

# Hiromasa Takemura

Professor

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## Education

2012 Ph.D. Department of Life Sciences, The University of Tokyo (Advisor: Ikuya Murakami)  
2009 M.A. Multidisciplinary Sciences, The University of Tokyo  
2007 B.A. Liberal Arts, The University of Tokyo

## Professional Experience

Sep 2021 – present: Professor, National Institute for Physiological Sciences  
Oct 2024 – present: Professor, Core for Spin Life Sciences, Okazaki Collaborative Platform,  
National Institutes of Natural Sciences  
Apr 2024 – present: Professor, Department of Quantitative and Imaging Biology, Headquarter for  
Co-Creation Strategy, National Institutes of Natural Sciences  
Apr 2022 – Mar 2023: Professor, International Research Collaboration Center, National Institutes of  
Natural Sciences  
Sep 2021 – present: Professor, The Graduate University for Advanced Studies (SOKENDAI)  
Apr 2021 – present: Senior Researcher, Center for Information and Neural Networks (CiNet),  
Advanced ICT Research Institute, National Institute of Information and  
Communications Technology (NICT)  
Apr 2018 – Mar 2021: Researcher (Tenure-Track), CiNet, NICT  
Apr 2015 – Mar 2018: Senior Visiting Researcher, CiNet, NICT  
Apr 2012 – Mar 2015: Postdoctoral Fellow, Department of Psychology, Stanford University  
(Advisor: Brian Wandell)

## Teaching Experience

**2023-present Lecturer**, “Special Lectures in Physiological Sciences”, SOKENDAI  
**2023-present Lecturer**, “Clinical pathophysiology 2”, SOKENDAI  
**2023-present Lecturer**, “Mechanisms of Perception and Learning B”, Nagoya University  
**2022-present Lecturer**, “Basic Physiological and Anatomical Brain Science”, SOKENDAI

**2022-present Lecturer**, “Systems Neuroscience II”, SOKENDAI

**2025 Lecturer**, “Integrated Lecture on Medicine”, Faculty of Medicine, The University of Tokyo

**2022-2023 Guest Professor**, Graduate School of Frontier Biosciences, Osaka University

**2018-2022 Guest Associate Professor**, Graduate School of Frontier Biosciences, Osaka University

**2017 Lecturer**, “Special Lectures II”, Graduate School of Frontier Biosciences, Osaka University (graduate)

**2017 Lecturer**, “Special Lecture on Biophysical Engineering B”, School of Engineering Science, Osaka University (undergraduate, co-instructor with Ichiro Fujita)

**2016 Guest Lecturer**, “Advanced Brain Informatics A, B, C”, Graduate School of Brain Sciences, Tamagawa University

**2015 Guest Lecturer**, “Neural plasticity”, Graduate School of Science and Engineering, Sophia University (undergraduate and graduate, Instructor: Shinichi Furuya)

**2015 Guest Lecturer**, “K310: Statistics Methods”, Department of Psychological and Brain Sciences, Indiana University (undergraduate, Instructor: Franco Pestilli)

**2014 Course Instructor**, “PSYCH287-01 Connectomics” (graduate, co-instructor with Brian Wandell and Stephen Smith). Department of Psychology, Stanford University

