Curriculum Vitae Last Updated: 06/07/2022

Ryosuke Tanaka

E-mail: ryosukecooltanaka@gmail.com
Date of birth: June 23, 1992

EDUCATION

09/2017 - 05/2022 **Yale University**, New Haven, CT, USA
PhD Student, Interdepartmental Neuroscience Program
Dissertation: "Motion-Based Spatial Vision in Drosophila: Connecting Canonical Levels of Understanding in Neuroscience"

04/2015 - 03/2017 **The University of Tokyo**, Tokyo, Japan
MSc, Graduate School of Arts and Sciences
Major: Psychology and Neuroscience
Sub-major: The Science Interpreter Training Program

04/2011 - 03/2015 **The University of Tokyo**, Tokyo, Japan
BSc, College of Arts and Sciences (GPA: 4.0/4.0)
Major: Psychology and Neuroscience

EDUCATION IN OTHER INSTITUTIONS

09/2014 - 01/2015 Courses in Psychology and Neuroscience, Harvard Extension School, Cambridge, MA, USA

RESEARCH AND EMPLOYMENT

08/2017 - 12/2017, 06/2018 - 05/2022 **Yale University**
Clark lab, Department of Molecular, Cellular, Developmental Biology
PhD Student
Adviser: Dr. Damon A. Clark
Putative Thesis Title: Algorithm and Mechanisms for Visual Motion Source Discrimination in *Drosophila*

01/2018 - 05/2018 **Yale University**
Jeanne lab, Department of Neuroscience
Rotation Student
Adviser: Dr. James M. Jeanne
Research Topic: Circuit mechanisms for olfactory sensation in fruitfly *Drosophila*

04/2017 - 07/2017 **RIKEN Brain Science Institute**
Kazama Lab, Circuit Mechanisms of Sensory Perception
Part-time Research Assistant
Advisor: Dr. Hokto Kazama
Research Topic: Visual information processing in fruit fly *Drosophila melanogaster*

09/2015 - 03/2017 **The University of Tokyo**
The Science Interpreter Training Program
Graduate Student (Sub-major)
Advisor: Dr. Osamu Sakura
Research Topic: Motivation of Scientists

09/2013 - 03/2017 **The University of Tokyo**
Yotsumoto Lab, Vision Science and Cognitive Neuroscience
Undergraduate Researcher / Graduate Student
Advisor: Dr. Yuko Yotsumoto
Research Topic: Neural correlates of human motion perception, psychological basis of time perception

TEACHING EXPERIENCE

09/2020 - 12/2020 Teaching Fellow: Laboratory for Neurobiology (Yale)
Assisting undergraduates majoring in neuroscience perform neurobiology experiments.

01/2019 - 06/2019 Teaching Fellow: Research Methods in Cognitive Neuroscience (Yale)
Assisting undergraduates majoring in psychology perform neurobiology experiments.

04/2015 - 03/2017 Teaching Assistant: Active Learning of English for Science Student Program for Undergraduate students (UTokyo)
Assisting freshman students to improve their in-class simple research projects on which they write a paper in English

04/2016 - 07/2016 Teaching Assistant: Freshman Seminar for Humanities Students on Brain Sciences (UTokyo)
Gave an introductory lecture on the process of scientific research.
Conducted an in-class fMRI experiment and data analysis.

04/2015 - 07/2015 Teaching Assistant: Psychology I for Undergraduate students (UTokyo)
Assisted preparing course materials and answered questions from students.

AWARDS AND SCHOLARSHIPS

05/2022 Neuroscience Thesis Prize, Yale University
09/2017-08/2019 Gruber Fellowship
$7,000 of stipend supplement and $2,500 of research budget
09/2017-08/2022 Takenaka Overseas Scholarship
Covers tuition up to 2,500,000JPY per year and stipend up to 2,000,000JPY per year for five years.
11/2016 Hot topics, Society for Neuroscience 46th Annual Meeting
10/2016 8th Illusion Contest Award, The Japanese Psychonomic Society
03/2015 National First Highschool Memorial Award for Academic Excellence
11/2015 7th Illusion Contest Award, The Japanese Psychonomic Society

11/2014	6th Illusion Contest Award, The Japanese Psychonomic Society
09/2014 - 01/2015	Leap for Tomorrow Study Abroad Initiative, Ministry of Education, Culture, Sports, Science and Technology, Japan

PUBLICATIONS

Tanaka, R. & Clark, D. A. (2022) Neural mechanisms to exploit positional geometry for collision avoidance, *Curr. Biol.*

Tanaka, R. & Clark, D. A. (2022) Identifying Inputs to Visual Projection Neurons in *Drosophila* Lobula by Analyzing Connectomic Data, *eNeuro*.

