

An Apps Store for SME

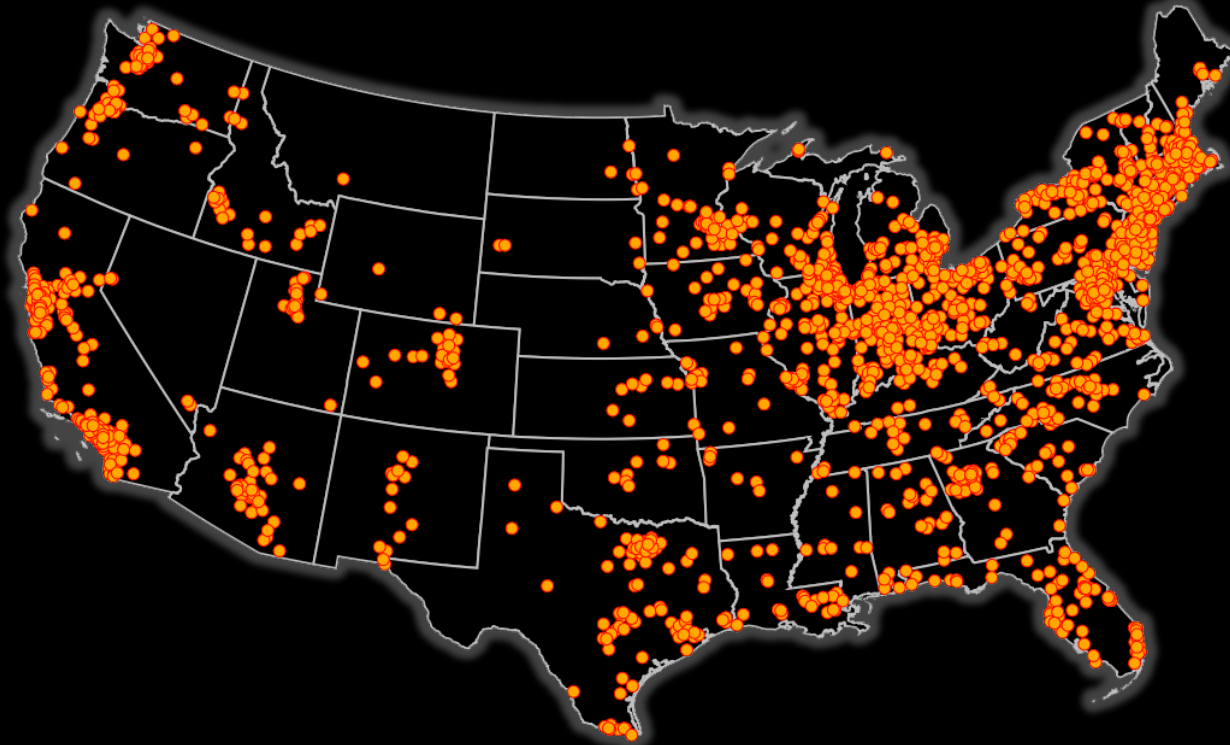
Early Success is Possible

Gerhard Klimeck

Purdue University

Prof. for Electrical and Computer Engineering

Director Network for Computational Nanotechnology



nanoHUB.org => manufacturingHUB.org

- What is nanoHUB?