**2013 Guest Lecturer**, “Advanced Brain Informatics A, B, C”, Graduate School of Brain Sciences, Tamagawa University

**2010 Tutor**, Autumn School for Computational Neuroscience, Japanese Neural Network Society

**2009 Tutor**, Autumn School for Computational Neuroscience, Japanese Neural Network Society

**2011 – 2012 Teaching Assistant**, “Cognitive and Behavioral Science Experiment”, The University of Tokyo

**2007 – 2009 Teaching Assistant**, “Information processing”, The University of Tokyo

## **Honors and Fellowships**

<b>2022</b>	Early Career Investigator Award, The Organization for Human Brain Mapping (OHBM)
<b>2018</b>	Outstanding Abstract Award, ISMRM Japanese Chapter
<b>2017</b>	Magna Cum Laude Merit Award, International Society for Magnetic Resonance in Medicine (ISMRM)
<b>2011</b>	Young Investigator Award, Japan Young Physiologist Association
<b>2011</b>	Dean Prize, The Graduate School of Arts & Sciences, The University of Tokyo
<b>2011</b>	JSPS Ikushi Prize from the Japan Society for the Promotion of Science
<b>2010</b>	Best Presentation Award from the Japanese Psychonomic Society
<b>2010</b>	Best Student Poster Award from Asia-Pacific Conference on Vision
<b>2009</b>	Prize for encouragement, Department of Life Sciences, The University of Tokyo
<b>2009</b>	Best Presentation Award from Vision Society of Japan
<b>2008</b>	Best Presentation Award from the Japanese Psychonomic Society
<b>2015 – 2018</b>	JSPS Superlative Postdoctoral (SPD) Fellow
<b>2013 – 2015</b>	JSPS Postdoctoral Fellow for Research Abroad

2009 – 2013                      Research Fellow, Japan Society for the Promotion of Science

## Research Grants

2024 – 2027                      Grant-in-Aid for Scientific Research (B), Japan Society for the Promotion of Science (role: PI, ¥14,300,000 for three years)

2022 – 2024                      Grant-in-Aid for Scientific Research (C), Japan Society for the Promotion of Science (role: Co-investigator, PI: Yoichiro Masuda)

2021 – 2024                      Grant-in-Aid for Scientific Research (B), Japan Society for the Promotion of Science (role: PI, ¥13,300,000 for three years)

2019 – 2022                      Grant-in-Aid for Scientific Research (C), Japan Society for the Promotion of Science (role: Co-investigator, PI: Yoichiro Masuda)

2017 – 2021                      Grant-in-Aid for Young Scientists (A), Japan Society for the Promotion of Science (role: PI, ¥19,600,000 for four years)

2015 – 2018                      Grant-in-Aid for JSPS Fellows, Japan Society for the Promotion of Science (¥9,000,000 for three years)

2012 – 2013                      JSPS Institutional Program for Young Researcher Overseas Visits

2011 – 2013                      Grant-in-Aid for JSPS Fellows, Japan Society for the Promotion of Science (¥1,400,000 for two years)

2009 – 2011                      Grant-in-Aid for JSPS Fellows, Japan Society for the Promotion of Science (¥2,000,000 for two years)

## Publications

*P: Primary Research Articles, R: Review, commentary, or editorial, \*: equal contribution*

- P        Taguma, D., Ogawa, S. & **Takemura, H.** (2025) Evaluating the impact of denoising diffusion MRI data on tractometry metrics of optic tract abnormalities in glaucoma. *Scientific Reports*, **15**, 25812.
- P        Nakayama, R., Uetsuki, M., Maruya, K. & **Takemura, H.** (2024) Evaluating correlations between reading ability and psychophysical measurements of dynamic visual information processing in Japanese adults. *Scientific Reports*, **14**, 29546.
- P        Luo, J., Yokoi, I., Dumoulin, S.O. & **Takemura, H.** (2024) Bistable perception of symbolic numbers. *Journal of Vision*, **24**, 12.
- P        **Takemura, H.**, Kaneko, T., Sherwood, C.C., Johnson, G.A., Axer, M., Hecht, E.E., Ye, F.Q. & Leopold, D.A. (2024) A prominent vertical occipital white matter fasciculus unique to primate brains. *Current Biology*, **16**, 3632-3643.
- R        **Takemura, H.**, Kruper, J.A., Miyata, T. & Rokem, A. (2024) Tractometry of the human visual white matter pathways in health and disease. *Magnetic Resonance in Medical Sciences*, **23**, 316-340.
- P        Uesaki, M., Furlan, M., Smith, A.T. & **Takemura, H.** (2024) White matter tracts adjacent to the human cingulate sulcus visual area (CSv). *PLoS ONE*, **19**, e0300575.
- P        **Takemura, H.**, Liu, W., Kuribayashi, H., Miyata, T. & Kida, I. (2023) Evaluation of simultaneous multi-slice readout-segmented diffusion-weighted MRI acquisition in human optic nerve measurements. *Magnetic Resonance Imaging*, **102**, 103-114.

