



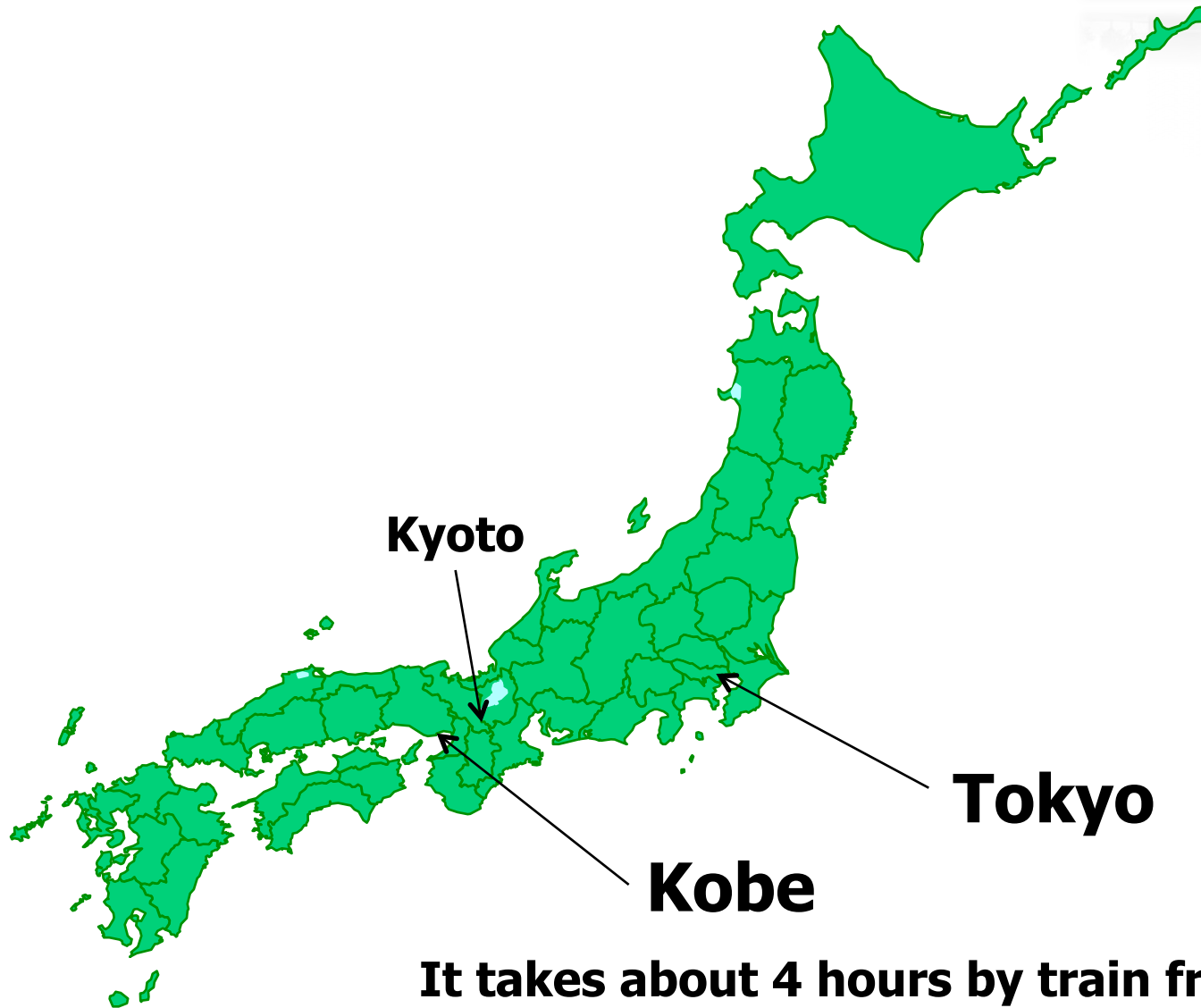
# RIKEN Advanced Institute for Computational Science (AICS)

