

Modern Computational Science: Energy of the Future

Summer School, September 3 - 14, University Oldenburg

Week 1

Time	Monday, 3.9	Tuesday, 4.9	Wednesday, 5.9	Thursday, 6.9	Friday, 7.9
9:00	Welcome and Introduction (<i>Hartmann/Agert</i>)	Random Number Generation (<i>Katzgraber</i>)	Monte-Carlo Methods (<i>Katzgraber</i>)	Data Analysis (<i>Young</i>)	Analysis of Wind Data (<i>Wächter</i>)
10:30	coffee break				
11:00	Introduction to HPC (<i>Harfst</i>)	Practical: PRNG (<i>Katzgraber</i>)	Practical: MC Methods (<i>Katzgraber</i>)	Practical: Data Analysis (<i>Young</i>)	Analysis of Wind Data (<i>Wächter</i>)
12:30	lunch break				
14:00	Practical: Using HPC Clusters (<i>Harfst</i>)	Differential Equations (<i>Chernov</i>)	Excursion	Short-term Weather Prediction (<i>von Bremen</i>)	Practical: Analysis of Wind Data (<i>Wächter</i>)
15:30	coffee break			coffee break	
16:00	Practical: Using HPC Clusters (<i>Harfst</i>)	Differential Equations (<i>Chernov</i>)		Practical: Short-term Weather Prediction (<i>von Bremen</i>)	Practical: Analysis of Wind Data (<i>Wächter</i>)

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Week 2

Time	Monday, 10.9	Tuesday, 11.9	Wednesday, 12.9	Thursday, 13.9	Friday, 14.9
9:00	Computational Fluid Dynamics (<i>Stoevesandt</i>)	Introduction to Networks (<i>Melchert</i>)	Energy Networks (<i>Lehnhoff</i>)	Collective Dynamics of Power Grids (<i>Timme</i>)	Large-eddy Simulations (<i>Witha</i>)
10:30	coffee break				
11:00	Computational Fluid Dynamics (<i>Stoevesandt</i>)	Introduction to Networks (<i>Melchert</i>)	Energy Networks (<i>Lehnhoff</i>)	Collective Dynamics of Power Grids (<i>Timme</i>)	Large-eddy Simulations (<i>Witha</i>)
12:30	lunch break				
14:00	Practical: Computational Fluid Dynamics (<i>Stoevesandt</i>)	Practical: Introduction to Networks (<i>Melchert</i>)	Social Activities	Practical: Collective Dynamics of Power Grids (<i>Timme</i>)	Summary/End of School (<i>Hartmann</i>)
15:30	coffee break			coffee break	
16:00	Practical: Computational Fluid Dynamics (<i>Stoevesandt</i>)	Practical: Introduction to Networks (<i>Melchert</i>)		Practical: Collective Dynamics of Power Grids (<i>Timme</i>)	