- P Morita, T., **Takemura, H.** & Naito, E. (2023) Functional and structural properties of interhemispheric interaction between bilateral precentral hand motor regions in a top wheelchair racing Paralympian. *Brain Sciences*, **13**, 715.
- R **Takemura, H.** (2023) Investigating human visual cortex variability. *Nature Reviews Neuroscience*, **24**, 270.
- P Oishi, H., **Takemura, H.** & Amano, K. (2023) Macromolecular tissue volume mapping of lateral geniculate nucleus subdivisions in living human brains. *NeuroImage*, **265**, 119777.
- P Miyata, T., Benson, N.C., Winawer, J. & **Takemura, H.** (2022) Structural covariance and heritability of the optic tract and primary visual cortex in living human brains. *The Journal of Neuroscience*, **42**, 6761–6769.
- R **Takemura, H.** & Rosa, M.P.G. (2022) Understanding structure–function relationships in the mammalian visual system: part two. *Brain Structure and Function*, **227**, 1167–1170.
- P Morita, T., Hirose, S., Kimura, N., **Takemura, H.**, Asada, M. & Naito, E. (2022) Hyper-adaptation in the human brain: functional and structural changes in the foot section of the primary motor cortex in a top wheelchair racing Paralympian. *Frontiers in Systems Neuroscience*, **16**, 780652.
- P Ogawa, S.\*, **Takemura, H.\***, Horiguchi, H., Miyazaki, A., Matsumoto, K., Masuda, Y., Yoshikawa, K. & Nakano, T. (2022) Multi-contrast magnetic resonance imaging of visual white matter pathways in patients with glaucoma. *Investigative Ophthalmology & Visual Science*, **63**, 29.
- R **Takemura, H.** & Rosa, M.P.G. (2021) Understanding structure–function relationships in the mammalian visual system: part one. *Brain Structure and Function*, **226**, 2741–2744.
- P Amemiya, K., Naito, E. & **Takemura, H.** (2021) Age dependency and lateralization in the three branches of the human superior longitudinal fasciculus. *Cortex*, **139**, 116–133.
- P Masuda, Y., **Takemura, H.**, Terao, M., Miyazaki, A., Ogawa, S., Horiguchi, H., Nakadomari, S., Matsumoto, K., Nakano, T., Wandell, B.A. & Amano, K. (2021) V1 projection zone signals in human macular degeneration depend on task despite absence of visual stimulus. *Current Biology*, **31**(2), 406–412.
- P **Takemura, H.\***, Palomero-Gallagher, N.\*, Axer, M., Gräbel, D., Jorgensen, M.J., Woods, R. & Zilles, K.\* (2020) Anatomy of nerve fiber bundles at micrometer-resolution in the vervet monkey visual system. *eLife*, **9**, e55444.
- R **Takemura, H.** & Thiebaut de Schotten, M. (2020) Perspectives given by structural connectivity bridge the gap between structure and function. *Brain Structure and Function*, **225**(4), 1189–1192.
- P **Takemura, H.**, Yuasa, K. & Amano, K. (2020) Predicting neural response latency of the human early visual cortex from MRI-based tissue measurements of the optic radiation. *eNeuro*, **7**(4), ENEURO.0545-19.2020. 1–18.
- P Kaneko, T.\*, **Takemura, H.\***, Pestilli, F., Silva, A.C., Ye, F.Q. & Leopold, D.A. (2020) Spatial organization of occipital white matter tracts in the common marmoset. *Brain Structure and Function*, **225**(4), 1313–1326.
- P Minami, S., Oishi, H., **Takemura, H.** & Amano, K. (2020) Inter-individual differences in occipital alpha oscillations correlate with white matter tissue properties of the optic radiation. *eNeuro*, **7**(2), ENEURO.0224-19.2020 1–11.
- P Bullock, D., **Takemura, H.**, Caiafa, C.F., Kitchell, L., McPherson, B., Caron, B. & Pestilli, F. (2019) Associative white matter connecting the dorsal and ventral posterior human cortex. *Brain Structure and Function*, **224**(8), 2631–2660.

