Past, Present, and Future of SJTU HPC

Minhua Wen

Center for High Performance Computing

Shanghai Jiao Tong University

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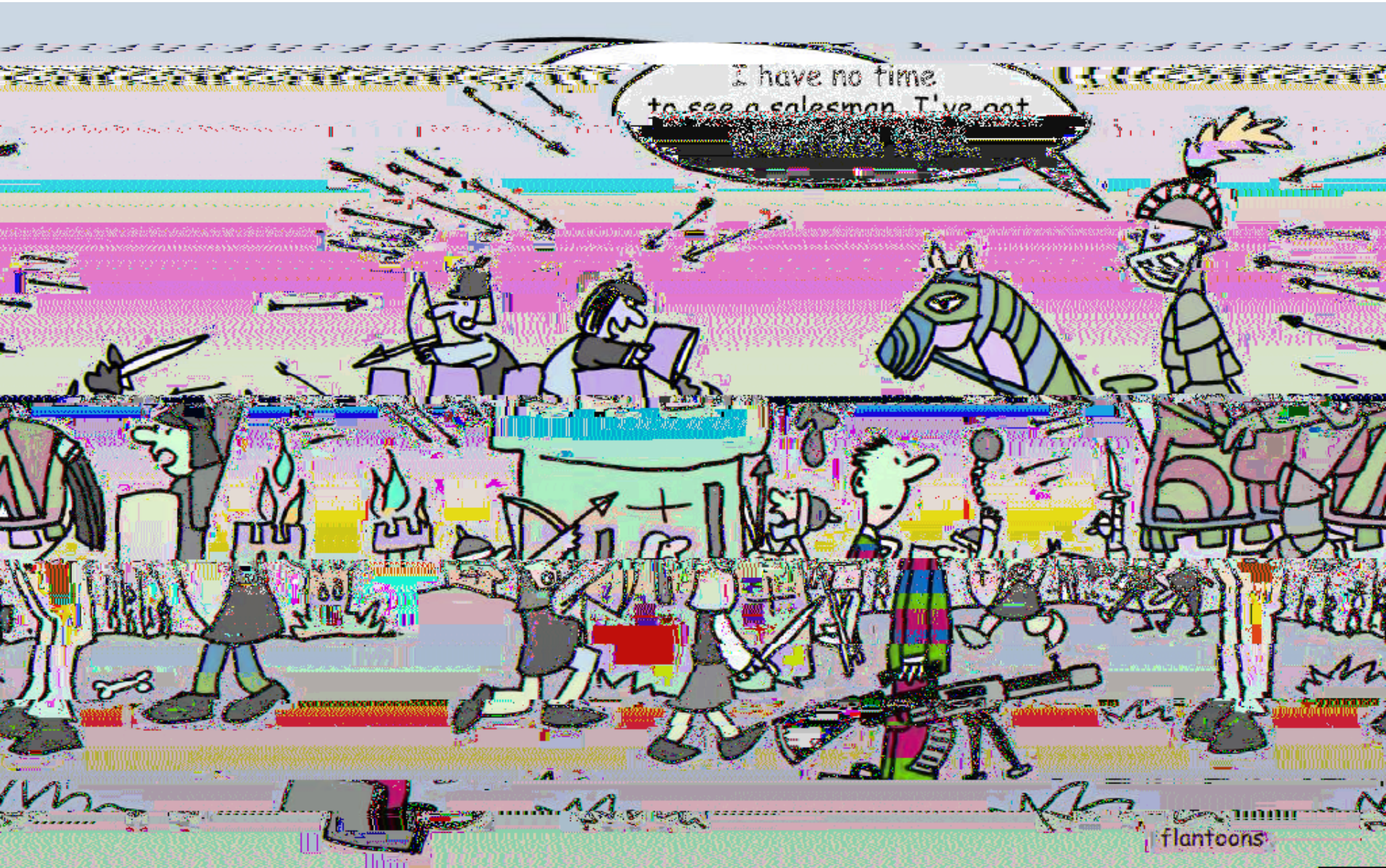

SJ HPC Center for HPC

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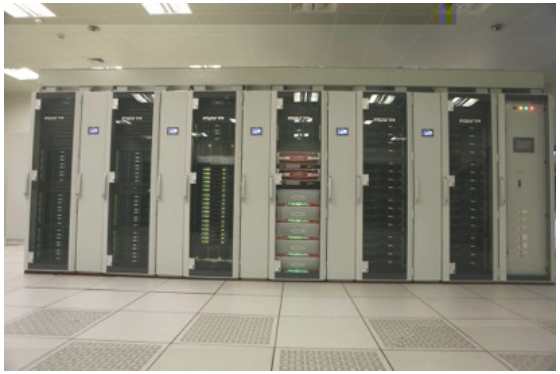

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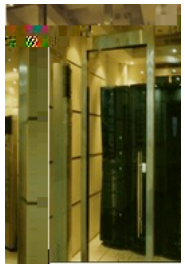

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S **HPC Lab**

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TOP500
CERTIFICATE
Tianhe-2 (TH-IVB-FEP) Cluster, Intel Xeon E5-2692 12C 2.200GHz, TH Express-2, Intel Xeon Phi 31S1P
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TOP500 SUPERCOMPUTER SITES

