九州大学
システム生命科学府　生命情報学講座
Neuroimaging and Neuroinformatics Laboratory
伊良皆研究室

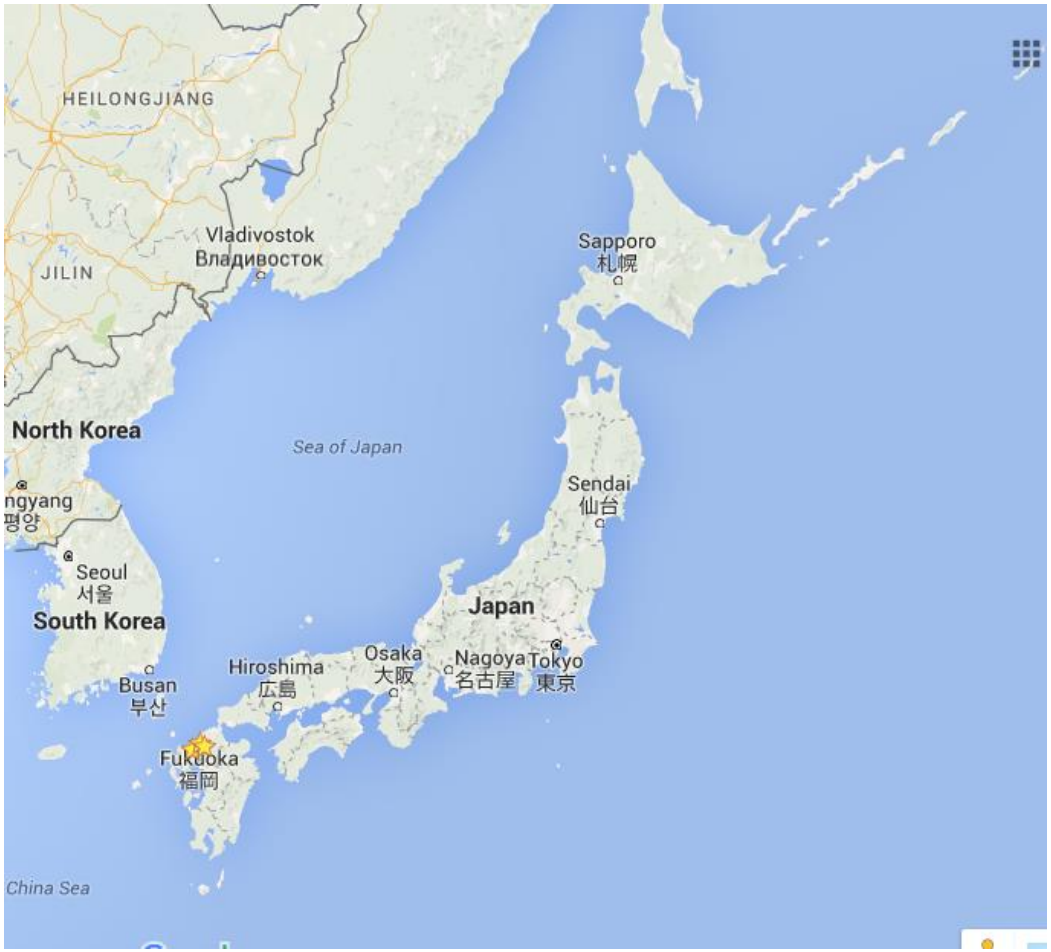
Graduate School of Systems Life Sciences
and
Faculty of Information Science and Electrical Engineering

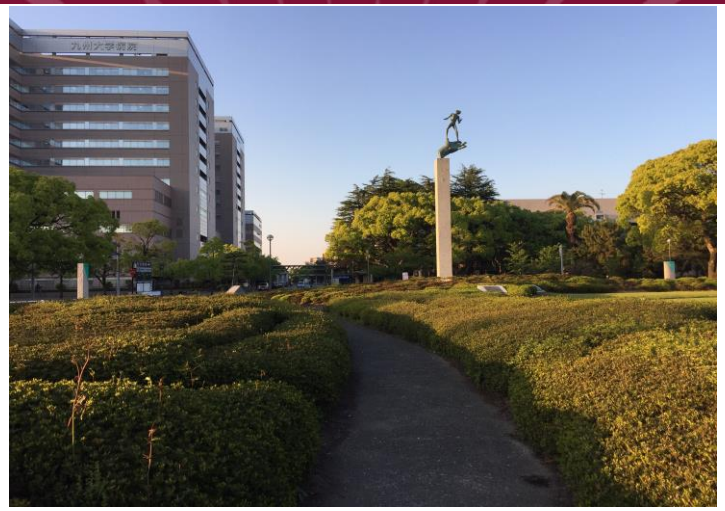
KYUSHU UNIVERSITY

HOMEPAGE :