- P **Takemura, H.\***, Ogawa, S.\*, Mezer, A.A., Horiguchi, H., Miyazaki, A., Matsumoto, K., Shikishima, K., Nakano, T. & Masuda, Y. (2019) Diffusivity and quantitative T1 profile of human visual white matter tracts after retinal ganglion cell damage. *NeuroImage: Clinical*, **23**, 101826.
- R **Takemura, H.**, Pestilli, F. & Weiner, K.S. (2019) Comparative neuroanatomy: integrating classic and modern methods to understand association fibers connecting dorsal and ventral visual cortex. *Neuroscience Research*, **146**, 1–12.
- P Oishi, H.\*, **Takemura, H.\***, Aoki, S.C., Fujita, I. & Amano, K. (2018) Microstructural properties of the vertical occipital fasciculus explain the variability in human stereoacuity. *Proceedings of the National Academy of Sciences of the United States of America*, **115**(48), 12289–12294.
- P Uesaki, M., **Takemura, H.** & Ashida, H. (2018) Computational neuroanatomy of human stratum proprium of interparietal sulcus. *Brain Structure and Function*, **223**(1), 489–507.
- P **Takemura, H.**, Pestilli, F., Weiner, K.S., Keliris, G.A., Landi, S., Sliwa, J., Ye, F.Q., Barnett, M., Leopold, D.A., Freiwald, W.A., Logothetis, N.K. & Wandell, B.A. (2017) Occipital white matter tracts in human and macaque. *Cerebral Cortex*, **27**(6), 3346–3359.
- R Rokem, A., **Takemura, H.**, Bock, A., Scherf, K. S., Behrmann, M., Wandell, B., Fine, I., Bridge, H. & Pestilli, F. (2017) The visual white matter: The application of diffusion MRI and fiber tractography to vision science. *Journal of Vision*, **17**(2):4, 1–30.
- P **Takemura, H.**, Caiafa, C.F., Wandell, B.A. & Pestilli, F. (2016) Ensemble Tractography. *PLoS Computational Biology*, **12**(2), e1004692.
- P **Takemura, H.**, Rokem, A., Winawer, J., Yeatman, J. D., Wandell, B. A. & Pestilli, F. (2016) A major human white-matter pathway between dorsal and ventral visual cortex. *Cerebral Cortex*, **26**(5), 2205–2214.
- P Ogawa, S., **Takemura, H.**, Horiguchi, H., Terao, M., Haji, T., Pestilli, F., Yeatman, J.D., Tsuneoka, H., Wandell, B.A. & Masuda, Y. (2014) White matter consequences of retinal receptor and ganglion cell damage. *Investigative Ophthalmology & Visual Science*, **55**(10), 6976–6986.
- P **Takemura, H.**, Ashida, H., Amano, K., Kitaoka, A. & Murakami, I. (2012) Neural correlates of induced motion perception in the human brain. *The Journal of Neuroscience*, **32**(41), 14344–14354.
- P **Takemura, H.**, Tajima, S. & Murakami, I. (2011) Whether dots moving in two directions appear coherent or transparent depends on directional biases induced by surrounding motion. *Journal of Vision*, **11**(14):17, 1–17.
- P **Takemura, H.**, Samejima, K., Vogels, R., Sakagami, M. & Okuda, J. (2011) Stimulus-dependent adjustment of reward prediction error in the midbrain. *PLoS ONE*, **6**(12), e28337.
- P **Takemura, H.** & Murakami, I. (2010) Visual motion detection sensitivity is enhanced by an orthogonal motion aftereffect. *Journal of Vision*, **10**(11):7, 1–12.
- P Tajima, S., **Takemura, H.**, Murakami, I. & Okada, M. (2010) Neuronal population decoding explains the change in signal detection sensitivity caused by task-irrelevant perceptual bias. *Neural Computation*, **22**(10), 2586–2614.
- P **Takemura, H.** & Murakami, I. (2010) Visual motion detection sensitivity is enhanced by orthogonal induced motion. *Journal of Vision*, **10**(2):9, 1–13.