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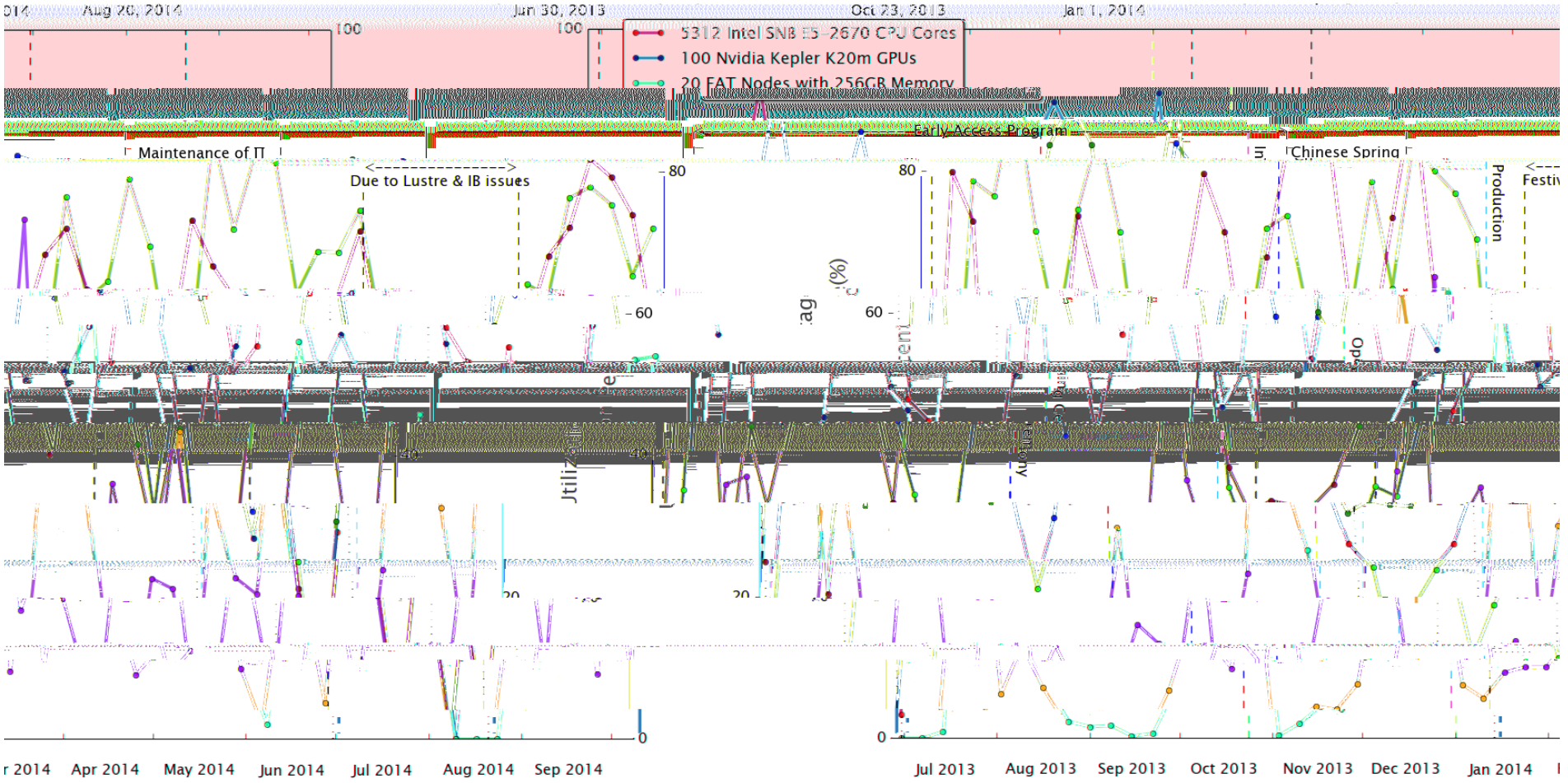
Weekly Utilization of Π, the Supercomputer of SJTU



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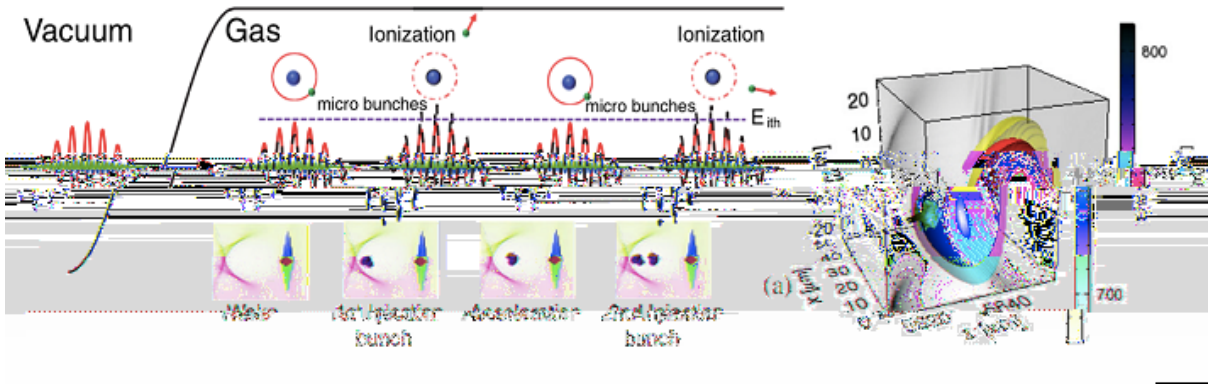
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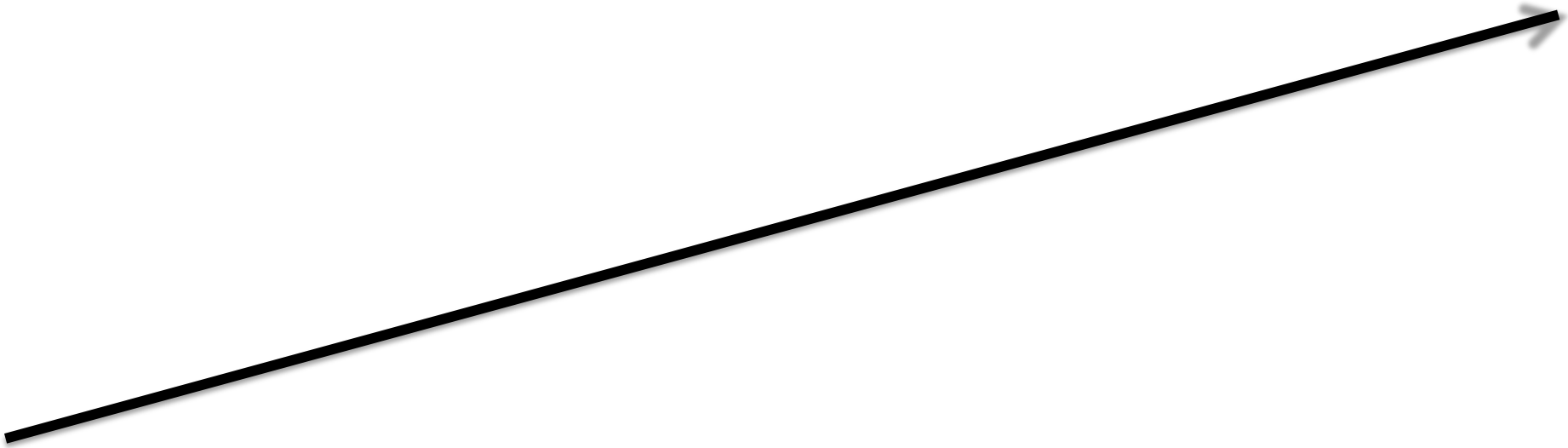

