The University of Tokyo International Research Center for Neurointelligence (IRCN)

Center Director
Takao K Hensch

Takao Hensch has revealed the basic mechanisms behind "critical periods" in brain development, in which the neural circuits are plastic and changeable, and shown that they can be controlled. This pioneering research has earned him worldwide recognition. He aims to bridge the arts and sciences and make full use of UTokyo's wide range of resources to uncover the foundations of human intelligence.

Aim

Our ultimate aim is to answer "How does human intelligence arise?" We approach this challenge from the perspective of neural circuit development in the brain.

IRCN combines life sciences with information sciences to establish the new field of "Neurointelligence". By clarifying the essence of human intelligence, overcoming neural disorders, and developing new AI technologies, we will contribute to a better future society.

Research

"Can the human brain understand itself?" We tackle one of humanity's biggest questions with a unique fusion of the life sciences, medicine, linguistics, mathematics, and information sciences.

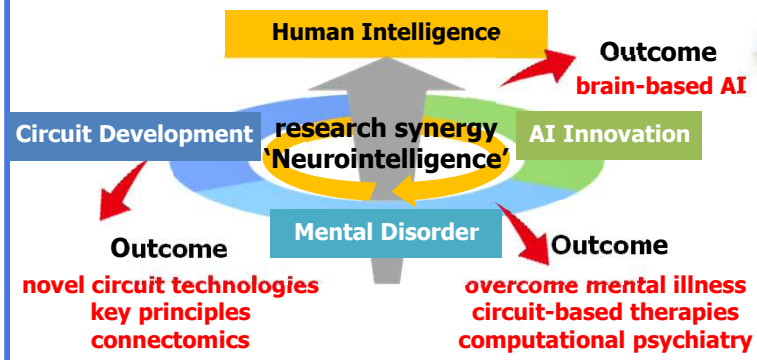
- Discover new principles of neurodevelopment
- Create innovative AI technologies based on neurodevelopmental principles
- Clarify pathologies of neurodevelopmental disorders
- Train young internationally-minded "AI-Neuroscientists"

Future vision

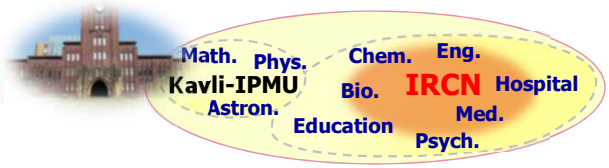
Incorporate social sciences to further understand human intelligence and solve problems faced by humanity

Characteristics

Transdisciplinary cycle of innovation



Internationalization and system reform



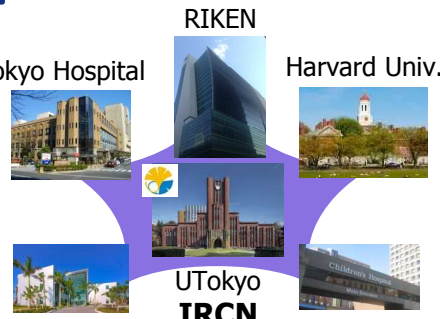
- Director's international reputation facilitates recruitment
- International partners encourage researcher exchange
- Management benefits from Kavli-IPMU's know-how
- Center fully leverages social-science resources

→ Drive university reform
Increase contribution to future society

Building Collaborations

Close international connections

- Neurodevelopment
- Cutting-edge AI
- Exchange of young researchers
- Clinical data
- Large-scale cohorts



Photos from institute's websites and Wikipedia