伊良皆研究室：HOME
bie.inf.kyushu-u.ac.jp
システム生命科学府 生命情報学講座・システム情報科学府 情報学専攻
Iramina Lab.
- Neuroimaging and Neuroinformatics Laboratory -
九州大学
KYUSHU UNIVERSITY
English ver.
伊良皆研究室HPにようこそ！
About Lab.
Members
Research
Admission
Access
Links
News & Topics
2016.5.2 ホームページを更新しました

Location





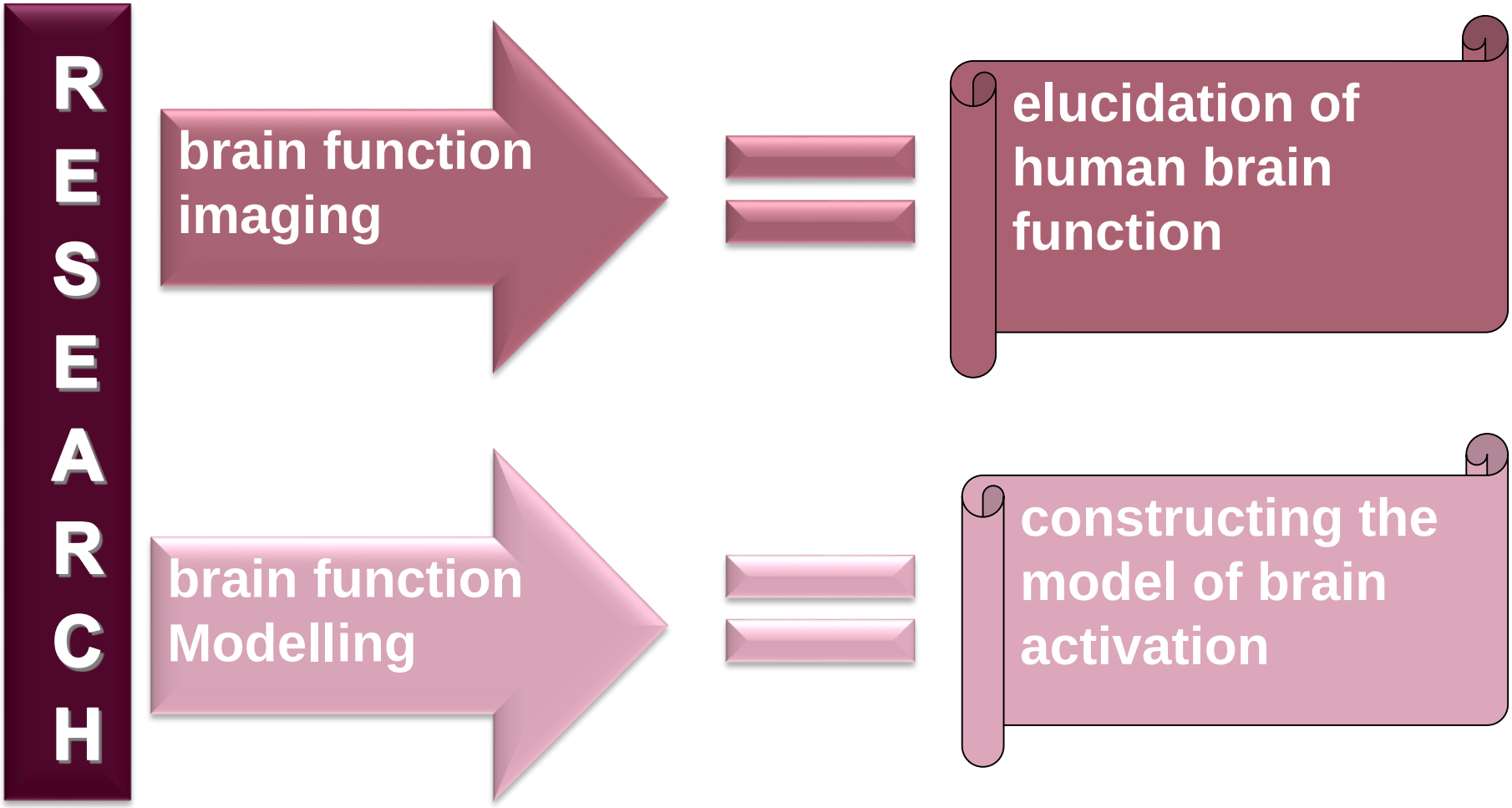
Kyushu University Hospital Campus,
Room 720,7th floor,West Wing