## Papers in progress (preprints)

- P Benson, N.C., Song, S., Chen, S., Miyata, T., **Takemura, H.** & Winawer, J. (2025) Machine learning matches human performance at segmenting the human visual cortex. *bioRxiv*, 2025.05.16.654503.

## Sessions organized at conferences

Gellersen, H., Dalton, M., Olsen, R. & **Takemura, H.** (2025, Jun) High-resolution structural and functional imaging of visual and memory systems. Symposium on the 2025 Organization for Human Brain Mapping, Brisbane, Australia.

**Takemura, H.** & Palomero-Gallagher, N. (2025, Jun) Neuroanatomy and its impact on structural and functional imaging (in honor of Karl Zilles). Educational Course on the 2025 Organization for Human Brain Mapping, Brisbane, Australia.

**Takemura, H.** & Palomero-Gallagher, N. (2024, Jun) Neuroanatomy and its impact on structural and functional imaging (in honor of Karl Zilles). Educational Course on the 2024 Organization for Human Brain Mapping, Seoul, Korea.

**Takemura, H.** & Palomero-Gallagher, N. (2023, Jul) Neuroanatomy and its impact on structural and functional imaging (in honor of Karl Zilles). Educational Course on the 2023 Organization for Human Brain Mapping, Montreal, Canada.

Palomero-Gallagher, N. & **Takemura, H.** (2022, Jun) Neuroanatomy and its impact on structural and functional imaging (in honor of Karl Zilles). Educational Course on the 2022 Organization for Human Brain Mapping, Glasgow, Scotland.

Weiner, K.S., **Takemura, H.** & Palomero-Gallagher, N. (2021, Jun) Neuroanatomy and its impact on structural and functional imaging (in honor of Karl Zilles). Educational Course on the 2021 Organization for Human Brain Mapping, Virtual meeting.

**Takemura, H.** & Takahata, T. (2019, Jul) Multi-dimensional approach to understand anatomical basis of visual functions. Member-initiated symposium on the 2019 Asia-Pacific Conference on Vision, Osaka, Japan.

**Takemura, H.** & Wagstyl, K. (2019, Jun) Multi-modal imaging approach for human neuroanatomy: integration across scales. Member-initiated symposium on the 2019 Organization for Human Brain Mapping Annual Meeting, Rome, Italy.

**Takemura, H.** & Takiyama, K. (2018, Jul) Cutting edge approach for understanding brain dynamics. Member-initiated symposium on the 41st annual meeting of Japan Neuroscience Society, Kobe, Japan.

**Takemura, H.** & Pestilli, F. (2016, Jul) Advances in computational human neuroanatomy. Member-initiated symposium on the 39th annual meeting of Japan Neuroscience Society, Yokohama, Japan.

Amano, K. & **Takemura, H.** (2014, Jul) Multi-modal measurement of the visual cortex. Member-initiated symposium on Asia-Pacific Conference on Vision, Takamatsu, Japan.

## Conference abstracts (International): Talks

**Takemura.** Comparative analysis of visual pathways using neuroimaging and high-resolution neuroanatomy datasets across species. OHBM 2025 (Symposium talk).

Uesaki, Miyata, Benson, Winawer & **Takemura.** Correlations between inter-subject variability in tissue properties of human V1, V2, and V3. OHBM 2024.

**Takemura.** How anatomy will help us to build models of information processing in the brain. OHBM 2024 (Educational Course talk).

