

# HARDWARE AREA

*Designing computer systems for tomorrow*

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- 16 faculty:

Todd Austin, Valeria Bertacco, Peter Chen, Robert Dick, Prabal Dutta, John Hayes, Scott Mahlke, Igor Markov, Jason Mars, Pinaki Mazumder, Trevor Mudge, Satish Narayanasamy, Marios Papaefthymiou, Karem Sakallah, Lingjia Tang, Thomas Wenisch



- 70+ Ph.D. students

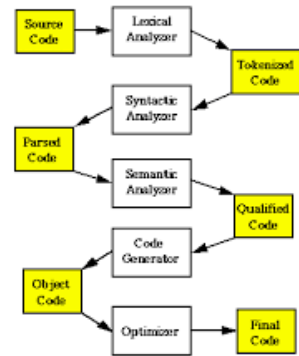
- >5M\$ research expenditures/year

NSF, DARPA, Intel, IBM, Qualcomm, NVIDIA, Cisco, Google...

- Home of 2 research centers:

- C-FAR Center for Future Architecture Research
  - ARM Research
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# Broad Research Spectrum



Design Viability



Data-centers

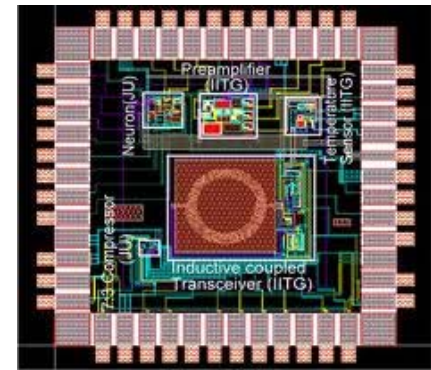


Hardware security

Compilers



HW Accelerators & GP-GPUs



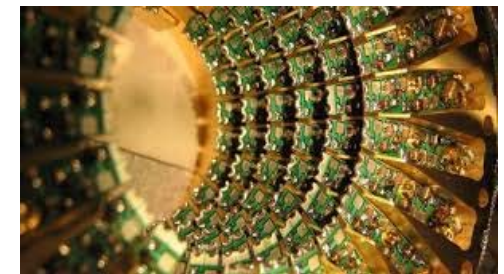
Circuit Design



Reliable Design

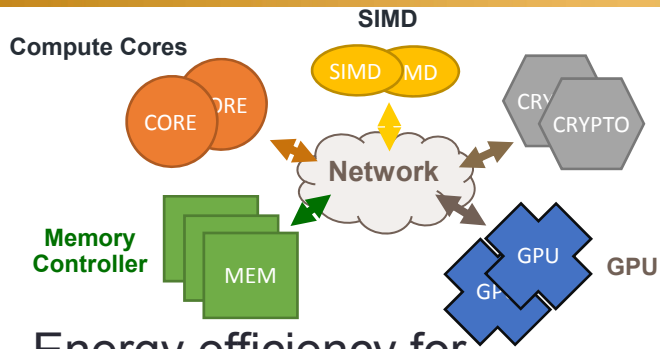


Embedded & wearable systems

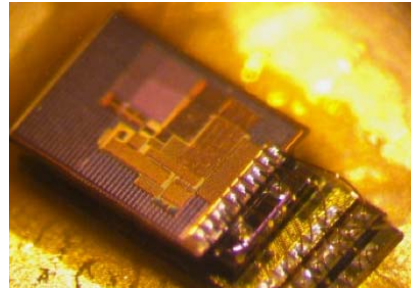


Quantum Computing

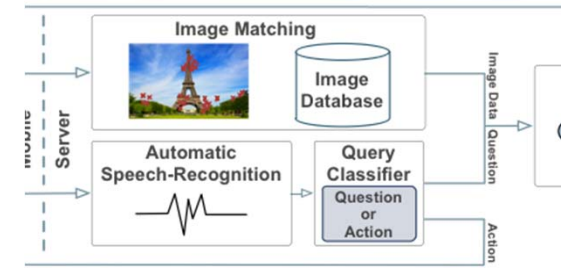
# Some of Our Recent Ideas



Energy efficiency for heterogeneous systems



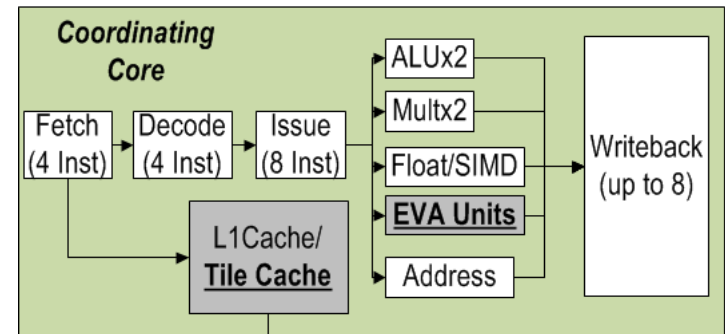
Micromote for Smartdust



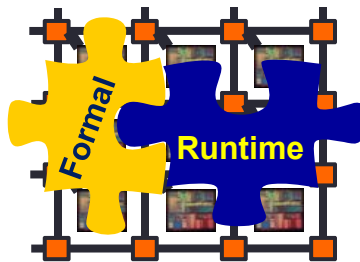
Sirius pipeline



Security for the heart



EVA – heterogeneous design



ForEVeR runtime



Computational sprinting

# Where did our graduates go ?

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- Faculty
    - CMU, Stanford, Illinois, GeorgiaTech, Toronto, Maryland, NC State, Virginia Tech...
  - Industrialists
    - IBM, ARM, Intel, AMD, Hewlett-Packard, Apple, Google, Microsoft, Facebook, NVIDIA, Qualcomm, Texas Instruments,...
    - Started their own company, sold out, got insanely rich, and happily retired.
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