神経回路（Neural Network）

科目番号  Registration Number: 01EQ055 (KM3NN07U at University of Bordeaux)

筆頭教員（連絡先・オフィスアワー） Course coordinator (contact details and office hour):
小金澤禎史 Tadachika Koganezawa (t-kogane@md.tsukuba.ac.jp, at all times)
(Course coordinator at University of Bordeaux: Denis Combes (denis.combes@u-bordeaux.fr))
(Other contact person at University of Bordeaux: Elena Avignone (elena.avignone@u-bordeaux.fr))

一般目標（GIO: General Instructional Objectives）
Systematic understanding of the basic functioning of the networks of the central nervous system

行動目標（SBO: Specific Behavioral Objectives）:
Upon completion of this course, students will be able to analyze and understand how vertebrate and invertebrate neuronal networks work in terms of:

- Cellular and synaptic mechanisms
- Normal and pathological plasticity
- Ontogenesis

授業項目 Lecture Schedule/Main Topic

September to November

I. Lectures: 32 hours

- Principles of organization of neuronal networks; central pattern generators
- Methods of study
- Cases study: locomotor networks & others
- Plasticity
- Development
- Interactions between networks
- From neural networks to robots

II. Tutorial class: 20 hours

- Case studies, simulation, task oriented work

評価方法 Evaluation for Grades & Credits

Grading will be based on the following examinations:

- Oral assignment during the course
- Written assignment during the course
- Paper (3 hours) at the end of the term
This course is held at University of Bordeaux from September to November. “International Medical Sciences Exchange Program III” must be taken together with this course.