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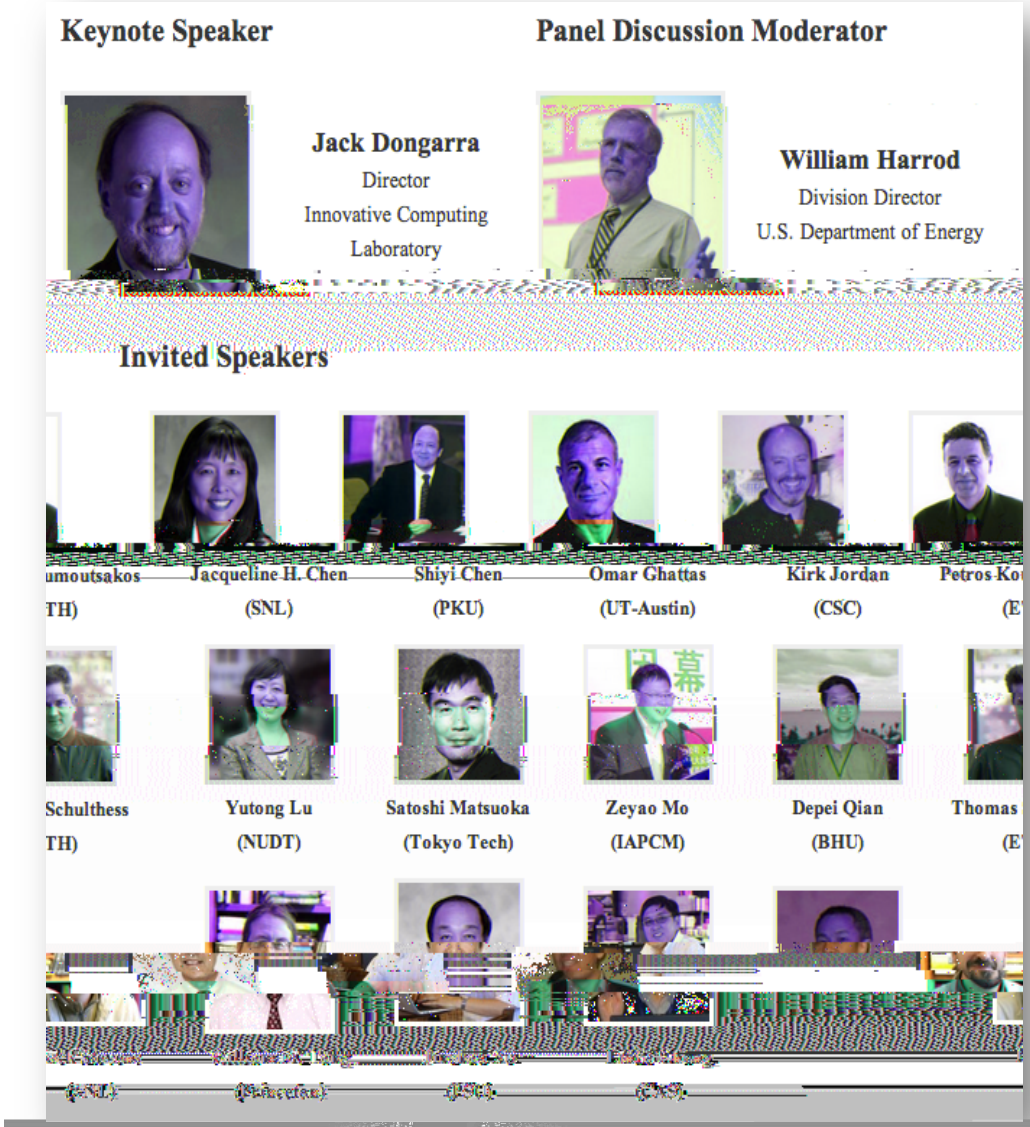

