ASHPC23 – Austrian-Slovenian HPC Meeting 2023

(13 – 15 June 2023, IZUM, Maribor, Slovenia)

DAY 0 12.06.2023				
15:00	---------------	-------------	**EuroCC 2**	**Central European NCCs Workgroup Meeting (for NCC/EuroCC 2 staff only)**
15:00			EuroCC 2	NCCs approaching industry
16:00	---------------	-------------	BREAK	COFFEE
16:15			EuroCC 2	NCCs training
17:15	---------------	-------------	BREAK	COFFEE
17:30			EuroCC 2	NCCs communication and dissemination
19:00	---------------	-------------	DINNER	AT IZUM

DAY 1 13.06.2023

Time	First	Last	Type	Title
09:30	----------------	-------------	OPENING	**WELCOME TO ASHPC23 (PC AND OC CHAIRS)**
09:45	----------------	-------------	**Session**	**QUANTUM COMPUTING**
09:45	**Daniel**	**Egger**	**KEYNOTE**	**Integrating quantum computers in high-performance computing environments**
10:30	Ratko	Pilipović		Optimal surface quantum error codes for the NISQ era
10:45	Janez	Povh		Evaluation of the D-Wave Hybrid solver on instances of Max-Cut problems
11:00	Mátyás	Koniorczyk		On physical and physics-motivated QUBO–Ising heuristics: applications and perspectives
11:15	----------------	-------------	BREAK	COFFEE
11:45	----------------	-------------	**Session**	**BEST OF (AS)HPC….**
11:45	Aleš	Zamuda		Generative AI Using HPC in Text Summarization and Energy Plants
12:00	Lorenz	Romaner		Density Functional Theory Simulations of Crystallographic Defects for Physical Metallurgy Applications
12:15	Lubomir	Riha		A scalable way to cinematic-style visualization of unstructured CFD data
12:30	----------------	-------------	BREAK	LUNCH
14:00	----------------	-------------	**Session**	**EXASCALE/CONTAINERS/…**
14:00	**Abdulrahman**	**Azab**	**KEYNOTE**	**Functional and non-functional technology challenges in exascale supercomputing**
14:45	Matjaž	Pančur		Containers and MicroVMs: From Cloud to HPC?
15:00	Ioannis	Vardas		Effects of Mapping Strategies on Average Duration and Throughput of Colocated HPC Applications
15:15	Barbara	Krašovec		Security of HPC systems
15:30	----------------	-------------	BREAK	COFFEE
16:00	----------------	-------------	**Session**	**EUROPEAN AND NATIONAL HPC INFRASTRUCTURES AND SERVICES**
16:00	Caterina	Caravita		Leonardo and the pre-exascale era
16:15	Ivan	Vialov		Italian Pre-Exascale HPC System LEONARDO and Its Austrian Share
16:30	Aleš	Zemljak		EuroHPC Vega, 2 years & counting …
16:45	Jan	Zabloudil		Status and developments at the Vienna Scientific Cluster
17:00	----------------	-------------	BREAK	
17:15	Ernst	Haunschmid		Quantum Austria and Multi Site Computer Austria (MUSICA)
17:30	Martin	Thaler		The UIBK HPC Ecosystem - LEO5
17:45	Michael	Fink		Software Deployment at the UIBK LEO5 Cluster
18:00	Martin	Belavić		Supek - Croatian Scientific and Educational Cloud HPC Resource
18:15	----------------	-------------	END of DAY	----------------
19:00	----------------	-------------	DINNER	AT HOTEL CITY