**Takemura,** Benson, Winawer & Miyata. (2023) Structural properties of the optic tract correlate with the size of V1 in the Human Connectome Project 7T Retinotopy Dataset. CRCNS 2023.

Benson, Song, Miyata, **Takemura**, & Winawer. (2023) Automated delineation of visual area boundaries and eccentricities by a CNN. CRCNS 2023.

Benson, Song, Miyata, **Takemura**, & Winawer. (2023) Automated Delineation of Visual Area Boundaries and Eccentricities by a CNN Using Functional, Anatomical, and Diffusion-Weighted MRI Data. MODVIS 2023.

**Takemura**. Why do we need anatomical knowledge for a correct and comprehensive interpretation of neuroimaging data? OHBM 2022 (Educational Course talk).

Benson, Chen, **Takemura** & Winawer. Accurate and automated delineation of V1-V3 boundaries by a CNN. VSS 2022.

**Takemura**. White matter tract analysis using neuroimaging and neuroanatomy datasets. OHBM 2021 (Educational Course talk).

**Takemura**. Understanding major white matter pathways in visual system: from neuroimaging to neuroanatomy. APCV 2019 (Symposium talk).

Uesaki, Furlan, Smith & **Takemura**. White matter connections of the human cingulate sulcus visual area (CSv). APCV 2019.

**Takemura**. Multi-modal imaging approach for visual white matter pathways. OHBM 2019 (Symposium talk).

**Takemura**, Ogawa, Mezer, Horiguchi, Miyazaki, Matsumoto, Shikishima, Nakano & Masuda. Disease in retinal ganglion cells affects diffusivity but not myelin volume along the optic radiation. APCV 2018.

**Takemura**, Pestilli, Weiner, Keliris, Landi, Sliwa, Ye, Barnett, Leopold, Freiwald, Logothetis & Wandell. Comparative neuroanatomy of occipital white matter tracts in human and macaque. VSS 2017.

Oishi, **Takemura**, Aoki, Fujita, & Amano. Human white matter structural properties correlate with individual difference in stereoacuity. VSS 2017.

**Takemura**, Pestilli, Weiner, Keliris, Landi, Sliwa, Ye, Barnett, Leopold, Freiwald, Logothetis & Wandell. Using diffusion MRI and tractography to identify macaque vertical occipital fasciculus. ISMRM 2017 (Magna Cum Laude Merit Award).

**Takemura**. Human visual white matter pathway studied by diffusion MRI. APCV 2014 (Symposium talk).

**Takemura** & Wandell. A major white-matter wiring between the ventral and dorsal stream. VSS 2014 (Symposium talk).

Pestilli, Yeatman, Rokem, Kay, **Takemura** & Wandell. LiFE: Linear Fascicle Evaluation- a new technology to study visual connectomes. VSS 2014.

**Takemura**, Rokem, Winawer, Yeatman, Wandell & Pestilli. Human white matter fascicles between ventral and dorsal visual field maps. SfN 2013.

**Takemura**, Tajima & Murakami. Motion integration and segregation modulated by surrounding motion. VSS 2011.

## Conference abstracts (International): Poster presentations

Hermes, Yanez-Ramos, Gregg, Worrell, McIntyre, **Takemura** & Miller. Anatomy-based estimates indicate that cortical stimulation can only sparsely affect long-range connections. CCNeuro 2025 (accepted).

Nakamura, Luo, Yokoi & **Takemura**. Assessing the inter-hemispheric transfer of symbolic numeral adaptation effect. OHBM 2025.

Taguma, Yokoi, Kinjo, Tsuchida, Miyata, Lerma-Usabiaga & **Takemura**. Assessing intra-, inter-scanner, and inter-site reproducibility of diffusion MRI-based tractometry. OHBM 2025.

Miyata, Fukunaga, Luo, Yokoi, Yamamoto, Yoshioka, Yang, Morita & **Takemura**. Evaluating the spatial distribution of negative BOLD induced by an auditory task in the human visual cortex. SfN 2024.