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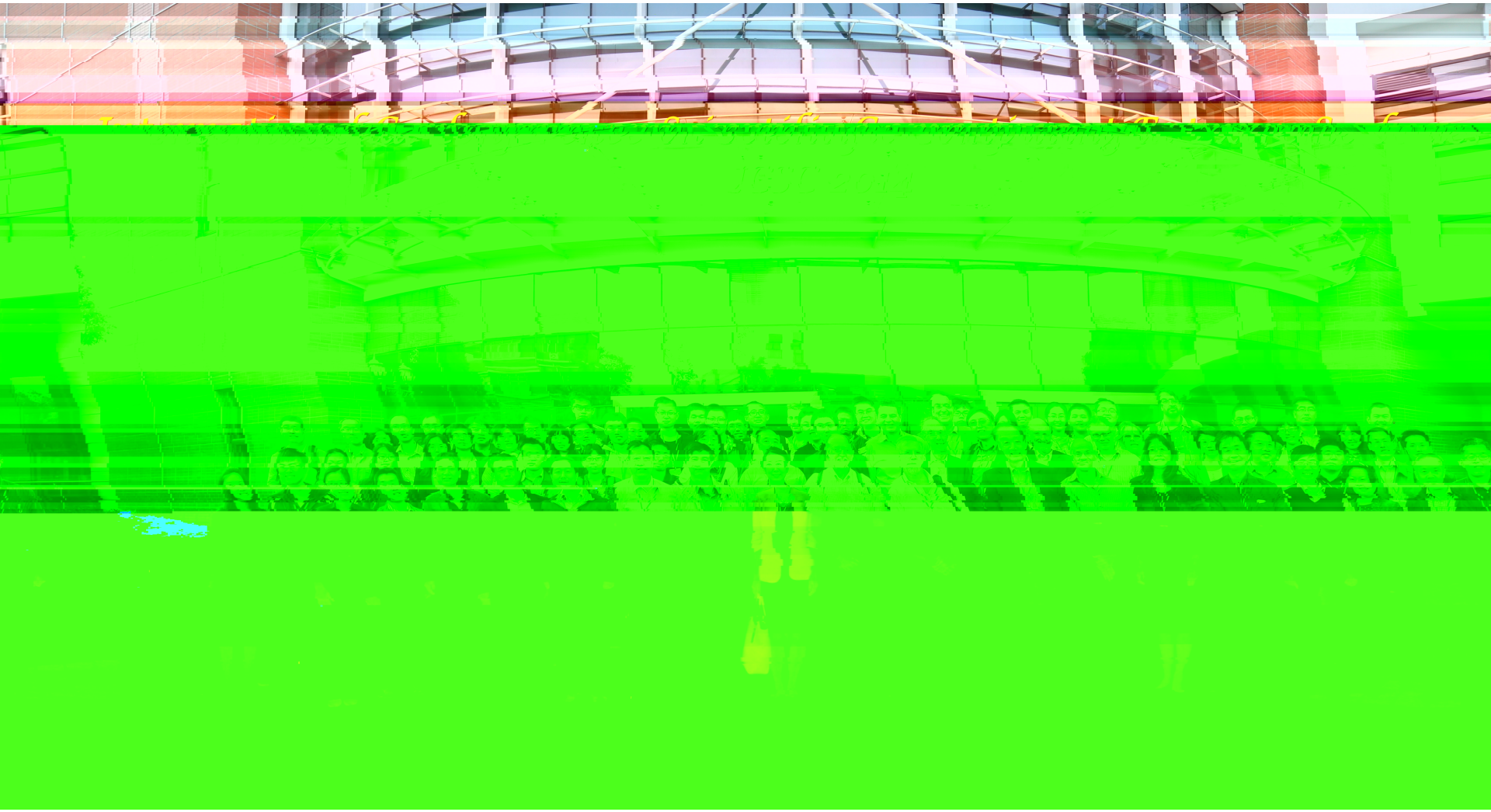

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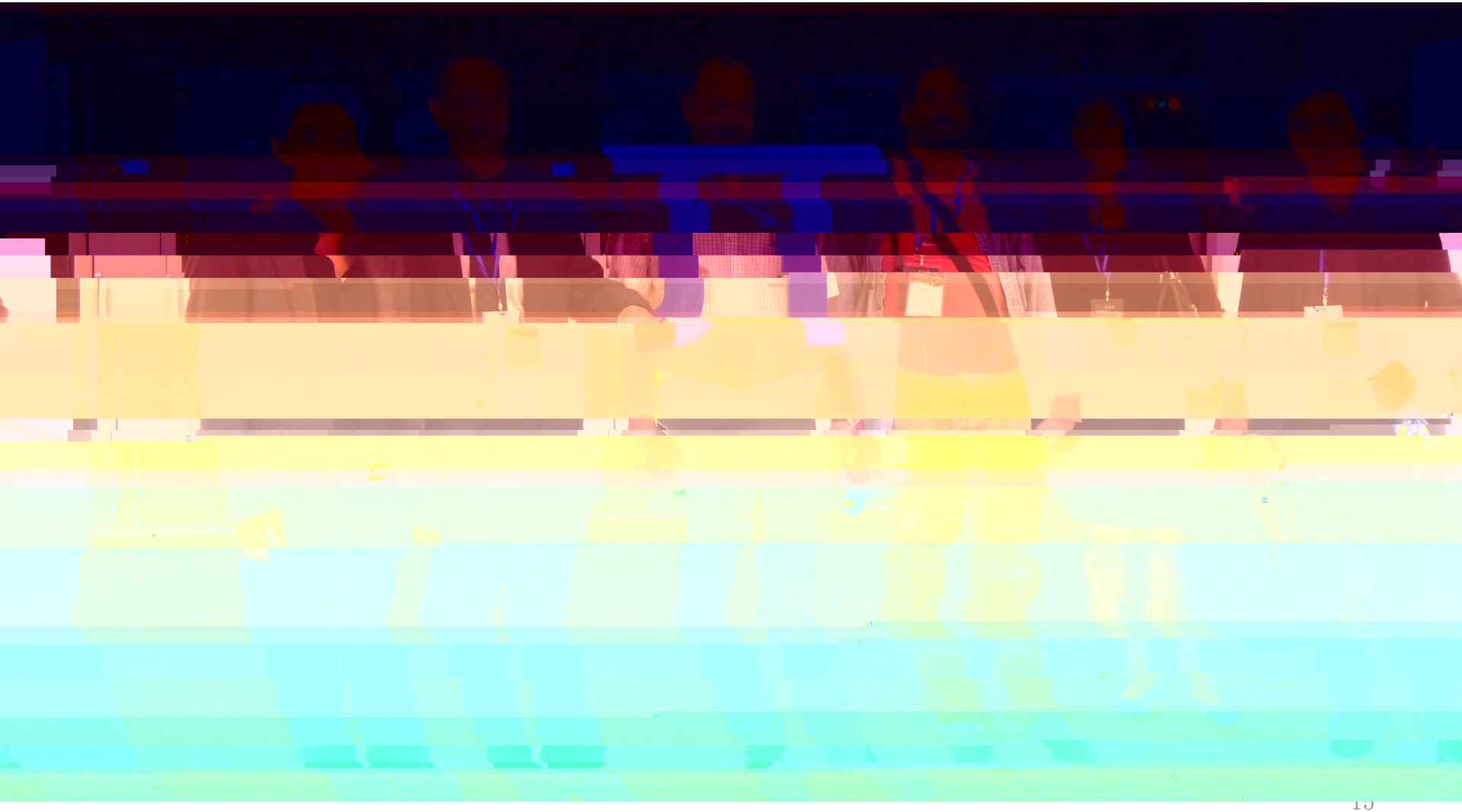