Agrochao, M.*, Tanaka, R.*, Salazar-Gatzimas, E., Clark, D. A. (2020) Mechanism for analogous illusory motion perception in flies and humans, *PNAS*. (* Equal contributions.)

Tanaka, R. & Clark, D. A. (2020) Object-Displacement-Sensitive Visual Neurons Drive Freezing in Drosophila, *Curr. Biol.*

Creamer, M. S., Mano, O., Tanaka, R., Clark, D. A. (2019) A flexible geometry for panoramic visual and optogenetic stimulation during behavior and physiology, *J. Neurosci. Meth*.

Tanaka, R. & Yotsumoto, Y. (2017) Passage of time judgments is relative to temporal expectation. *Front. Psychol.*

Tanaka, R. & Yotsumoto, Y. (2016) Networks extending across dorsal and ventral visual pathways correlate with trajectory perception. *Journal of Vision*

PRESENTATIONS

Tanaka, R. & Clark, D. A. (2022) Neural mechanisms for collision avoidance exploiting positional geometry. COSYNE 2022 (Poster). Lisbon, Portugal. 03/2022

Tanaka, R. & Clark, D. A. (2021) Visual circuit for collision avoidance in walking *Drosophila* . Society for Neuroscience Annual Meeting (Poster). Online. 11/2021

Tanaka, R. & Clark, D. A. (2020) Visual Object Detection in *Drosophila* . Janelia Mechanistic Cognitive Neuroscience Junior Scientist Workshop (Recorded Talk). Online. 11/2020

Tanaka, R. & Clark, D. A. (2020) A *Drosophila* object detector drives stopping with a displacement sensitive algorithm. CSHL Neural Circuit Meeting. Online. 03/2020

Agrochao, M., Tanaka, R., Clark, D. A., Salazar-Gatzimas, E. (2020) Neural mechanism for illusory motion perception from stationary patterns. COSYNE 2020 (Talk). Denver, CO, USA. 03/2020

Tanaka, R. & Clark, D. A. (2020) *Drosophila* small object detectors trigger stopping with a novel, displacement-sensitive algorithm. COSYNE 2020 (Poster). Denver, CO, USA. 03/2020

Tanaka, R., Horikawa, R., Ogata, T. & Yotsumoto, Y. (2016) Altered Brain Networks in Congenital Adrenal Hyperplasia Revealed Using Multimodal MRI. Society for Neuroscience, 46th Annual Meeting (Poster). San Diego, CA, USA. 11/2016

Tanaka, R. & Yotsumoto, Y. (2016) Passage of Time Judgment Depends on Temporal Anticipation. The Japanese Psychonomic Society, 35th Annual Meeting (Poster). Tokyo Japan 10/2016

Tanaka, R. & Yotsumoto, Y. (2015) Neural Activity in the Ventral Visual Stream which Correlates with Motion Trajectory Perception. The Vision Society of Japan (Talk). Tokyo Japan 07/2015

Tanaka, R. & Yotsumoto, Y. (2015) Contribution of the ventral visual pathway to Perception of the Wriggling Motion Trajectory Illusion: an fMRI study. Vision Sciences Society, 15th Annual Meeting (Poster). St Pete Beach FL USA. 05/2015

PROFESSIONAL SKILLS

Basic genetics, behavioral experiments, two-photon calcium imaging in fruitfly *Drosophila melanogaster*.

Programming experience in Matlab (~8 years) and python (~2 years).

Competency in designing visual stimuli for neuroscience experiments.

Basic skills in electronics.

Experimental design, data acquisition, and data analysis in human fMRI and psychophysics experiments.

OTHER ACTIVITIES

10/2016 - 11/2016 Contributor for Asahi Student Newspaper

Contribtued a short article series about scientific research and career development.