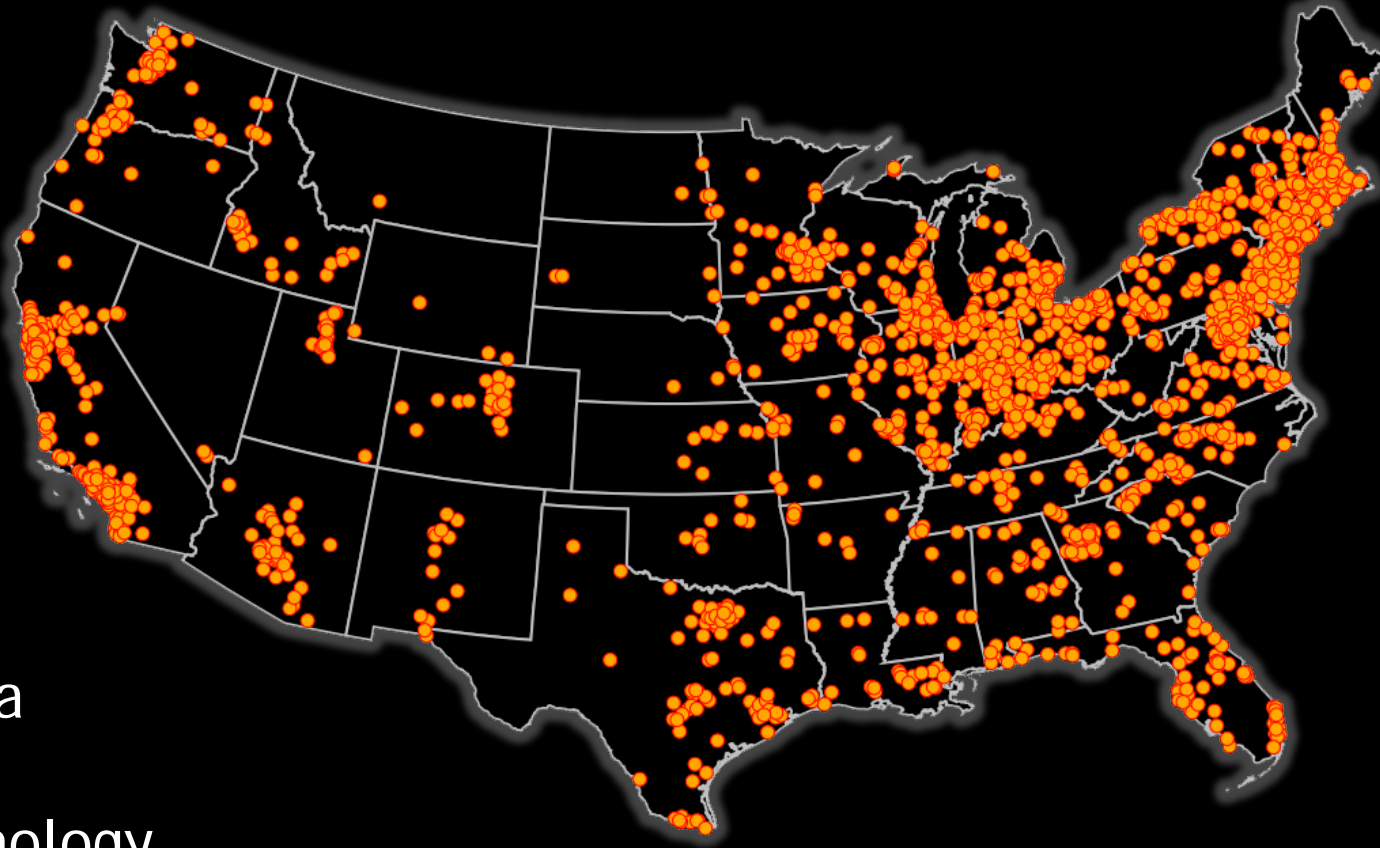
- Workforce Development

- **Industry Impact**

- Understanding Users

- Success Criteria