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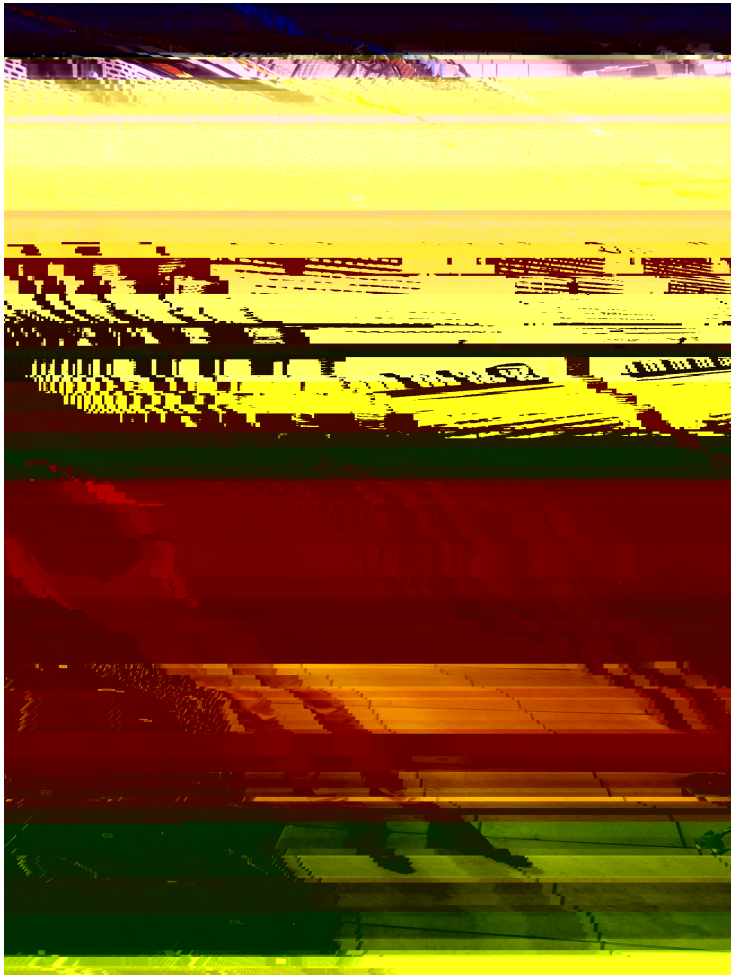