Kyushu University ITOCampus,
Room 808,8th floor,West -2

FACULTY OF INFORMATION SCIENCE AND ELECTRICAL ENGINEERING
システム情報科学府　情報学専攻

GRADUATE SCHOOL OF SYSTEMS LIFE SCIENCES
システム生命科学府 生命情報学講座

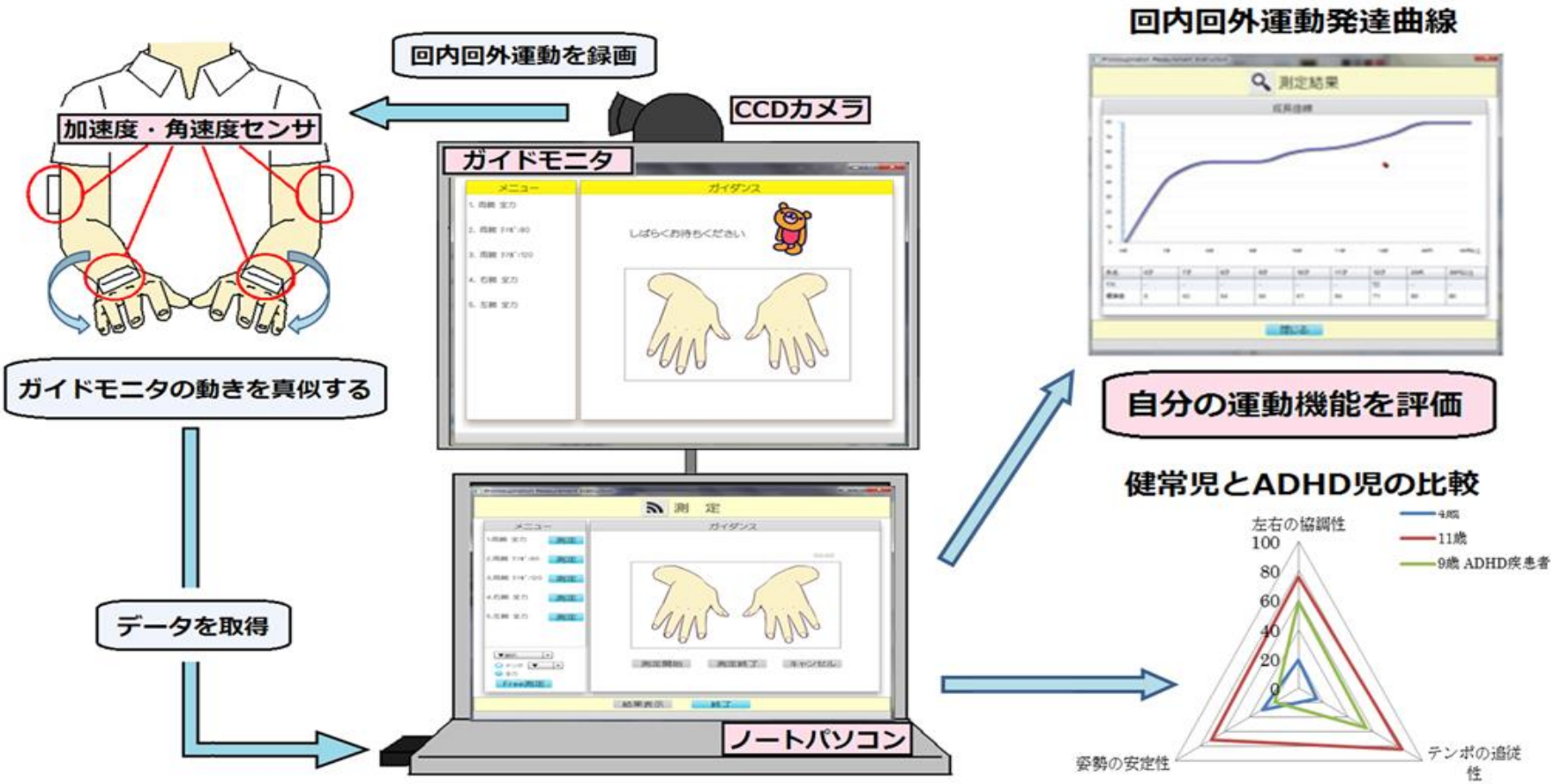
Founded in 2005


RESEARCH
brain function imaging
=
elucidation of human brain function
brain function Modelling
=
constructing the model of brain activation

