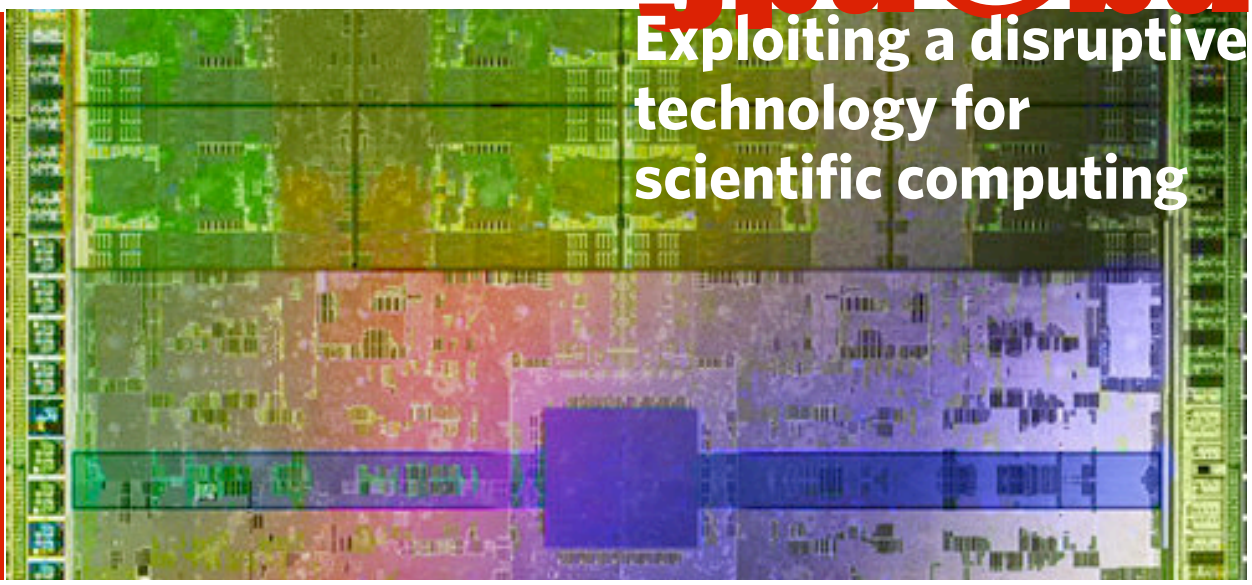
# gpu@bu

## Exploiting a disruptive technology for scientific computing

November 12–13, 2009



An X-ray image of the "Fermi" GPU die from Nvidia.

## Launch workshop for the NSF-funded Experimental GPU cluster for fundamental physics

**organized by Lorena Barba, Richard Brower, Claudio Rebbi**

**Thursday, Nov. 12**

9–9:10am Welcome & Introductions, Claudio Rebbi

9:10–9:30am Richard Brower, Boston University
*"Potential impact of the 'Experimental GPU cluster for Fundamental Physics' NSF grant"*

9:30–10:20am Hanspeter Pfister, Harvard University
*"High-throughput science"*

10:20–10:50am *BREAK*

10:50am–11:40pm David Luebke, Nvidia
*"Graphics hardware & GPU computing: past, present, and future"*

11:40–12:10pm Richard Edgar, Harvard University
*"Diesel-powered supercomputing"*

12:10–12:40pm David Kaeli, Northeastern University
*"Many-core acceleration in biomedical applications"*

12:40–2pm *LUNCH – sandwiches will be provided*

2–2:30pm Michael Clark, Harvard University
*"GPU mixed-precision linear equation solver for lattice quantum chromodynamics, QCD"*

2:30–3pm Andreas Klöckner, Brown University
*"GPU metaprogramming using PyCUDA: methods and applications"*

3–3:30 Nicolas Pinto, MIT
*"Unlocking brain-inspired computer vision"*

3:30–4pm *BREAK*

4–4:30pm Bharat Sukhwani, Boston University
*"High-performance computing using GPUs: examples from computational biology"*

4:30–5pm Lorena Barba, Boston University
*"Toward GPU-accelerated meshfree flow simulation"*

5–5:30pm Tsuyoshi Hamada, Nagasaki University
*"42 TFlops N-body simulations on GPUs"*

5:30pm Panel Discussion

**Tutorial, Friday Nov. 13**

9am–12pm "CPU/GPU programming with CUDA"

**More information:**

http://barbagroup.bu.edu/gpuatbu/

BU Center for Computational Science