Name	Junichiro Kadomoto	Lab. location	Hongo	Research field	Computing systems

We are advancing research aimed at realizing innovative computer systems to support the information society of the future. With a focus on computer architecture, we are driving comprehensive optimization across a variety of research fields, including integrated circuits, networks, software, computational theory, and HCI. We are creating systems that offer new value from the perspectives of interaction and computation. The laboratory is jointly managed with the Irie Lab.

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Research Themes

In the pursuit of computational systems that realize unprecedented forms of interaction, we conduct research on **computer systems composed of multiple tiny chips that can change shape and function**, as well as **computer systems that perform wireless communication using light**. We are exploring new applications that leverage the shape-changing ability of computer systems, fine-grained information presentation, and sensing functionalities.

Furthermore, as computers based on new computational principles, we are researching **fault-tolerant universal quantum computers**. We are exploring suitable architectures for quantum computers with universal computing capabilities that perform computations while correcting quantum bit errors using error correction codes.

We are also working on research related to the **design automation** that facilitates the design and development of such computers.
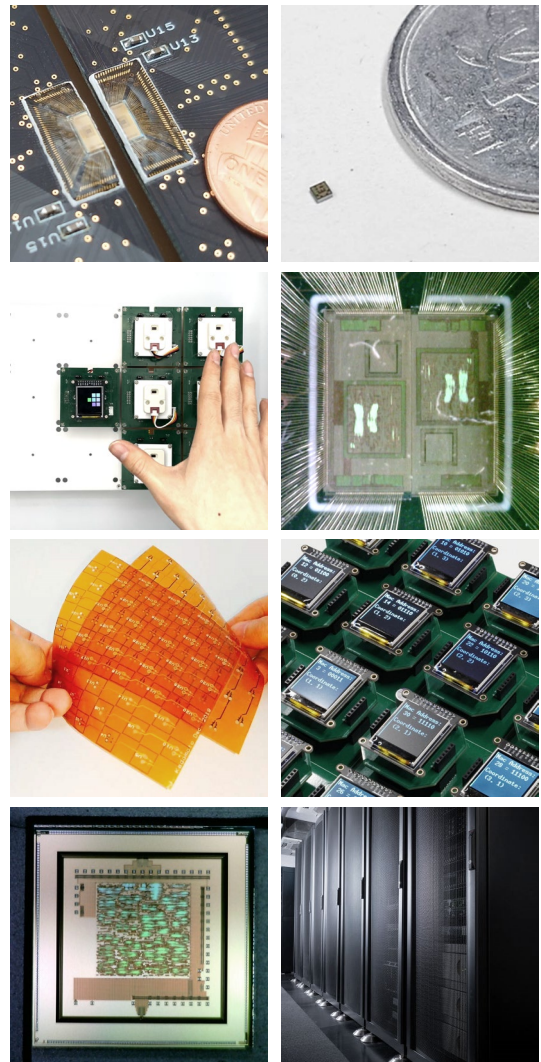
Other Information

- We believe that our distinctive feature is conducting research and development across various layers and actually building and operating our own unique computer systems. We welcome those who are enthusiastic about engaging in software and hardware engineering.
- As for our computing environment, we are equipped with high-end FPGAs and cluster machines.