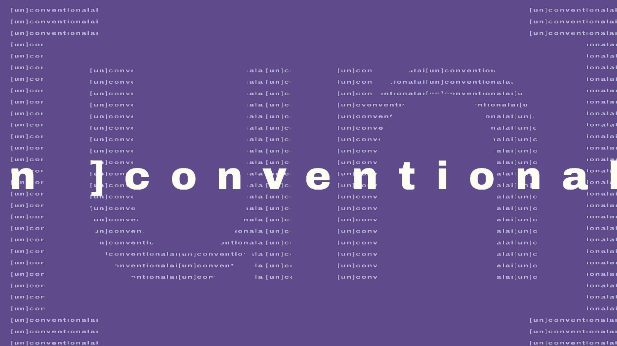


Unconventional AI

The next substrate for intelligence

Sriram Krishnamoorthy

[u n c o n v e n t i o n a l a i]



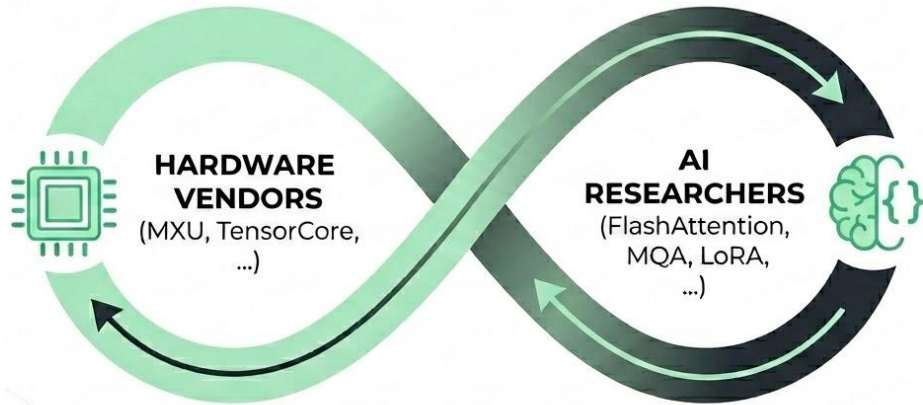
[un]conventional mission

Unconventional AI is rethinking computing with the singular purpose of bringing biology scale energy efficiency to AI. Energy is the most important barrier in scaling AI; we're building a **new kind of computer that's vastly more energy efficient.**

Goal: 1000x efficiency in 5 years

Hardware lottery

Researchers use matrix multiplication because that is what current hardware performs well



Hardware vendors optimize matrix multiplication because that is what researchers use

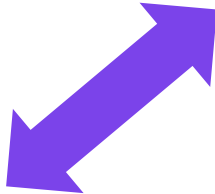
Other design points



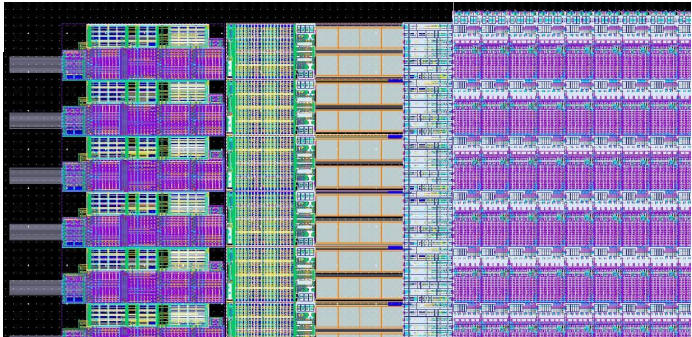
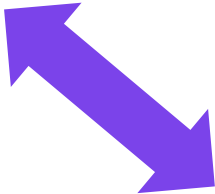
Biology's existence proof

<10mW!!

Inference with oscillators



256 Oscillators (t = 0.000)



FULL STACK AI CODESIGN: VERTICAL OPTIMIZATION HIERARCHY

SYSTEM MODELING:

End-to-end modeling and evaluation of new abstractions.



AI SYSTEMS: Parameter-efficient training for novel substrates.



AI THEORY: Expressive, hardware-aware algorithmic foundations.



Scalable, energy-efficient compute and memory organization.



Energy-efficient foundational hardware primitives.

Join Us!



Happy hour: 5-9 pm
Central Bar, Bellevue

<https://tinyurl.com/unconv-ai-mlsys-jobs>

unconv.ai/careers



Edge of Chaos Stipend
Employees receive \$1,000 annually to encourage unconventional risk-taking: a project or experience that takes you entirely out of your comfort zone.