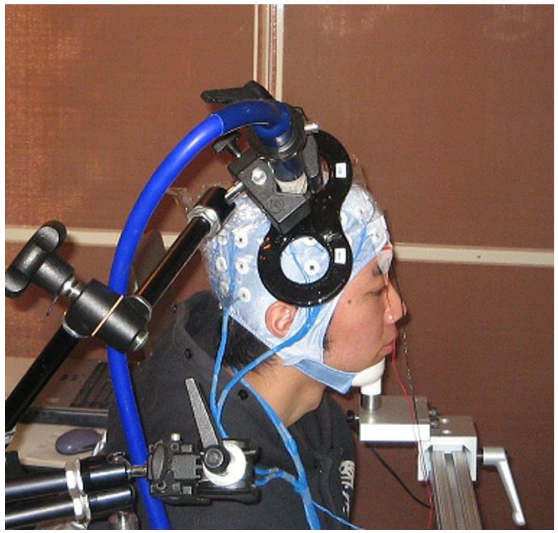
Major research topics

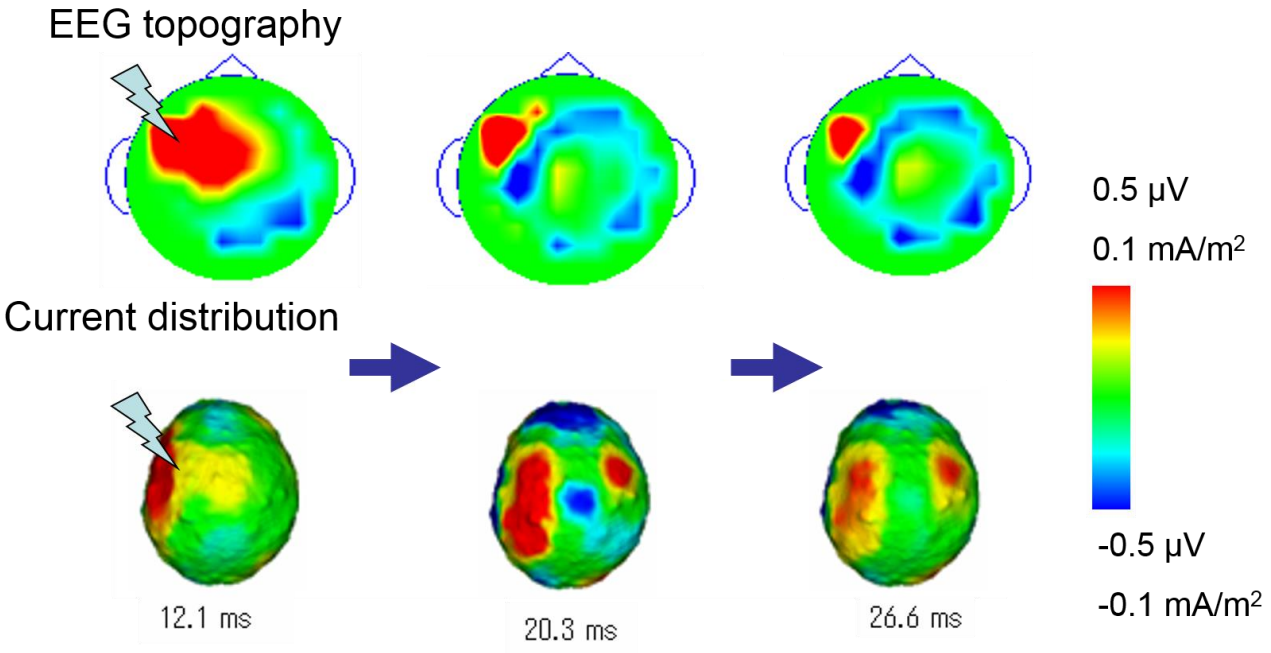
- Study of brain function with non-invasive functional dynamics neuro-imaging
- Study of the mechanisms of visual perception using TMS
- Analysis of the induced eddy current during TMS with finite element method
- Study of brain information processing during visual perception using EEG and MEG
- EEG and NIRS measurement of brain function
- Development of Neuro-rehabilitation system based on BCI (Brain Computer Interface
- Evaluation System for Minor Nervous Dysfunction by Pronation and Supination
- Development of the educational support system for children with disabilities, based on BCI

