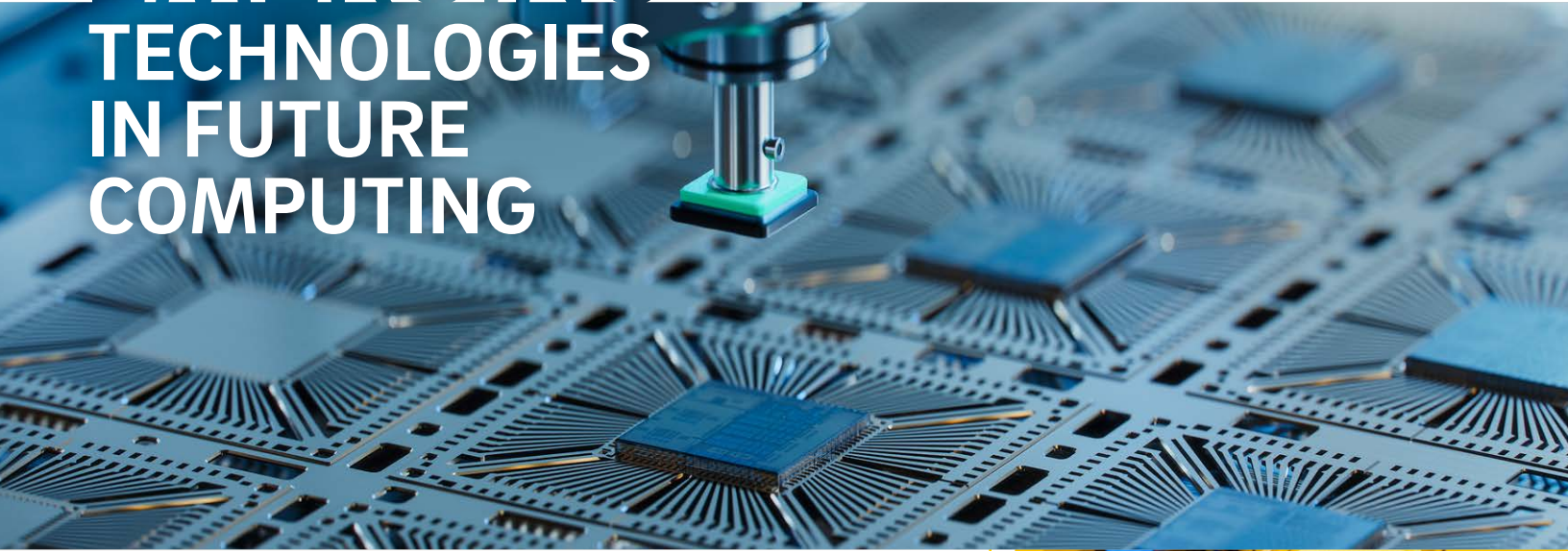


EMERGING TECHNOLOGIES IN FUTURE COMPUTING



EMERGING TECHNOLOGIES MEET EMERGING COMPUTING PARADIGMS

Our interdisciplinary experts are redefining the boundaries of semiconductors and system architectures to meet the super-exponential growth in computing demands. Partner with us to overcome the limitations of Moore's Law and power the next generation of AI and autonomous systems.



We offer synergistic R&D partnerships across the full research stack for the future of computing, including:

Device & Technologies

EDA & Academic PDK

Systems Architectures

Emerging Applications

ACCESS THE FUTURE COMPUTING ECOSYSTEM

Through strategic industry collaborations, our partners tap into a vibrant local tech economy and cutting-edge research in heterogeneous integration. This includes novel glass embedding for photonics and wafer-scale AI datacenter solutions.



RESEARCH FOCUS AREAS

HETEROGENEOUS INTEGRATION & PACKAGING

State-of-the-art research into single-package integration of high-bandwidth memories, optical transceivers, and computation cores. Capabilities enable several orders of magnitude higher performance and energy efficiency than current state-of-the-art standards.

EMERGING MEMORY TECHNOLOGIES

Advanced development of new memory technologies and new computer architectures that synergistically exploit them are expected to improve memory bandwidth, capacity, and latency by several orders of magnitude.

PHOTONICS INTERCONNECTS & AI SCALING

Innovative panel-scale reconfigurable photonic fabrics and radio-over-fiber technologies. Our systems support scalable AI computation and virtualized cloud processing with leap-ahead capabilities and performance.

IN-SENSOR & PHYSICS-BASED COMPUTING

Exploring sensor-compute integration and "computation-by-physics." These paradigms enable humanoid robotics and autonomous mobility with real-time, low-power intelligence.

FUTURE COMPUTING WORKFORCE DEVELOPMENT

- Industry-sponsored research projects prepare students for the semiconductor and AI workforce
- Internships and targeted recruiting
- Visiting Industry Fellows
- A voice in curriculum development for emerging computing paradigms



Learn more about:
our faculty, students,
workforce development,
and research facilities:



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