

# OOKAMI A64FX Webinar: LIKWID, OSACA, SpMV

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Erlangen National Center for High Performance Computing (NHR@FAU)

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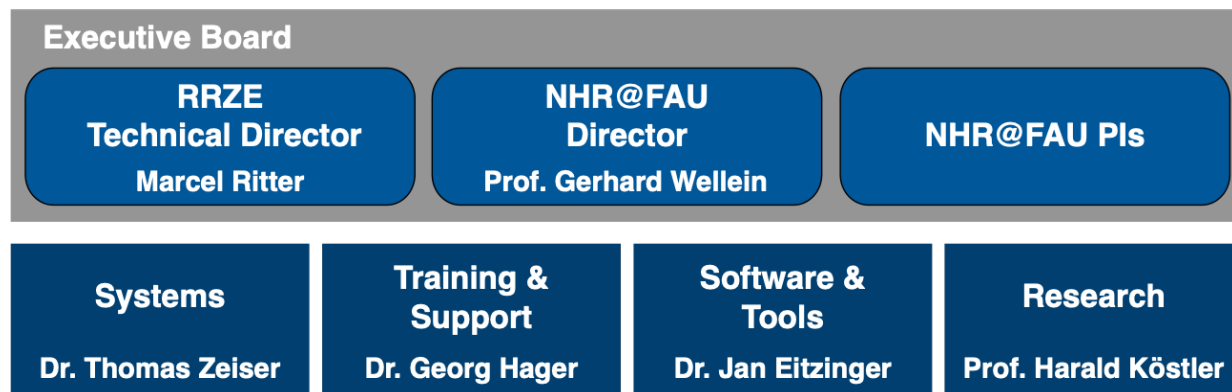
Stony Brook University



- One of eight newly established “themed” HPC centers in Germany
- Complement the Federal centers at Garching, Jülich, Stuttgart



Erlangen National Center for High Performance Computing (NHR@FAU)



- **Research**

- Performance Engineering
- Performance Modeling
- Performance Tools
- Hardware-Aware Building Blocks for Sparse Linear Algebra and Stencil Solvers
- HPC/HPDA Research Software Engineering

- **Applications**

- Atomistic simulations in life science and materials science



Erlangen National Center for High  
Performance Computing (NHR@FAU)

# The presenters

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Jan Laukemann  
PhD student



Christie L. Alappat  
PhD student



Thomas Gruber  
PhD student



Georg Hager  
NHR@FAU Head of  
Training & Support

# Agenda

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- **LIKWID** tools part 1: topology and affinity
- **SpMV** theory
  - Hands-On/demo: SpMV with CRS
- Introduction to **OSACA**
  - Hands-On/demo: OSACA analysis
- Break
- **SpMV**: SELL-C- $\sigma$
- **LIKWID** part 2: performance counters
- Hands-On/demo: **SpMV** CRS vs. SELL-C- $\sigma$  analysis
- Loose ends



**OOKAMI**

**<http://tiny.cc/OOKAMI-Hackathon>**