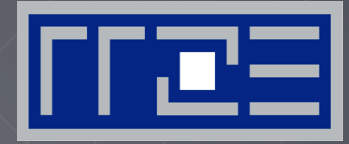


ERLANGEN REGIONAL COMPUTING CENTER



<http://tiny.cc/NLPE-Md1S>

Node-Level Performance Engineering

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Erlangen Regional Computing Center (RRZE)
University of Erlangen-Nuremberg

Three-day short course
Maison de la Simulation, Saclay, France
2018-06-11/12/13





Day 1	
Welcome & intro	GH
Computer architecture	GH
Tools: topology, affinity, clock speed	GH
Microbenchmarking for architectural exploration (and more)	GH
The Roofline performance model: basics	GH
Optimal use of parallel resources: ccNUMA	GH
Day 2	
Tools: hardware performance counters	JE
Optimal use of parallel resources: SIMD	JE
Performance Engineering with patterns	JE
Roofline case study: Jacobi smoother	GH
Roofline case study: sparse matrix-vector multiplication	GH
Hands-On exercises	
Day 3	
Hands-On code work	