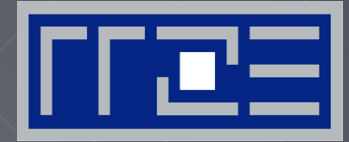


ERLANGEN REGIONAL COMPUTING CENTER



<http://goo.gl/0Qv45o>

Node-Level Performance Engineering

Georg Hager, Jan Eitzinger, Gerhard Wellein
Erlangen Regional Computing Center (RRZE)
University of Erlangen-Nuremberg

Two-day short course
University of Basel, Switzerland
2017-03-13/14



qr.me.com



Day 1	
09:00-10:15	Computer Architecture: pipelines, cores, caches, memory
10:15-10:45	Coffee break
10:45-11:15	Simple multicore tools: topology, affinity, clock speed
11:15-12:15	Microbenchmarking for architectural exploration (and more)
12:15-13:30	Lunch
13:30-14:30	Introduction to the Roofline model
14:30-17:00	Hands-on exercises (with on-the-fly coffee break)
Day 2	
09:00-09:30	Hardware performance counters
09:30-10:15	Roofline case study: dense matrix-vector multiplication
10:15-10:45	Coffee break
10:45-12:15	Roofline case study: Jacobi smoother
12:15-13:30	Lunch
13:30-14:30	Optimal use of parallel resources: SIMD & ccNUMA
14:30-17:00	Hands-on exercises (with on-the-fly coffee break)