



# Augstas veiktspējas skaitļošanas izmantošana skaitliskā modelēšanā/Use of High Performance Computing in Numerical Simulations

## Thursday, 22 February 2024

**Numerical Simulations: Use of High Performance Computing in Numerical Simulations - House of Science / Zoom**

**(09:30 - 14:30)**

**-Conveners: Jānis Virbulis**

time	[id] title	presenter
09:30	Registration and Coffee	
10:00	Opening	
10:10	[1] Simulation of liquid metal MHD with free surface	DZELME, Valters
10:30	[2] Modeling of hydrogen production on stepped surfaces of SrTiO <sub>3</sub> perovskite nanoparticles - ab initio computational study	SOKOLOV, Maksim
10:50	[3] Numerical modeling of dipolar quantum gases: from Bose-Einstein condensates to supersolids	BALAZ, Antun
11:10	[4] OpenFOAM Simulation of Fiber Concrete Flow	HERMMANN, Heiko
11:30	[5] Numerical analysis of heat exchange in a double layer system with opposing fluid flow	RIBICKIS, Valters
11:50	[6] HPC demonstration in practice. Jupyterhub example. Questions and answers (in Latvian)	JEŠKINS, Jurijs
12:10	Lunch and Discussions	
12:50	[7] Numerical simulations of air disinfection using a UV purifier	SABANSKIS, Andrejs
13:10	[8] Dam installation assessment: a hydrogeological modeling approach for Lielais Pelečāres mire and Cena mire	TIMUHINS, Andrejs
13:30	[9] Investigation of the scalability of OpenFOAM hydrodynamic simulations on HPC clusters	SUROVOVS, Kirils
13:50	[10] Optimization of execution on HEMUS supercomputer	Prof. ATANASSOV, Emanouil
14:10	Resume, Concluding Discussion, Coffee	