Invitation to
Global AAR Course
(A Japanese Government Scholarship Program)

Dept Human Intelligence Systems
Grad School Life Science and Systems Engineering
Kyushu Institute of Technology
The Shibata Lab is in Wakamatsu Campus!

**Wakamatsu Campus**
- Graduate School of Life Science and Systems Engineering

**Iizuka Campus**
- School of Computer Science and Systems Engineering
- Graduate School of Computer Science and Systems Engineering

**Tobata Campus**
- School of Engineering
- Graduate School of Engineering

Japan
Kansai International Airport
Narita International Airport
Fukuoka Airport
Kitakyushu Airport

Kyutech
Kyushu Institute of Technology

WAKAMATSU Campus

IIZUKA Campus

TOBATA Campus
Modernization of Japan started in Kitakyushu.

Yawata Governmental Steel & Iron Company firstly founded in 1901. (Kitakyushu City)

Blast furnace monument of 1st steel company in Japan. (Kitakyushu City)
Presnt : Nippon Steel & Sumitomo Metal Co.
### History

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1909</td>
<td>The Meiji College of Technology was opened to its first students as a private institution with three departments.</td>
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<td>1921</td>
<td>Became a 4-year course national institution.</td>
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<td>1949</td>
<td>Under the National School Establishment Law, the Meiji College of Technology became the Kyushu Institute of Technology.</td>
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<td>1986</td>
<td>The Faculty of Computer Science and Systems Engineering was established.</td>
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<td>2000</td>
<td>The Graduate School of Life Science and Systems Engineering (Independent postgraduate school) was established.</td>
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<tr>
<td>2004</td>
<td>All National Universities were transformed into National University Corporations; the Kyushu Institute of Technology was also incorporated as a National University Corporation.</td>
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**Mr. Keiichiro Yasukawa**  
Founder  

**Dr. Kenjiro Yamakawa**  
First President
Facilities - Wakamatsu Campus
International Students
Employment of International Students

Many of our international students have been employed by Japanese companies after graduation.
Dept of Human Intelligence Systems

We aim to incorporate the principles of human intelligence into intelligent information processing platforms and into artificial intelligent systems, as well as to actively contribute to the development in industry. The research and education in this department covers but is not limited to (i) advanced development of mechanical systems and devices such as intelligent autonomous robots, (ii) intelligent information system development and artificial intelligence algorithms design that incorporate the principles of human reasoning, (iii) scientific analysis of social activities and human intelligence by using mathematical modelling, brain science and cognitive science in general.

- Home page
  - [http://www.brain.kyutech.ac.jp/index_e.html](http://www.brain.kyutech.ac.jp/index_e.html)
- Academic Staffs
  - See the right column for our department
Features of Global AAR Course

- Advanced Assistive Robotics (AAR)
  - Solutions to industry and medical welfare
  - Intelligent systems that enable
    - Increase in productivity and safety
    - Decrease in labor load and patient pain
    - Assist in motor skill learning and rehabilitation
- Multidisciplinary
  - Robotics, Machine learning, Brain science, Psychology, and so on
- Not necessarily specific to “assistive” robotics
  - Robotics is an integrative research field
    - Integrated circuits, control, sensing, nanosystems, computer systems, machine learning, cognitive/behavioral science, neuroscience, brain-computer interface, etc.
- Both Master course and doctor course
- No Japanese is required to get the degree
  - But learning Japanese and Japanese cultures are strongly encouraged
  - Collaborative learning with Japanese students
Features of Global AAR Course

Shift-invariant Regularization Matrix

- From the constraint of shift-invariance, the regularization matrix $\Lambda$ should satisfy $YAY^T = Y'AY'^T$
- This leads to optimized regularization matrix $\Lambda = H^{-1} - I$
Joint Graduate School

Car Electronics Course

"Automobile engineering" "Intelligent information processing"

Engine dismantle/assembly at Nissan Kyushu Factory

EEG monitoring in driving

Image processing programming

Intelligent Car & Robotics (Car-Robo) Course

Comprehensive Practicums (6 subjects)

Small-size EV

Robo-car

Robocup soccer robot

Winner of Japan cup 7y in low

@home service robot

Minicar/minirobot

Recognition programming

Off-site meeting
Scholarship for This Course

- Japanese Government Scholarship
  - MEXT (Ministry of Education, Culture, Sports, Science & Technology)
- 3 Master-course and 3 Doctor-course students
- 144,000/145,000 JPY per a MONTH for the master-course/doctor-course students
- No tuition fee!
- University recommendation
  - Intensive interviews
  - Average score higher than 2.3/3 over recent 2 years
- Entrance in October only
Apply for This Scholarship Program Now!

- We need to screen excellent candidates and fulfill the application form together with the applicants by around this March 13th!
- Contact address:
  Program Manager  Prof. Tomohiro SHIBATA
e-mail: tom@brain.kyutech.ac.jp