Schedule

	Sunday	Monday (23 March)	Tuesday (24 March)	Wednesday (25 March)
9.00		Opening (Fehske/Suhm/Bungartz)	Pflüger	Vander Aa
		Chow	Kowitz	Nakajima
			Zaspel	Shudler
		Coffee break	Coffee break	Coffee break
11.00		Reps	Hochbruck	Matsuoka
		Krämer		
		Futamura	Alvermann	Schenk
12.30		Lunch (@Krupp-Kolleg)	Lunch	Lunch
14.00		Saad (13:45)	Kreutzer	Vanroose
		Basermann (14:45)	Karakakis	Hager
		Kramer (15:15)	Stoyanov	Coffee break
16.00			Coffee break	Simon
		Guided University Tour	Ribbrock	
17.00			Barreda Vaya	Workshop Summary (Wellein)
	Registration		Wubs	Farewell
18.00		Quickshot poster presentations		
	Welcome	Poster session	Public evening lecture	

Registration:	Sunday, 17.00-19.00 in the Alfried-Krupp-Wissenschaftskolleg or during the workshop
Welcome:	Sunday, from 18.00 (Brasserie Hermann)
Public evening lecture:	Tuesday, 18.00 in the Alfried-Krupp-Wissenschaftskolleg
Workshop start:	Monday, 23 March, 9.00
Workshop end:	Wednesday, 25 March, 17.00

Monday Sessions

Workshop opening

9:00–9:10	**Welcome address** *Holger Fehske (Greifswald), Christian Suhm (WiKo Greifswald)*
9:10–9:30	**SPPEXA: Software for Exascale Computing** *Hans-Joachim Bungartz (München)*

Morning sessions

9:30–10:30	**Quantum Chemistry on Large-scale Heterogeneous Clusters** *Edmond Chow (Georgia Tech Atlanta)*
10:30–11:00	**Coffee break**
11:00–11:30	**Pipelined deflated Conjugate Gradients** *Bram Reps (Antwerpen)*
11:30–12:00	**Adaptive choice of projectors in eigenvalue algorithms** *Lukas Krämer (Wuppertal)*
12:00–12:30	**z-Pares: Software package for solving large sparse eigenvalue problems based on contour integral and complex moment** *Yasunori Futamura (Tsukuba)*
12:30–13:45	**Lunch** *Lunch is served in the Krupp-Kolleg*

Afternoon sessions

13:45–14:45	**Divide and conquer algorithms for large Hermitian eigenvalue problems** *Yousef Saad (Univ. Minnesota)*
14:45–15:15	**Scalable block methods and preconditioning for hardware efficient sparse eigensolutions** *Achim Basermann (Köln)*
15:15–15:45	**GPU cloud computing for modeling photosynthetic energy transfer** *Tobias Kramer (Berlin)*

Guided university tour

16:00–17:15	**Tour through the University main and historic buildings** *We start at 16:05 at the Rubenow Statue in the Domstraße*

Poster session

17:30–18:00	**Quickshot poster presentations**
18:00–20:00	**Poster session** Refreshments & Snacks

Tuesday Sessions

Morning sessions

9:00–9:30	**EXAHD – Simulation of Fusion Plasmas, Higher-Dimensional Problems, and Exa-Challenges** *Dirk Pflüger (Stuttgart)*
9:30–10:00	**EXAHD – Physics, Eigenproblems, and Faults** *Christoph Kowitz (München)*
10:00–10:30	**EXAHD – Combination Technique, Theory, and Preconditioning** *Peter Zaspel (Bonn)*
10:30–11:00	**Coffee break**
11:00–12:00	**Time integration of evolution equations** *Marlis Hochbruck (Karlsruhe)*
12:00–12:30	**Polynomial expansions in quantum physics computations** *Andreas Alvermann (Greifswald)*
12:30–14:00	**Lunch**

Afternoon sessions

14:00–14:30	**Optimizing the Performance of the Kernel Polynomial Method on Heterogeneous Systems** *Moritz Kreutzer (Erlangen)*
14:30–15:00	**SparseX: a library for high-performance Sparse Matrix-Vector multiplication on multicore platforms** *Vasileios Karakakis (München)*
15:00–15:30	**Task-based hybrid parallel sparse matrix-vector multiplication (SpMVM) with GASPI/GPI2** *Dimitar Stoyanov (Kaiserslautern)*
15:30–16:00	**Coffee break**
16:00–16:30	**Integrating multi-threading and accelerators into DUNE-ISTL** *Dirk Ribbrock (Dortmund)*
16:30–17:00	**Leveraging Task-Parallelism in ILUPACK for many-core architectures** *Maria Barreda Vaya (Castellón de la Plana)*
17:00–17:30	**Eigenvalue computation with Trilinos and HYMLS for fluid flow problems** *Fred Wubs (Groningen)*

Public evening lecture

18:00–19:00	**What Supercomputers Do, and what Supercomputers Still Can't Do** *Horst Simon (Berkeley Lab)*

Wednesday Sessions

Morning sessions

9:00–9:30	**ExaShark: A Scalable Hybrid Array Kit for Exascale Simulation** *Tom Vander Aa (Leuven)*
9:30–10:00	**ppOpen-HPC: Open Source Infrastructure for Development and Execution of Large-Scale Scientific Applications on Post-Peta-Scale Supercomputers with Automatic Tuning (AT)** *Kengo Nakajima (Tokyo)*
10:00–10:30	*(Update)* **Exascaling Your Library: Will Your Implementation Meet Your Expectations?** *Sergei Shudler (Darmstadt)*
10:30–11:00	**Coffee break**
11:00–12:00	**Harnessing the Deep Memory Hierarchy with Communication Reducing Algorithms for Exascale** *Satoshi Matsuoka (Tokyo)*
12:00–12:30	**Performance Engineering for Extreme-Scale Stochastic Optimizations on Petascale Architectures** *Olaf Schenk (Lugano)*
12:30–14:00	**Lunch**

Afternoon sessions

14:00–14:30	**Raising the arithmetic intensity of Krylov solvers** *Wim Vanroose (Antwerpen)*
14:30–15:00	**The GHOST library: An overview of its functionality and a comparison to other approaches** *Georg Hager (Erlangen)*
15:00–15:30	**Coffee break**
15:30–16:30	**Usable Exascale and beyond Moore's Law** *Horst Simon (Berkeley Lab)*

Closing & Farewell

16:30–17:00	**Workshop Summary** *Gerhard Wellein (Erlangen)*
17:00-17:30	**Farewell** Refreshments & Snacks