Ryosuke Tanaka

Postdoctoral Researcher, Institute for Neuroscience, Technical University of Munich
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Date of birth: June 23, 1992

EDUCATION

09/2017 - 05/2022	**Yale University**, New Haven, CT, USA PhD Student, Interdepartmental Neuroscience Program
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 EXPERIENCE

09/2022 - Present	**Techincail University of Munich** **Portugues Lab**, Institute for Neuroscience Postdoctoral Researcher Adviser: Dr. Ruben Portugues Research Topic: Functions and mechanisms of heading direction circuitry in larval zebrafish
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

03/2024-02/2027	HFSP Long Term Fellowship
03/2023-Present	EMBO Postdoctroal Fellowship
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

Mano, O., Choi, M., Tanaka, R., Creamer M. S., Matos, N. C. B., Shomar, J., Badwan, B. A., Clandinin T. R., & Clark, D. A. (2023) Long timescale anti-directional rotation in *Drosophila* optomotor behavior, *bioRxiv*

Tanaka, R., Zhou, B., Agrochao, M., Badwan, B. A., Au, B., Matos, N. C. B, & Clark, D. A. (2023) *Drosophila* integrates visual evidence and counterevidence in self motion estimation, *bioRxiv* .

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. 02/2022

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.