Summer School 2016

July 17 – 28, 2016

Agenda

Week 1 focus: MPI, OpenMP, I/O

	Monday July 18, 2015	**Tuesday July 19, 2015**	**Wednesday July 20, 2015**	**Thursday July 21, 2015**	**Friday July 22, 2015**
9:00 – 10:30	Introduction to HPC *C. Gheller*	OpenMP *B. Cumming*	MPI *M. Martinasso*	MPI + I/O *M. Martinasso* *C. Gheller*	HPC I/O and data processing *Jean Favre*
Break					
11:00 – 12:30	Access to CSCS systems *C. Bignamini*	OpenMP *B. Cumming*	MPI *M. Martinasso*	MPI I/O *C. Gheller*	HPC I/O and data processing *Jean Favre*
Break					
14:00 – 15:30	Introduction to the Miniapp *B. Cumming*	Miniapp (Adding OpenMP parallelism)	MPI *M. Martinasso*	Miniapp (adding MPI parallelism)	Miniapp (experiment with I/O)
Break		VISIT to CSCS Dinner at Ristorante *Il Cantinone*			
16:00 – 17:30	OpenMP *B. Cumming*		MPI *Maxime Martinasso*	Miniapp (adding MPI parallelism)	Miniapp (experiment with I/O)
Support	*R. Janalík* *J. Kardos* *C. Bignamini*	*R. Janalík* *J. Kardos* *C. Bignamini*	*R. Janalík* *J. Kardos* *C. Bignamini*	*R. Janalík* *J. Kardos* *C. Bignamini*	*R. Janalík* *J. Kardos* *C. Bignamini*
Goal	Familiarize with CSCS systems and Miniapp, and introduction to OpenMP	Introduction to OpenMP and application to Miniapp	Introduction to MPI	Approaching hybrid computing	Introduction to efficient I/O for HPC
Birds of Feather					

Week 2 focus: GPUs

	Monday July 25, 2015	**Tuesday July 26, 2015**	**Wednesday July 27, 2015**	**Thursday July 28, 2015**	**Friday July 29, 2015**
9:00 – 10:30	Introduction to GPU architecture *B.Cumming*	CUDA *B. Cumming*	OpenACC *V. Karakasis*	Scientific libraries *P. Sanan*	
Break					
11:00 – 12:30	CUDA *B. Cumming*	CUDA *B. Cumming*	OpenACC *V. Karakasis*	Scientific libraries *P. Sanan*	
Break				Wrap-up of the accomplished work	
14:00 – 15:30	CUDA *B. Cumming*	Miniapp (Implementing Miniapp with CUDA)	Miniapp (Implementing Miniapp with OpenACC)		
Break					
16:00 – 17:30	Miniapp CUDA setup and simple kernels implementation	Miniapp (Implementing Miniapp with CUDA)	Miniapp (Implementing Miniapp with OpenACC)		
Support	*R. Janalík* *J. Kardos* *A. Jocksch*	*R. Janalík* *J. Kardos* *A. Jocksch*	*R. Janalík* *J. Kardos* *A. Jocksch*	*R. Janalík* *J. Kardos* *A. Jocksch*	
Goal	Introduction to GPUs and CUDA	Developing CUDA knowledge	Introduction to OpenACC	Introduction to scientific libraries and wrap up benchmarks and results for miniapp	
Birds of Feather					