Evaluation System for Minor Nervous Dysfunction by Pronation and Supination



Simultaneous measurement of EEG, Transcranial Magnetic Stimulation (TMS) , transcranial direct current electrical stimulation (TDCS)



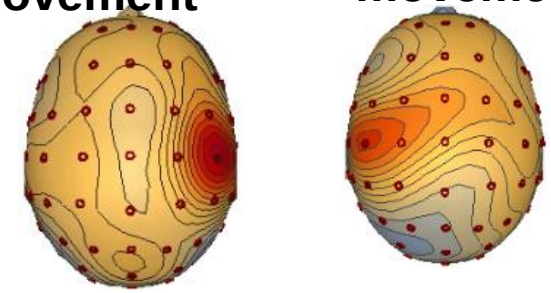


TDCS

Development of Neuro-rehabilitation system based on BCI (Brain Computer Interface

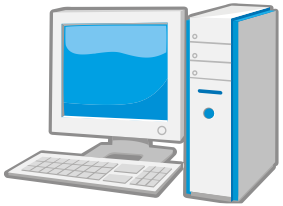
Left hand movement

Right hand movement



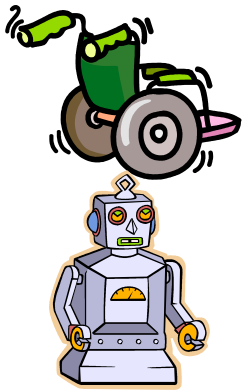
The difference occurance of Gamma(40-50Hz)