Iida, Masuda, Ogawa, Terao, Amano, **Takemura**, Horiguchi, Ogawa, Matsumoto, Nakadomari & Nakano. Sensory modality-independent and task-dependent response in the primary visual cortex (V1) in patients with retinal dystrophy. International Visual Field and Imaging Symposium 2024.

Taguma, Ogawa & **Takemura**. Evaluating the impact of denoising on diffusion MRI-based tractometry on glaucoma patients. OHBM 2024.

Luo, Yokoi & **Takemura**. Perceptual bistability in occluded digital numbers: a behavioral study. OHBM 2024.

Saito, Rapan, Niu, Chao, Tsujimura, Palomero-Gallagher & **Takemura**. Multi-receptor analysis of the macaque lateral geniculate nucleus. OHBM 2024.

**Takemura**, Kaneko, Sherwood, Johnson, Axer, Hecht, Ye & Leopold. Inter-species comparison of the vertical occipital fasciculus across mammalian species: a diffusion MRI study. SfN 2023.

**Takemura**, Kaneko, Sherwood, Johnson, Axer, Ye & Leopold. Comparative diffusion MRI study on the vertical occipital fasciculus across mammalian species. OHBM 2022.

Miyata, Benson, Winawer & **Takemura**. Correlation between microstructural properties of the optic tract and size of primary visual cortex. OHBM 2022.

Iida, Ogawa, **Takemura**, Horiguchi, Miyazaki, Osawa, Kinjo, Matsumoto, Nakadomari, Masuda, Yoshikawa & Nakano. The effect of binocular blindness in critical period on visual white matter pathways: a single case study. ARVO 2022.

**Takemura**, Kimura, Morita & Naito. Tissue properties along the corticospinal tract of the wheelchair racing athlete: a case study. OHBM 2021.

Miyata, Benson, Winawer & **Takemura**. Structural covariance and heritability of the optic tract and primary visual cortex in living human. OHBM 2021.

Oishi, **Takemura** & Amano. Quantitative structural mapping of the lateral geniculate nucleus subdivisions in living human brain. OHBM 2021.

Amemiya, Naito & **Takemura**. Heterogeneous age dependency in the human superior longitudinal fasciculus. OHBM 2021.

**Takemura**, Liu, Kuribayashi & Kida. Advantage of simultaneous multi-slice readout-segmented echo-planar imaging on diffusion MRI measurements of the human optic nerve. ISMRM 2021.

Miyata, Benson, Winawer & **Takemura**. Investigating structural covariance of the human optic tract and primary visual cortex in a neuroimaging dataset. SfN Global Connectome 2021.

**Takemura**, Liu, Kuribayashi & Kida. Advantage of readout-segmented EPI in simultaneous multi-slice diffusion MRI measurements for identifying uncinate fasciculus. ISMRM 2020.

**Takemura**, Liu, Kuribayashi & Kida. Advantage of diffusion MRI with simultaneous multi-slice readout-segmented EPI in tractography. OHBM 2020.

Ogawa, **Takemura**, Horiguchi, Miyazaki, Matsumoto, Masuda, Yoshikawa & Nakano. Tissue properties of visual white matter pathways in glaucoma. OHBM 2020.

Amemiya, Naito & **Takemura**. Structural properties of human superior longitudinal fasciculus lateralization along the lifespan. OHBM 2020.

**Takemura**, Axer, Palomero-Gallagher, Gräbel, Jorgensen, Woods & Zilles. Visualization and mapping of white matter tracts in non-human primate visual system using polarized light imaging. SfN 2019.

Oishi, **Takemura** & Amano. Using macromolecular tissue volume mapping to parcellate magno and parvo subdivisions in the human lateral geniculate nucleus. SfN 2019.

Oishi, **Takemura** & Amano. Using macromolecular tissue volume mapping to identify subdivisions in human lateral geniculate nucleus. APCV 2019.