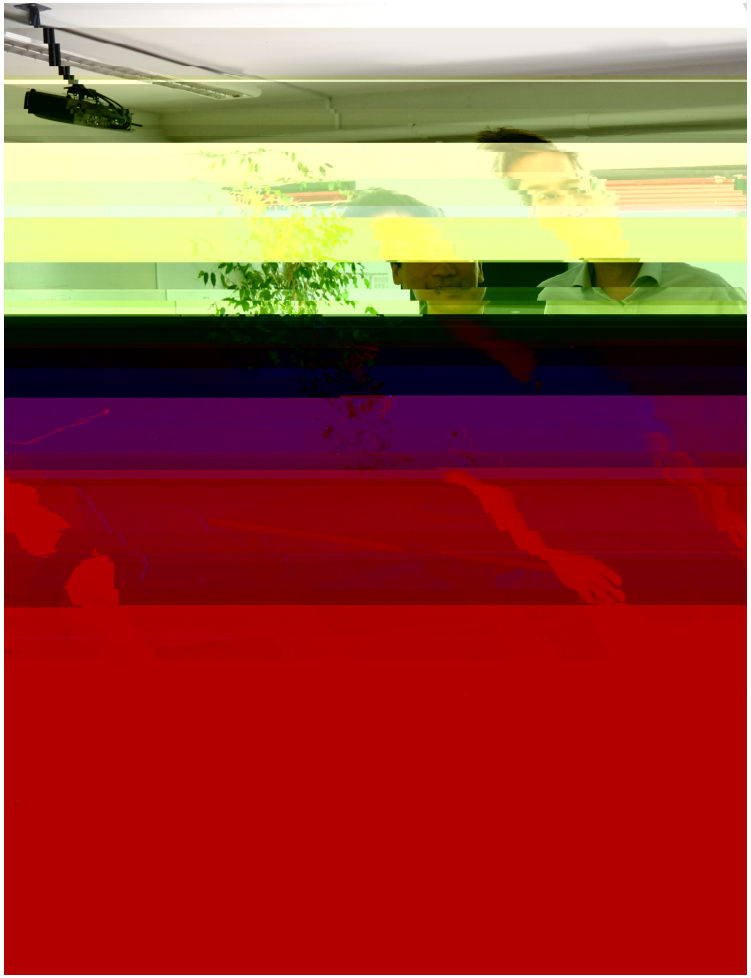

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并行程序设计原理
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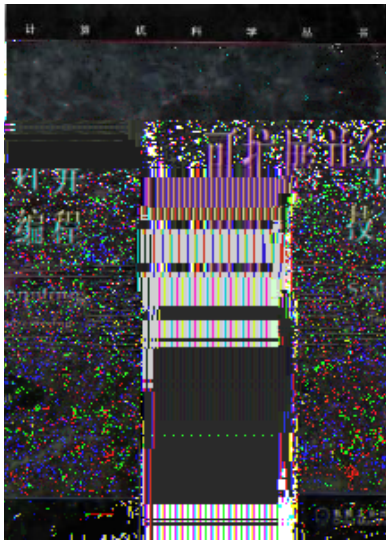