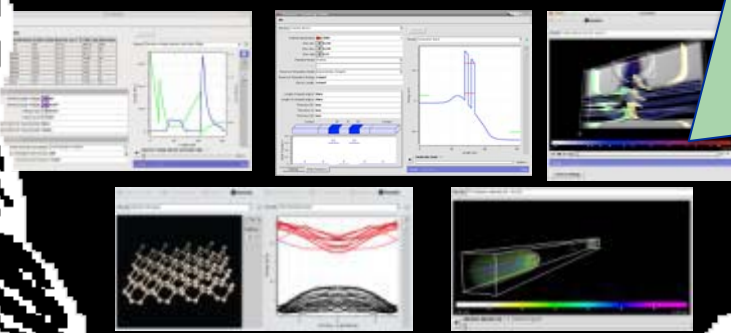
- HUBzero Technology



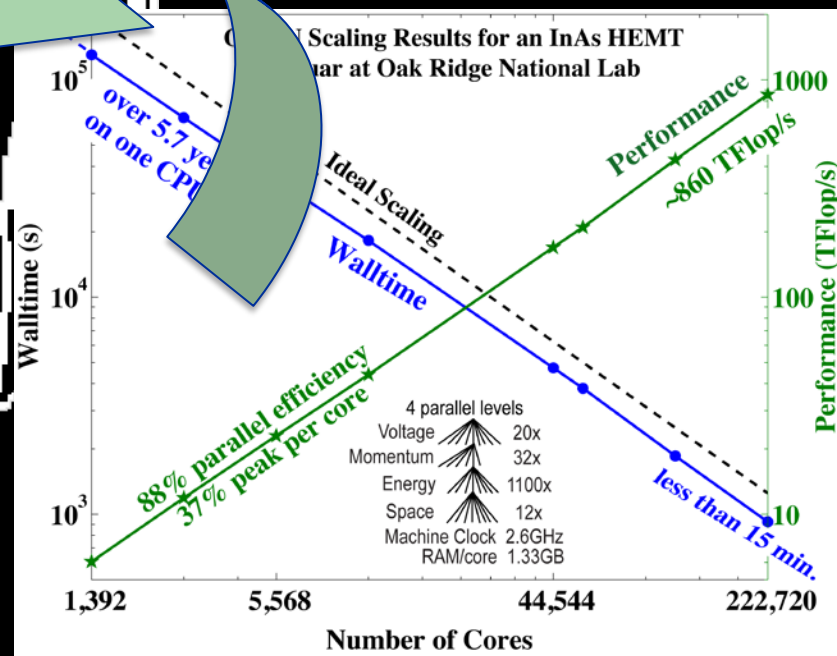
Electronic Structure & Electron Quantum Transport Simulations

