures: Optimization on Multicores			
9:00 – 10:30	Optimization on Multicore Architectures	S. Cozzini	(note , Audio)
10:30-11:00	Break		
11:00-12:30	Introduction to Parallel Computing on Linux Cluster	S. Cozzini	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Exercises on Optimization	S. Cozzini	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Exercises on Benchmarking	L. Heltai	
17:15-18:00	Free Practice		
Thursday 29 January 2009			
Theoretical Lectures: Monte Carlo and Parallel Libs			
9:00 – 10:30	Monte Carlo Simulations	A. Balaz	(note , Audio)
10:30-11:00	Break		
11:00-12:30	Parallel Libraries and Tool Boxes	L. Heltai	(note , Audio)
12:30-14:00	LUNCH		
Friday 30 January 2009			
Grid			
9:00 – 9:45	Introduction to Grid Computing	S. Cozzini	
9:45-10:30	Introduction to gLight Grid Middleware	A. Balaz	
10:30-11:00	Break		
11:00-11:30	SEE-GRID_SCI Project	A. Balaz	
11:30-12:00	EU-IndiaGrid	S. Cozzini	
12:00-12:30	Overview of Iranian Grid	S. Rouhani	
12:30-14:00	LUNCH		
14:00-18:00	Lab Session on Grid Computing	M. Arabgol & S.M. Sheikh Alishahi	

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Saturday 31 January 2009			
Theoretical Lectures: Advanced System Tools			
9:00 – 10:30	Installation Procedures for Clusters	A. Balaz	(note , Audio)
10:30-11:00	Break		
11:00-11:45	Queue Systems for HPC Platform	S. Cozzini	(note , Audio)
11:45-12:30	The Art of Benchmarking	S. Cozzini	(note)
12:30-14:00	LUNCH		
Laboratory			
14:00-15:00	Advanced Cluster Installation	A. Balaz	
15:00-15:45	Free Practice		
15:45-16:15	Break		
15:45-16:15	Queue System Configuration	S. Cozzini	
17:15-18:00	Free Practice		

Sunday 01 February 2009			
Theoretical Lectures: Advanced Parallel Topics			
9:00 – 10:00	Parallel I/O and Parallel File Systems	S. Cozzini	(note , Audio)
10:00-11:00	Error Messages and Debugging	L. Heltai	(note , Audio)
11:00-11:30	Break		
11:30-13:30	Monitoring Systems and Tricks of the Trade	A. Balaz	(note , Audio)
12:30-14:00	LUNCH		
Laboratory			
14:00-16:00	Free Practice		