Brain wave



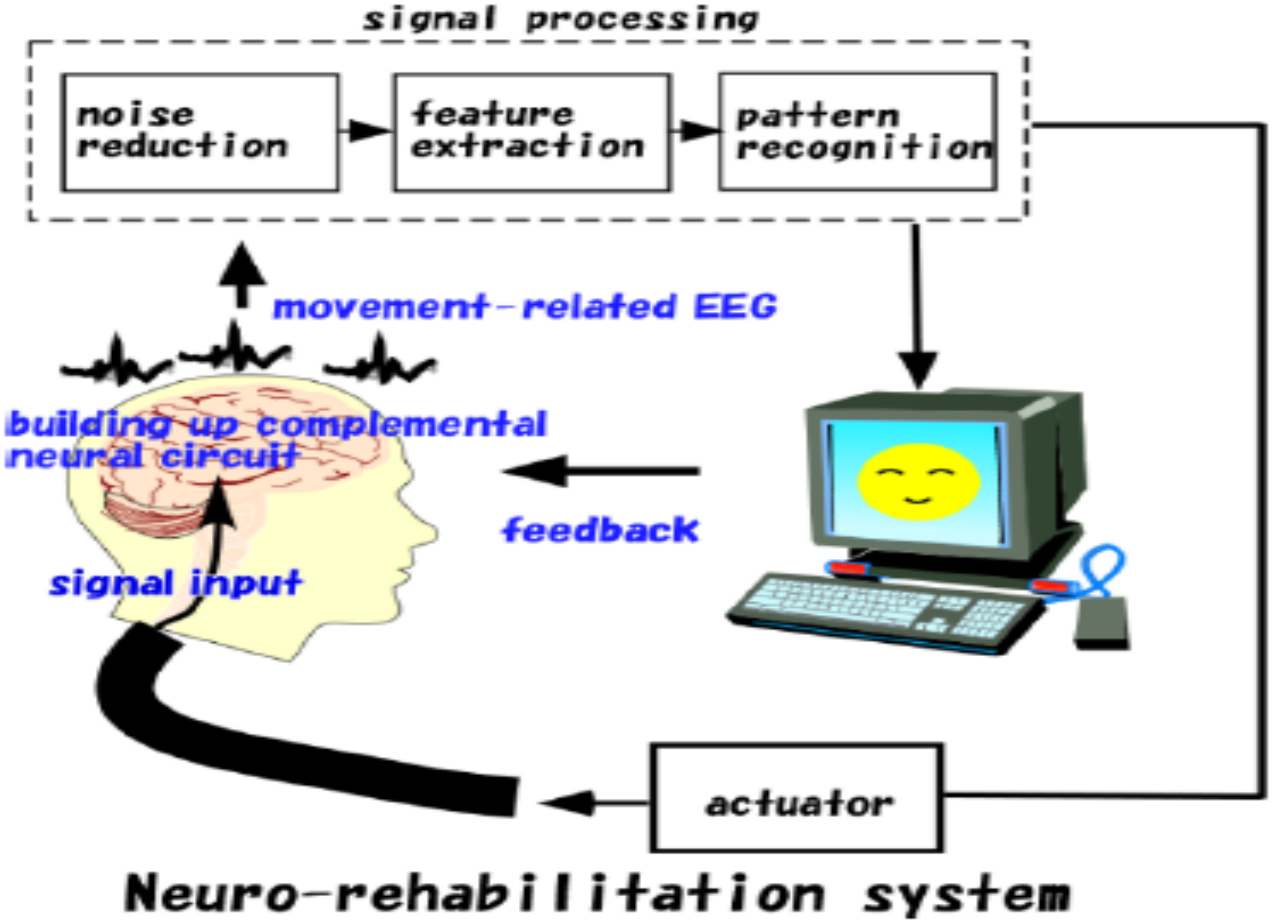
Pattern Classification

Control Signal

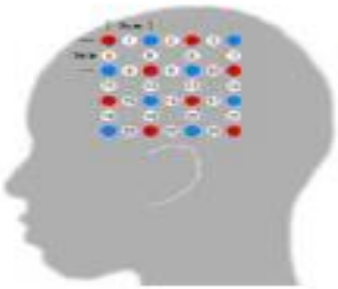


Output

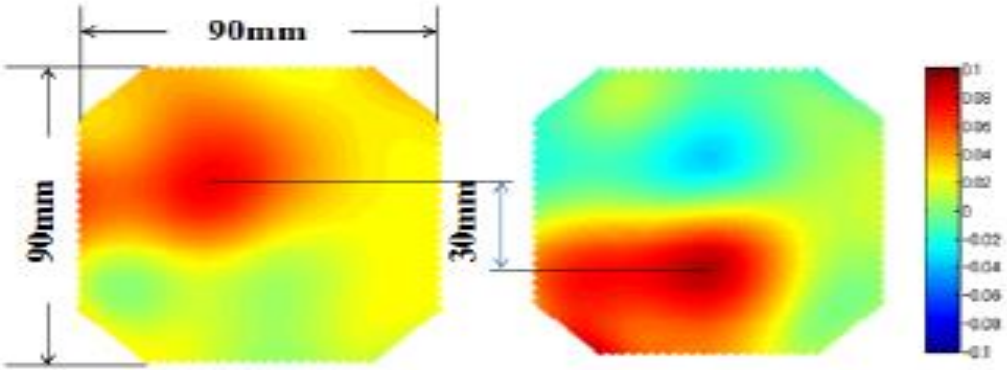
Innovation of Neuro-Rehabilitation by combined Neuro-feedback and Brain Stimulation