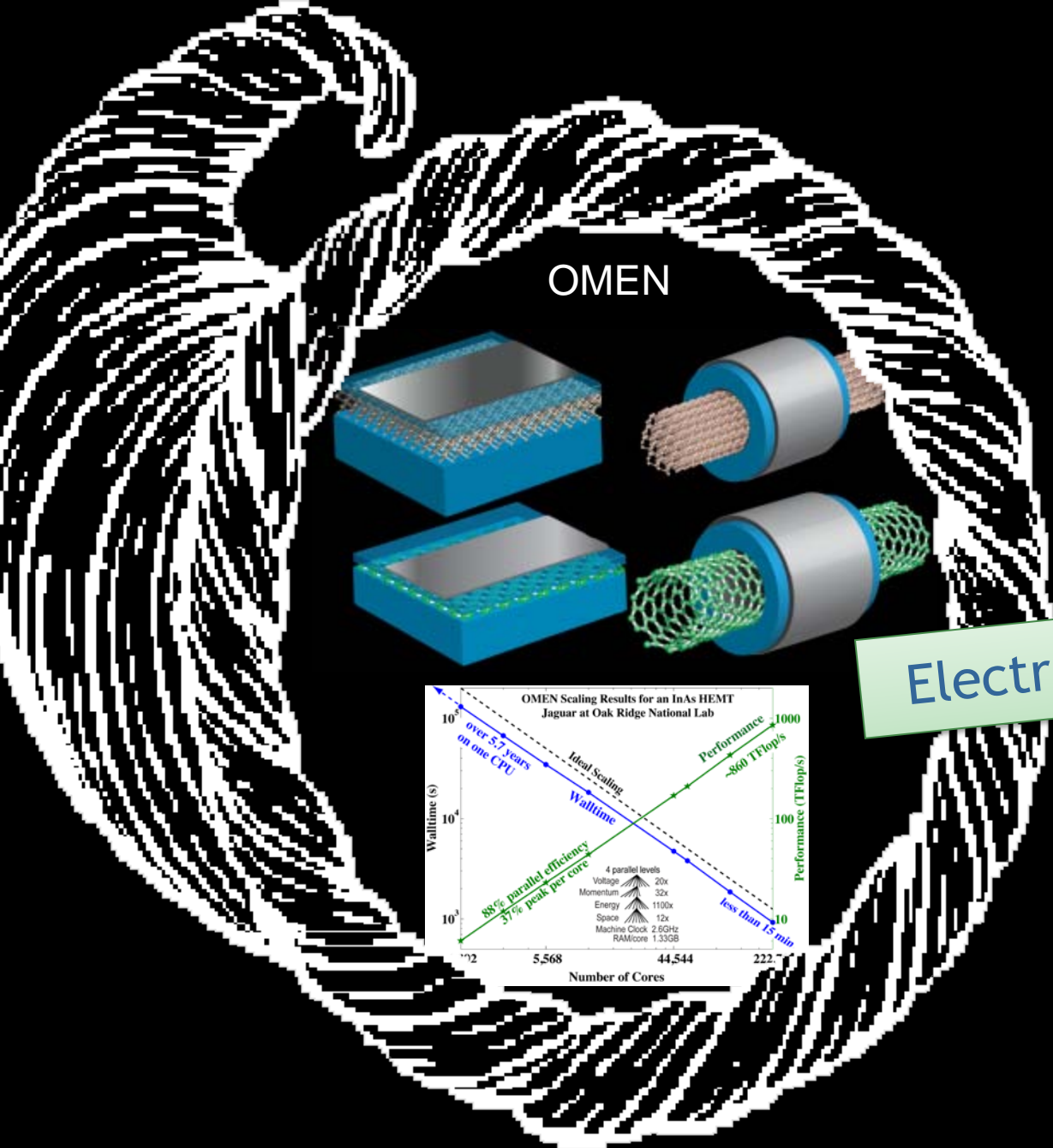
NEMO & OMEN

Runs on fastest computer in the world

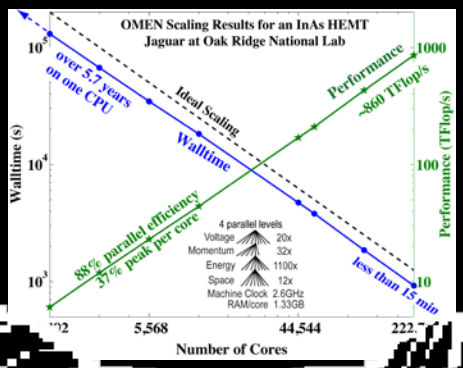
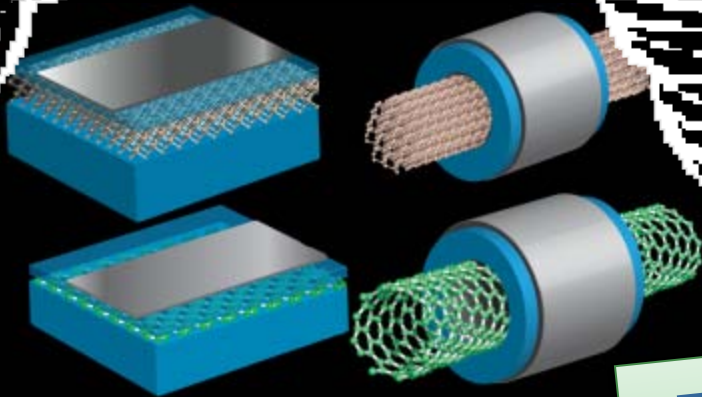


Runs 5 tools in nanoHUB
>3,500 users





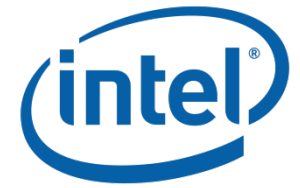
OMEN



Mark Stettler, PhD.
Mgr. TCAD, Oregon



Dmitri Nikonov, PhD.
Mgr. Strategic Research, CA



Intel's partnership with Network for Computational Nanotechnology

Dmitri Nikonov

dmitri.e.nikonov@intel.com

NSF Site Visit
April 2010

Why we cannot live without NCN/nanoHUB

nanoHUB puts simulation capabilities into the hands of a wide community, many more users and impact of the tools

nanoHUB's open source policy ensures that simulations codes are shared, verified by other researchers, re-used by next generations of students

nanoHUB is a "one-stop shop" for the newcomers to nanotechnology, including Intel's senior technologists

