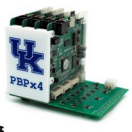
Grad and **Undergrad** students

Interested in **Computer Engineering research**?

One of your options has an **open house** with **free food** from **10AM-3PM Wednesday, April 15, 2026** in **Marksbury room 108**





Aggregate.Org
UNBRIDLED COMPUTING

***Prof. Dietz**'s Computer Engineering research group, externally known as **Aggregate.Org**, considers all aspects of Compilers, Hardware Architectures, and Operating Systems (KAOS) together, optimizing system performance rather than performance of the individual parts. We also leverage commodity parts and interfaces as much as possible. It was this approach that in February 1994 enabled us to build the world's 1st Linux PC cluster supercomputer and has continued to drive our research into a variety of seemingly unrelated fields:*

- ***Parallel and Quantum Computing**: We still work with Linux PC clusters and GPUs, but also now have a heavy emphasis on the quantum-inspired PBP (Parallel Bit Pattern) model, and are working on FPGA-based prototypes. The primary goal is dramatically reducing power per computation without sacrificing speed.*
- ***Computational Photography**: Even our earliest cluster supercomputers had video walls, and so we became involved in improving camera and imaging technology. You can get a feel for what we've been doing at* **`http://aggregate.org/DIT`**
- ***Making Technologies**: We got into 3D printing to build custom camera parts, but have done research largely involving DFM (Design For Manufacturability). An overview of some of that work is at* **`http://aggregate.org/MAKE`**

Interested, but can't attend? You can **contact Prof. Dietz** via email to **HankD@engr.uky.edu** or **Dr. Eberhart** via email to **PSEber2@uky.edu**, put **"`KAOS S26`"** in the Subject line.

This lab is *just one of various options* that you have for undergraduate or graduate research in CPE-related fields during this Summer and beyond. *This is our 2nd CPE lab lunch sponsored by Prof. Dietz as CPE DUS (Hankd@engr.uky.edu).*