AN IN-MEMORY COMPUTING SERIES

Next Talk: 02/August/2021, 4-5:30pm CET

MYTHIC'S FLASH-BASED ANALOG COMPUTE-IN-MEMORY

Dr. Dave Fick, CTO of Mythic

Al and many other applications have opportunities to build systems that merge memory and computing into a unified structure in ways that yields significant improvements in energy efficiency, performance, and cost. In these scenarios, "moving the compute to the memory" makes sense because the applications have large amounts of data to process and relatively simple operations to perform, which makes it not too difficult to create specialized processing near the memory when traditionally moving the data to the main system processor would be slow and inefficient. These approaches have a wide variety of applications as well as approaches. On one end of the spectrum, systems that have processing inside of an SSD to perform searches inside the drive itself, and on the other end of the spectrum, systems that have analog compute performing mathematics directly on the bitlines of the memory arrays. In this talk, we will provide an overview of many of these approaches as well as the methods to their madness.

More information about the event and the speaker: <u>https://www.ict.tuwien.ac.at/staff/taherinejad/MiM/next.html</u>

Mondays in Memory (MIM) is a free biweekly webinar series open to everyone around the world and dedicated to all aspects and technologies related to in-memory computing (including, in a broader sense, near-memory computing too). MIM will be held on the first and third Monday of each month (starting in May 2021) at 4pm CET (7am Pacific time, and 10pm Beijing time).

Each webinar starts with a 40mins talk by a speaker, followed up with a 40mins questions and discussions with the speaker and two panel members. Dr. Nima Taherinejad hosts the webinars, and together with his team they organize the MiM series.

Website: http://www.ict.tuwien.ac.at/ staff/ aherinejad/MiM/ Email:nima.taherinejad@tuwien.ac.at

Dave Fick co-founded Mythic with Mike Henry in 2012, a company building next-



generation intelligence processing units (IPUs) for edge and cloud inference. Mythic has raised \$165M of venture capital to combine analog computing, dataflow architecture, and compute-in-memory to provide the best combination of performance and energy efficiency available. Dave received his Ph.D. from the University of Michigan under David Blaauw and Dennis Sylvester at the Michigan Integrated Circuits Lab.

For more information, please see his webpages at http://davefick.com or https://www.mythic-ai.com/