Were nanoHUB's services ever interrupted, it would have disastrous impact on mission of my department

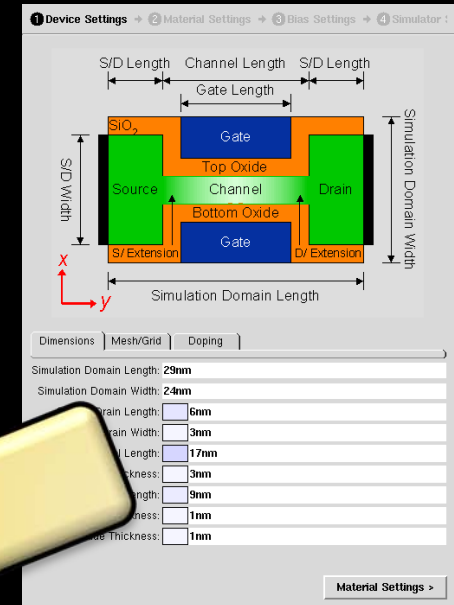
Texas Instruments

=> Patent

Dr. R. Chris Bowen

Texas Instruments

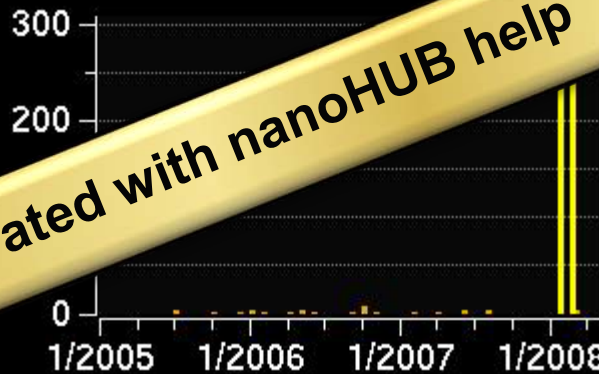
I used the tool in a mode ... far away from the original intent of the simulator. ... The insight that "nanoFET Lab" provided was convincing enough for me to begin more detailed simulations at Texas Instruments and to ultimately develop a patent application.



nanoFET Lab

Patent generated with nanoHUB help

■ Simulation Runs ■ Web Visits



3 AFM Manufacturers:

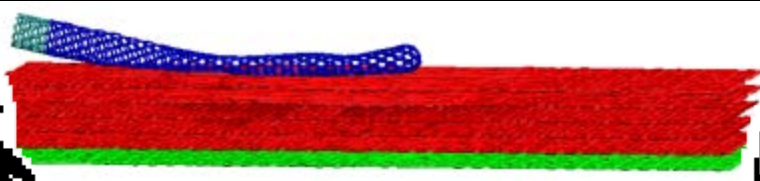
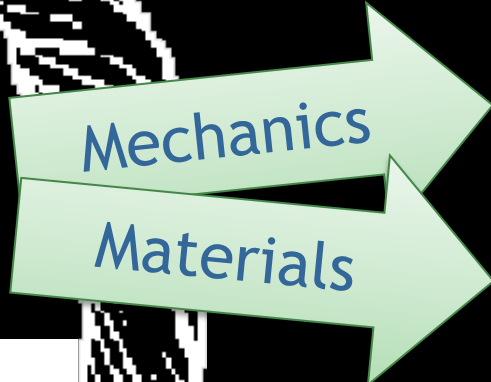
- Training / Virtual Instrument
- Research



I have been using VEDA ...
... found it to be extremely useful. ...
... enabled us to make better choices in designing new probes.
... used VEDA as a check on other calculations.

Roger Proksch
Asylum Research

New Partnership



Virtual Atomistic
Tip and Surface

Fund tool development

Molecular Dynamics
(virtual surfaces)



VEDA
(Virtual AFM)

Papers by Industrial Authors

8.7%



Publications

- 46 papers total
- 41 papers in nano

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