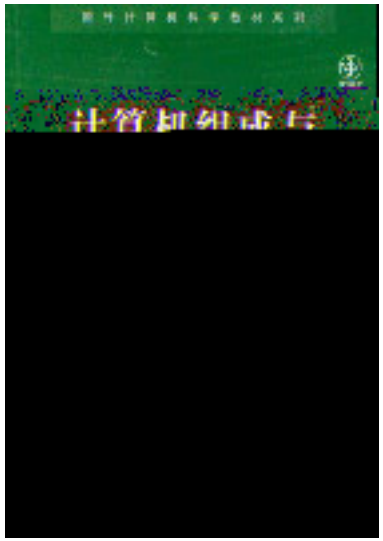

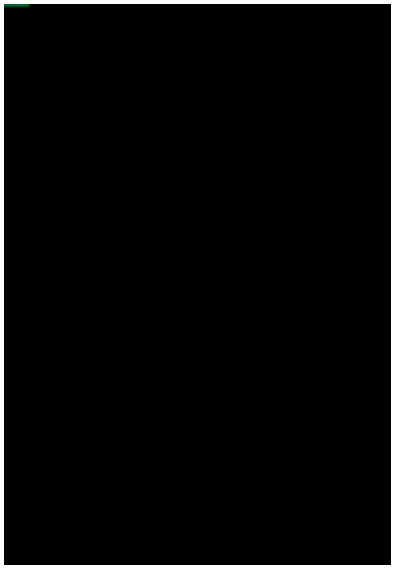


并行程序设计
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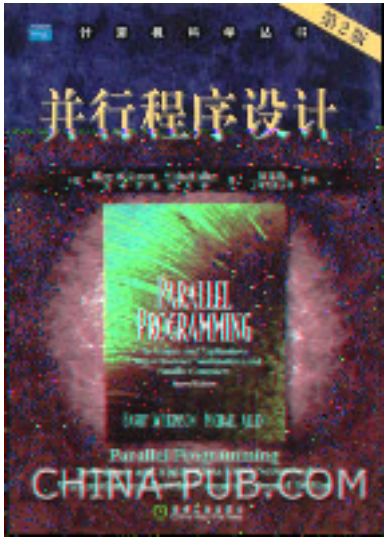
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计算机系统结构
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Supercomputer
Challenge ASC14
ASC14 WISDOM UNBOUNDED
2014世界大学生超级计算机竞赛
中山大学 SUN YAT-SEN UNIVERSITY
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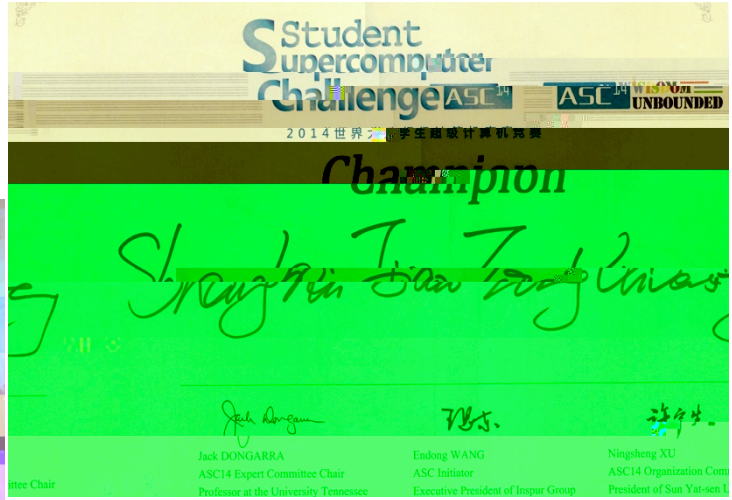
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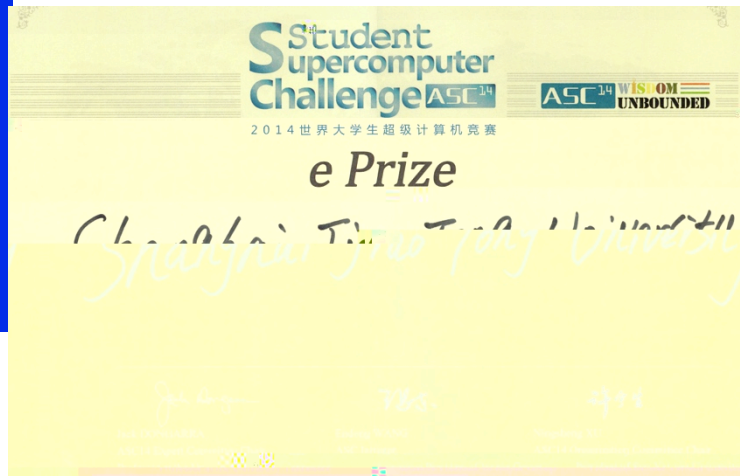
ASC14 Expert Committee Chair
Professor at the University Tennessee
Endong WANG
ASC Initiator
Executive President of Inspur Group
Ningsheng XU
ASC14 Organization Comm
President of Sun Yat-sen U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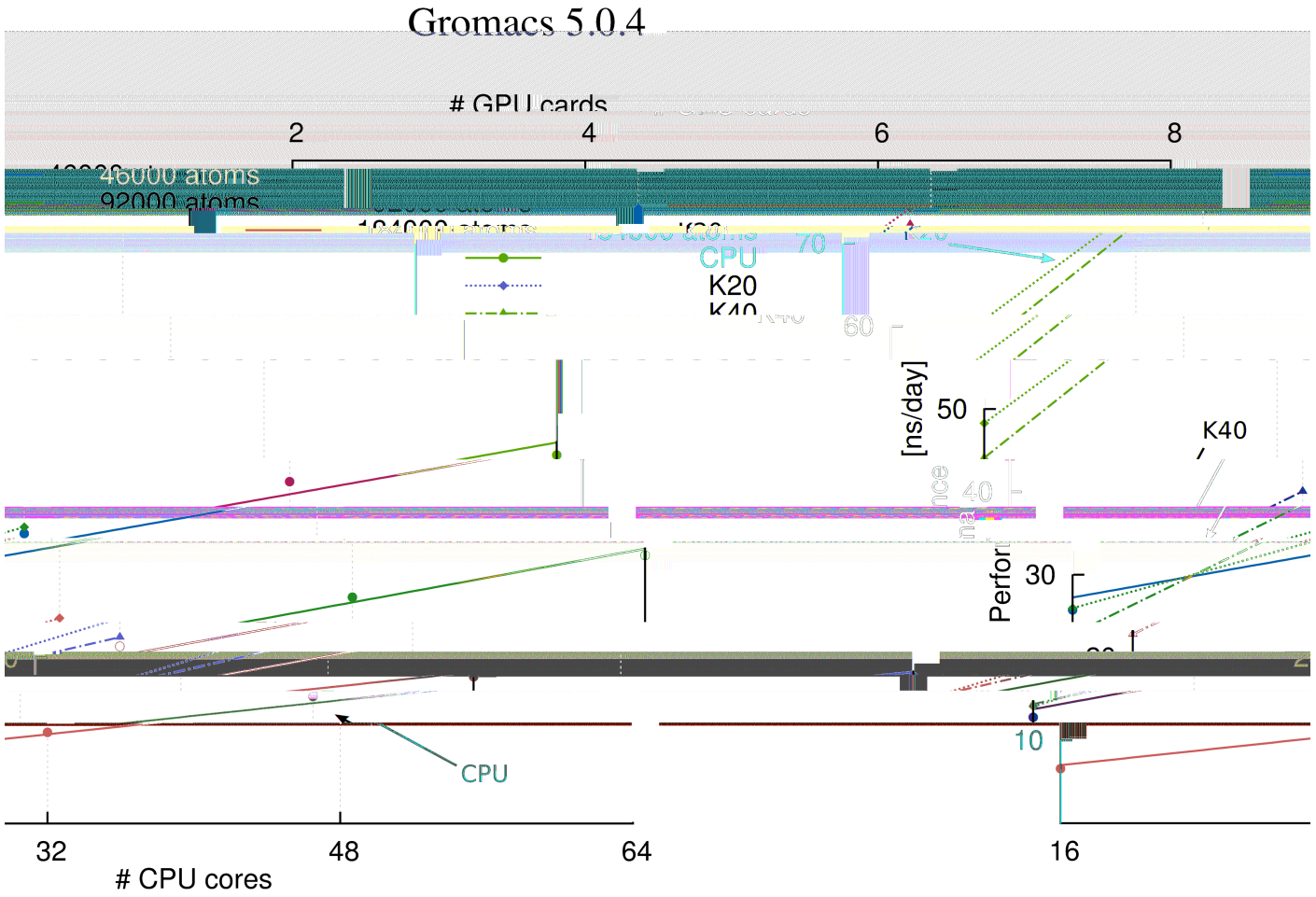
Gromacs 5.0.4
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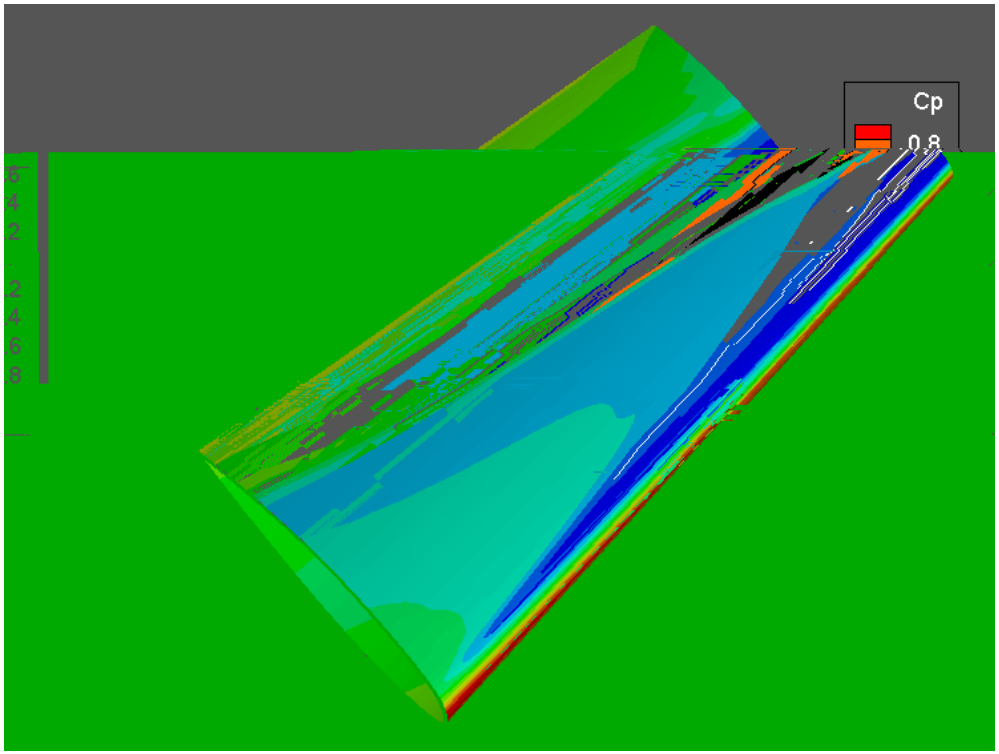
RANS Solver in SJTU