DAY 2 14.06.2023				
09:30	----------------	-------------	Session	HPC FOR INDUSTRIES – SERVICES, SUPPORT AND SUCCESS STORIES
09:30	Tomi	Ilijaš	KEYNOTE	HPC as an opportunity for innovative SMEs
10:15	Draško	Tomić		Multi-head Additive Manufacturing with Optimal HPC Thermal Stabilization - AMOTS
10:30	Matej	Borovinšek		Preliminary Analysis of Innovative Aerostructures Spectrum Powered by HPC
10:45	Jürgen	Zechner		Development of High-Performance- and Real-Time-Computing Software for the Simulation of Electromagnetic Fields
11:00	----------------	-------------	BREAK	COFFEE
11:00	----------------	-------------	Session	EuroCC National Competence Centres – SERVICES FOR INDUSTRIES
11:30	David	Felhős		Enabling HPC-scale Engineering Simulations for SMEs
11:45	Raman	Ganguly		EuroCC Supercomuting Accelerator – Grow with advanced technology
12:00	Tomas	Karasek		NCC Czech Republic, entrance to the world of HPC
12:15	Marek	Magryś		PLGrid Infrastructure in the Exascale Era
12:30	Gabrijela	Zaharijas		SMASH – Marie Skłodowska-Curie COFUND project for postdoctoral researchers using HPC VEGA to develop machine learning applications for science and
12:45	----------------	-------------	BREAK	LUNCH
14:00	----------------	-------------	Session	CONT. - HPC FOR INDUSTRIES…
14:00	Iztok	Bajec	KEYNOTE	Lost in Vega(s): learning how to translate between English and Slovene on Vega
14:45	Soner	Steiner		Time series in HPC: An exploratory study with distributed time series data for energy use cases
15:00	Alja	Prah		Ensuring the quality of HPC software development
15:15	----------------	-------------	Session	POSTER - LIGHTNING TALKS
15:30	----------------	-------------	POSTERS	COFFEE + POSTER SESSION
	Pavel	Tomšič	poster	SCtrain: Supercomputing knowledge partnership
	Pavel	Tomšič	poster	The Slovenian National Competence Center for HPC – EuroCC@SLING
	Martin	Belavić	poster	Croatian Competence Centre for HPC - HR HPC CC
	Andreas	Rauber	poster	Research Data Infrastructure Landscape at TU Wien
	Blaž	Vrhovšek	poster	Data Storage and Analysis Challenges on HPC Systems in Genomic Medicine
	Katrin	Muck	poster	Python, Conda, and Virtual Environments on the Vienna Scientific Cluster
	Diego	Dalla Costa	poster	Computer Aided Engineering in Augmented Reality: Flow Visualizations for Hydro Power Applications
	Leon	Bogdanović	poster	Real-time human pose estimation using YOLOv7 on HPC
	Stefano	Elefante	poster	Cryo-EM Software Packages: A Sys-admins Point of View
	Marko	Jukič	poster	Inverse Molecular Docking Approaches on HPC Systems
	Andraž	Filipčič	poster	Open boundary molecular dynamics with GPU parallel computation
	Davor	Sluga	poster	Rand_gpu – A C/C++ library for generating pseudo-random numbers on the GPU
	Aleš	Zamuda	poster	Computing in DAPHNE: Integrated Data Analysis Pipelines for Large-Scale Data Management, HPC and Machine Learning
	Lubomir	Riha	poster	SPACE - Scalable Parallel Astrophysical Codes for Exascale - Center of Excelence
	James	McKevitt	poster	Accelerating Astrophysical Code Using CUDA Fortran
	Ivona	Vasileska	poster	SIMPIC: A simplified particle-in-cell plasma physics code optimized for multiple
16:30	----------------	-------------	Session	HPC IN NATURAL SCIENCES
16:45	Francesco Carlo	Mantegazza		GPU-accelerated matrix-free solvers for the efficient solution of cardiac electrophysiology in lifex
17:00	Sascha	Hunold		Massively Scaling Molecular Screening Workloads on EuroHPC Supercomputers
17:15	Vid	Ravnik		Benchmarking the CmDock Molecular Docking Software on HPC Systems
17:30	----------------	-------------	BREAK	
17:45	----------------	-------------	Session	OPENSCIENCELABS & STORAGE
17:45	Constanze	Rödig		OpenScienceLabs for HPC on the European Open Science Cloud
18:00	Marko	Ferme		Slovenian open access infrastructure – storing and sharing big data
18:15	Dejan	Lesjak		Federated storage status and plans in SLING centres
18:30	----------------	-------------	END of DAY	
19:30	----------------	-------------	DINNER	AT HOTEL CITY

DAY 3 15.06.2023				
09:30	----------------	-------------	Session	EPI et al.
09:30	**Mario**	**Kovač**	KEYNOTE	**European Processor Initiative**
10:15	Siegfried	Hoefinger		Energy Efficiency in HPC - European, Global and National Perspective
10:30	Domen	Tabernik		A GPU Cluster for Small Teams to Efficiently Conduct Deep Learning Research and Development
10:45	Alois	Schlögl		Running Windows-applications on a Linux HPC cluster using WINE
11:00	----------------	-------------	BREAK	COFFEE
11:00	----------------	-------------	Session	**MPI is here to stay…**
11:30	Sascha	Hunold		MPI is Good, Control is Better: Checking Performance Guidelines of Collectives
11:45	Philippe	Swartvagher		Rank Reordering within MPI Communicators to Exploit Deep Hierarchal Architectures of Supercomputers
12:00	Alena	Melic		Joint propagation characteristics of acoustic and electromagnetic waves in shallow ocean
12:15	----------------	-------------	CLOSING	ASHPC24
12:30	----------------	-------------	BREAK	LUNCH
14:00	----------------	-------------	END	END OF ASHPC23