Yutaka Ishikawa

University of Tokyo

Leader of System Software Research Team at AICS

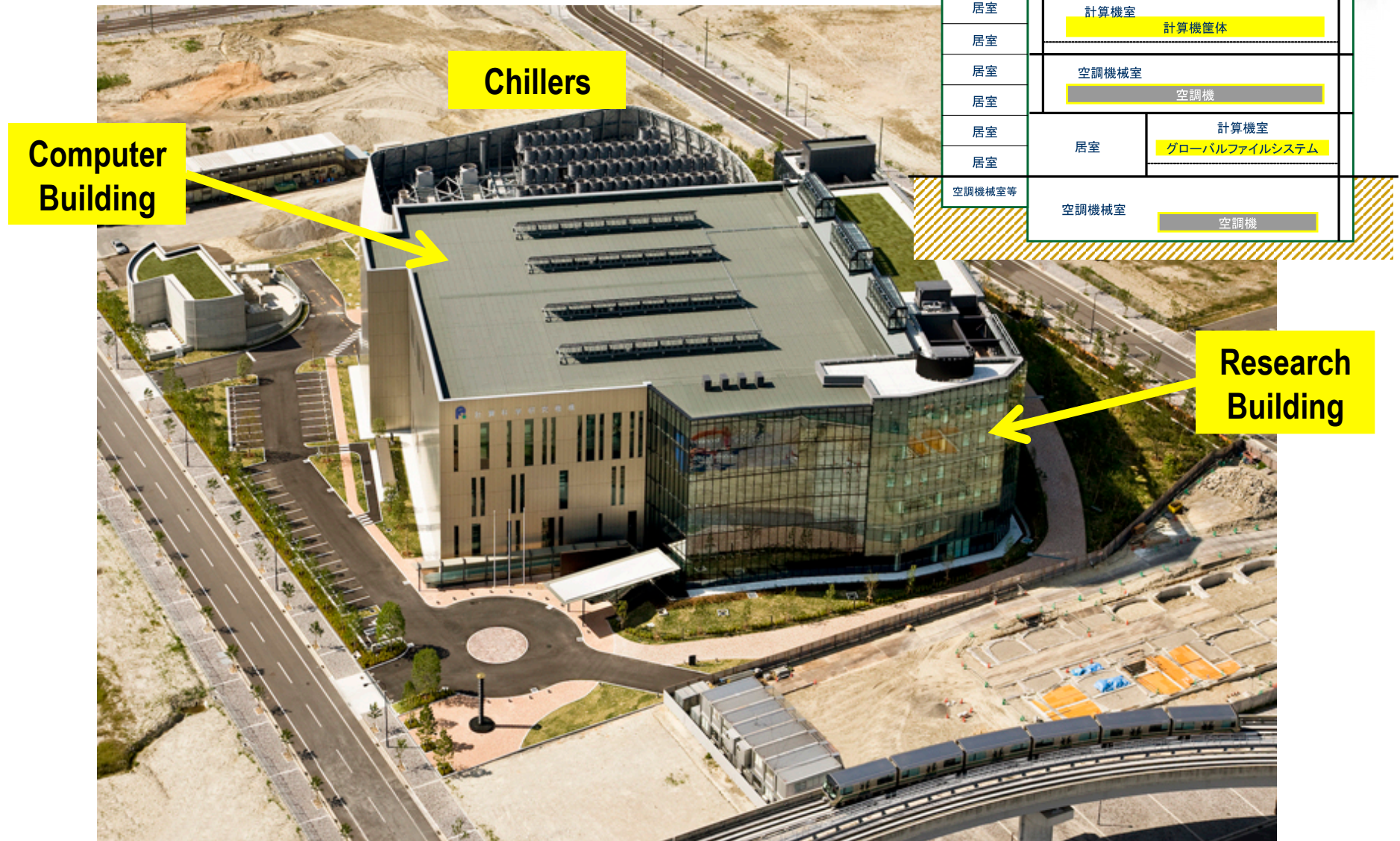
# RIKEN Advanced Institute for Computational Science (AICS)



**It takes about 4 hours by train from Tokyo**

# RIKEN Advanced Institute for Computational Science (AICS)

## Bird's Eye View





# Inside the buildings

*Computer room (3F)*



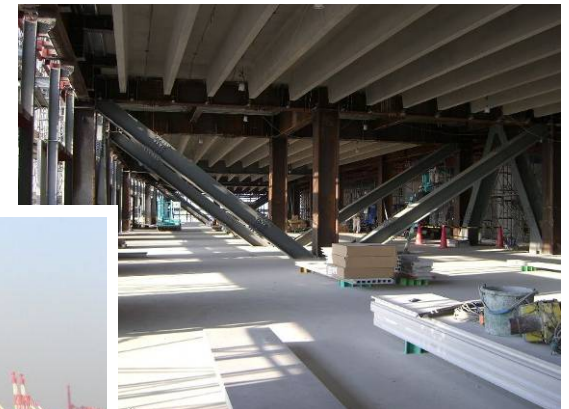
*Chillers*



*Solar panels on the top*



*Making a double floor*



# RIKEN Advanced Institute for Computational Science (AICS)



- The institute was established at the NGS in Kobe
  - Operation division
  - Research division
    - 8 research teams are now organized
- Objectives:
  - Take responsibility to run the NGS
  - Carry out the leading edge of computational science technologies and contribute for COE of computational science in Japan
  - Propose the future directions of HPC in Japan and conduct it.
- Topics
  - Promoting strong collaborations between computational and computer scientists, working with core-organizations of each fields together.
  - Fostering young scientists who exploit both computational and computer science
  - Research for new concepts for HPC in the future after the NGS (this is, exascale?)

**<http://www.aics.riken.jp/>**

# Research Teams



## ■ Computational Science

### ■ 5 research teams

- Life science/drug, new material/energy, climate/disaster, manufacturing technology, origin of matters, genome informatics, ...

## ■ Computer Science

### ■ 5 research teams

- System Software, Yutaka Ishikawa (University of Tokyo)
- Programming Environment, Mitsuhsa Sato (University of Tsukuba)
- Processor, Makoto Taiji
- Parallel Algorithms and Numerical Libraries
- Large Data Processing

# How to organize users of NGS



- Strategic Use: MEXT selected 5 strategic fields from national viewpoint.
  - Field 1: Life science/Drug manufacture
  - Field 2: New material/energy creation
  - Field 3: Global change prediction for disaster prevention/mitigation
  - Field 4: *Mono-zukuri* (Manufacturing technology)
  - Field 5: The origin of matters and the universe
- MEXT Funds 5 core organizations that lead research activities in these 5 strategic fields

- General Use:

The use for the needs of the researchers in many science and technology fields including industrial use and educational use