- CFD code by SJTU
- Used in COMAC
- Simu. For Wing design
- Based on RANS Equ.
- FVM on Struc. Grid
- 20~30x speedup

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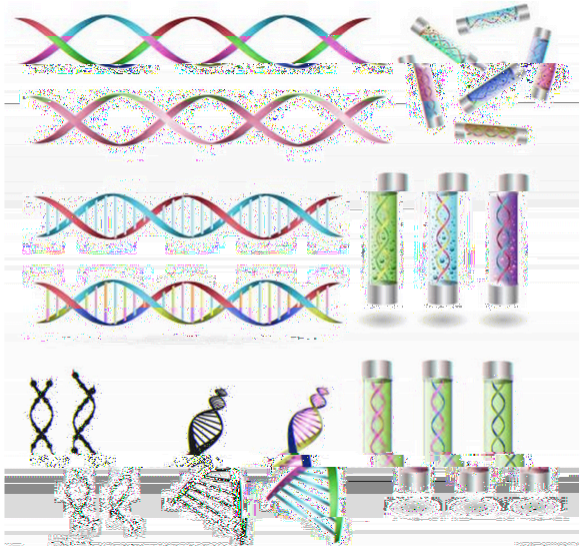

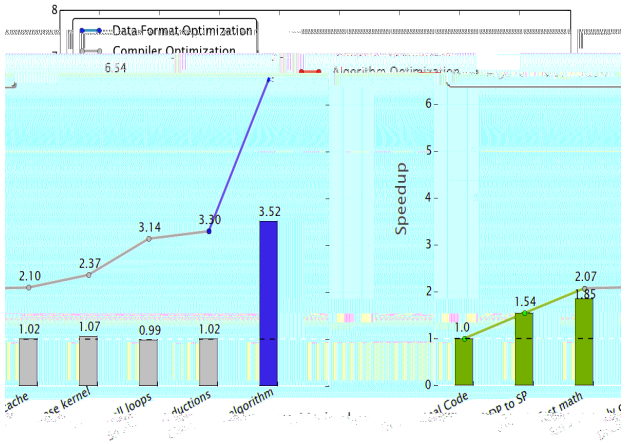

- Gene analysis program of BGI
- Used for microbe identification
- Based on Hierarchical clustering & GMM
- Optimized in Data format, compiler & algorithm
- Achieved 6.5+ speedup

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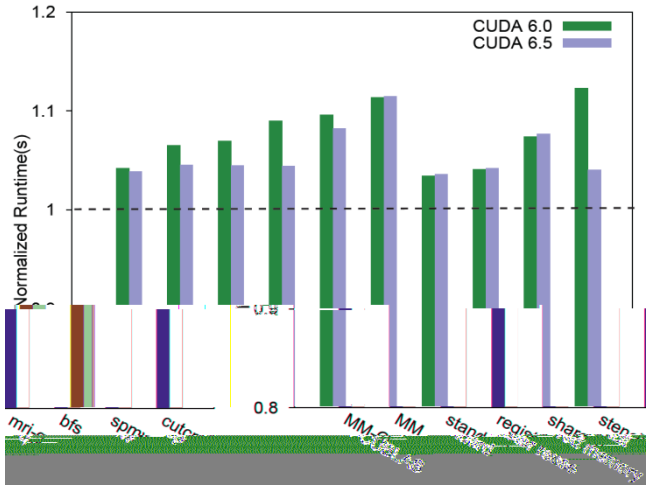

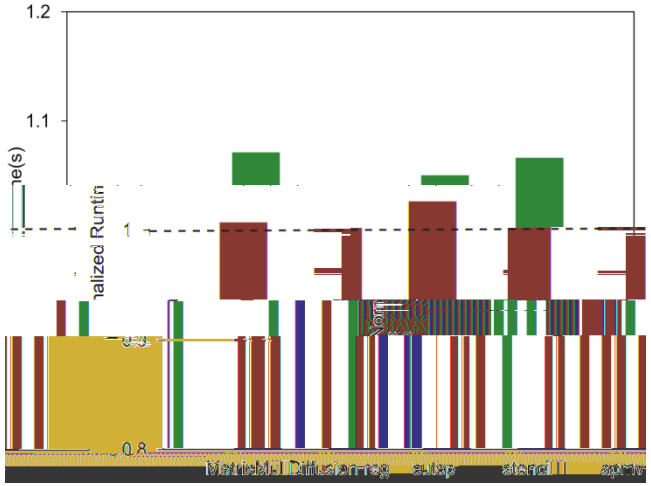

Thank you!