

Theme: New Computing

- Sub theme: Technologies to attack the memory and communication wall

Tighter coupling of memory and computing will fundamentally change the way computation is done in the future. We are looking for new ideas to bring innovation in both the hardware and software space as it related to either processing in memory or processing near memory. All topics in this space are welcome, but in particular, we are interested in the following list of topics

- 1) Programming models and runtimes for efficiently utilizing memory-coupled computing
- 2) Methods for optimizing scientific libraries and AI frameworks to leverage memory-coupled computing
- 3) Operating system and runtime technologies needed to best expose the advantages of memory couple computing to applications
- 4) Advances in integrating CPU and accelerator technology
- 5) Thermal and cooling technology to address the challenges induced by memory-coupled computing
- 6) Novel power delivery techniques to address the challenges induced by memory-coupled computing

※ Participants are encouraged to propose new ideas outside the topics listed above in the space of memory-coupled computing.

※ Funding: Up to USD 150,000 per year