Measurement of brain function by NIRS and its application



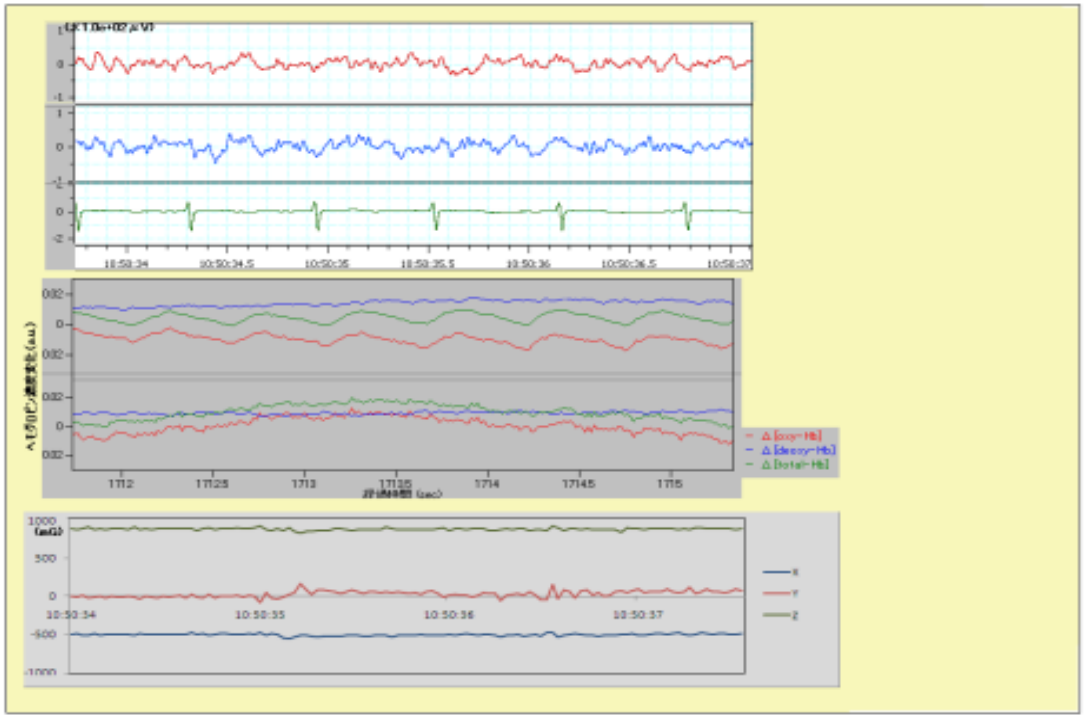
Measurement probe of NIRS



NIRS topography

Ring finger stimulation (left), thumb stimulation (right)

Development of the educational support system for children with disabilities, based on BCI



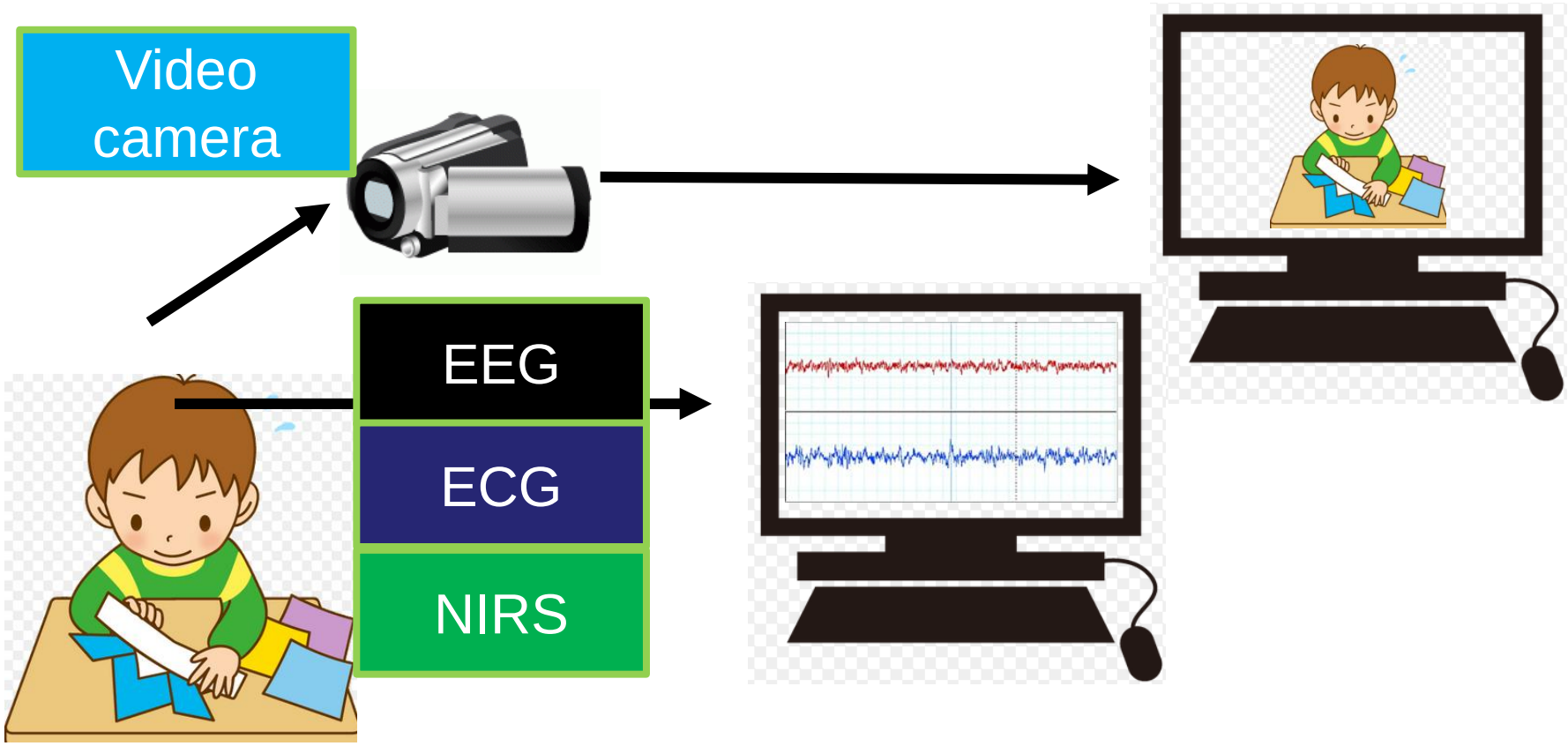
無線脳波計による脳波、心電図の記録

Wireless (EEG, ECG)

Wireless **NIRS**

Accelerometer sensor

Measurement System

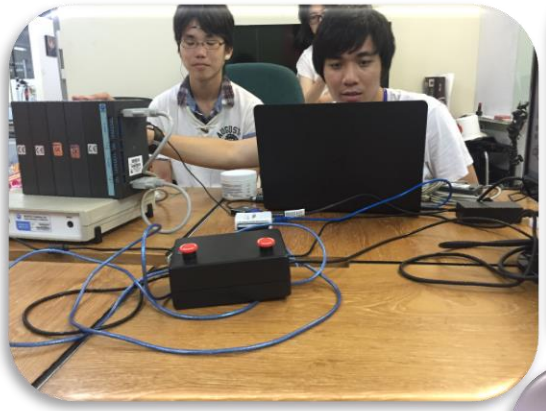


Publication

- **Yuya Onitsuka, Yoshiyuki Shiotsuka, Keiji Iramina, The difference in the kinds of stimulations in CIT based on ERP, Proceedings of 2015 8th Biomedical Engineering International Conference (BMEiCON), 2015.11.**
- **Masaki Ono, Hiroki Furusho, Keiji Iramina, Analysis of the complexity of EEG during the short-term memory task, Proceedings of 2015 8th Biomedical Engineering International Conference (BMEiCON), 2015.11.**
- **Kazuki Onikura, Keiji Iramina, Evaluation of a head movement artifact removal method for EEG considering real-time prosessing, Proceedings of 2015 8th Biomedical Engineering International Conference (BMEiCON), 2015.11.**
- **Thanate Angsuwatanakul, Boonserm Kaewkamnerdpong, Keiji Iramina, Brain complexity analysis of functional near infrared spectroscopy for working memory study, Proceedings of 2015 8th Biomedical Engineering International Conference (BMEiCON), 2015.11.**
- **Ge Sheng, Ruimin Wang, Yue Leng, Haixian Wang, Pan Lin, Keiji Iramina, A Double-Partial Least-Squares Model for the Detection of Steady-State Visual Evoked Potentials IEEE Journal of Biomedical and Health Informatics, 2015.09.**
- **Miki Kaneko, YUshiro Yamashita, Keiji Iramina, Quantitative Evaluation System of Soft Neurological Signs for Children with Attention Deficit Hyperactivity Disorder, Sensors, 16, 1, 2016.01.**
- **Kaori Tamura, Chihiro Karube, Takaaki Mizuba, Mayumi Matsufuji, Sachio Takashima, Keiji Iramina, Phase-locked theta activity evoked in patients with severe motor and intellectual disabilities upon hearing own names, Brain & Development, 37, 8, 2015.11.**
- **Miki Kaneko, YUshiro Yamashita, Osamu Inomoto, Keiji Iramina, Soft Neurological Signs in Childhood by Measurement of Arm Movements Using Acceleration and Angular Velocity Sensors, Sensors, 15, 10, 2015.10.**
- **Zennifa Fadilla, Junko Ide, Yukihiro Noguchi, Keiji Iramina, Monitoring of Cognitive State on Mental Retardation Child using EEG, ECG and NIRS in Four Years Study, Proceedings of 37th Engineering in Medicine and Biology Society EMBC2015, 2015.08**
- **Etc…..**

Student Activity

- Thailand (winter school/ Summer school/ short visit program in Biomedical engineering)
- USA (training Program)






NEUROIMAGING and NEUROINFORMATIC Member

Professor : Keiji Iramina /伊良皆啓治

D5　4 people（SLS Doctoral Program for 5 years）

D4　2 people（ SLS Doctoral Program for 5 years ）

D3　1 people（ SLS Doctoral Program for 5 years ）

D2　2 people（ SLS Doctoral Program for 5 years ）

D1　3 people（ SLS Doctoral Program for 5 years ）

M2　2 people（ISEE Master Program）

M1　1 people（ISEE Master Program）

B4　3 people（Undergraduate student）

Research Student　2 people

International student :　9 people (Indonesia, China, Thailand, France）