**Takemura**, Axer, Palomero-Gallagher, Gräbel, Jorgensen, Woods & Zilles. Ultra high-resolution mapping of occipital white matter tracts disentangles current controversies. OHBM 2019.

**Takemura**, Ogawa, Mezer, Horiguchi, Miyazaki, Matsumoto, Shikishima, Nakano & Masuda. Microstructural properties of optic tract and optic radiation after retinal ganglion cell damage. OHBM 2019.

Amemiya, Naito & **Takemura**. Lifespan change in asymmetry of superior longitudinal fasciculus. OHBM 2019.

Uesaki, **Takemura**, Furlan & Smith. White matter tracts adjacent to the cingulate sulcus visual area (CSv) assessed with diffusion MRI. OHBM 2019.

**Takemura**, Kaneko, Pestilli, Silva, Ye & Leopold. Vertical occipital fiber tract in the common marmoset. SfN 2018.

Bullock, **Takemura**, Caiafa, Kitchell, McPherson, Caron & Pestilli. Clarifying the anatomical organization and cortical projections of multiple major white matter tracts associating the human temporal and parietal lobes. SfN 2018.



Yuasa, **Takemura**, Motoyoshi & Amano. Two streams of feedback signals from parietal cortex to visual areas subserve visual awareness. SfN 2018.

**Takemura**, Palomero-Gallagher, Gräbel, Axer, Jorgensen, Woods & Zilles. Ultra high-resolution mapping of vertical occipital fasciculus in the vervet monkey brain. OHBM 2018.

**Takemura**, Berman, Yuasa, Mezer, & Amano. Predicting response latency of human V1 from microstructural properties along the optic radiation. OHBM 2018.

Yuasa, **Takemura**, Motoyoshi & Amano. Transient oscillatory feedback from ipsilateral IPS in response to a visual target. SfN 2017.

Minami, Oishi, **Takemura** & Amano. Functional roles of alpha oscillations underlying the communication between dorsal and ventral visual areas. VSS 2017.

Cousineau, Descoteaux & **Takemura**. Effect of Different Seeding Strategies on Tractometry Reproducibility. ISMRM 2017.

**Takemura**, Uesaki & Ashida. Human white-matter pathway communicating parietal and posterior-insular cortex. SfN 2016.

Oishi, **Takemura**, Aoki, Fujita & Amano. Diffusion properties of human visual white matter correlate with stereoacuity. SfN 2016.

Bullock, **Takemura**, Caiafa & Pestilli. The posterior associative white matter network between the human temporal and parietal brain lobes. SfN 2016.

Bullock, Moehlen, McPherson, Caiafa, **Takemura** & Pestilli. Evidence for a direct white matter tract between human parietal and inferotemporal cortex. APS 2016.

**Takemura**, Pestilli, Weiner, Keliris, Landi, Sliwa, Ye, Barnett, Leopold, Freiwald, Logothetis & Wandell. Occipital vertical fiber system in human and macaque. SfN 2015.

Uesaki, **Takemura** & Ashida. White-matter pathway connecting sensory cortical regions involved in optic-flow processing. ECVF 2015.

**Takemura**, Wandell & Pestilli. (2015, Jun) Ensemble tractography: reducing the parameter dependency of tracking algorithms. OHBM 2015.

Ogawa, Wandell, **Takemura**, Pestilli, Yeatman, Rokem, Horiguchi, Terao, Haji & Masuda. Trans-synaptic changes in central white matter pathways in retinitis pigmentosa. SfN 2014.

Ogawa, **Takemura**, Horiguchi, Terao, Haji, Pestilli, Yeatman, Shikishima, Tsuneoka, Wandell & Masuda. Disease in the photoreceptors (JMD) or retinal ganglion cells (LHON) affects optic tract and radiation tissue properties. ARVO 2014.

Ogawa, Masuda, Horiguchi, **Takemura**, Terao, Haji, Shikishima, Tsuneoka & Wandell. Loss of retinal ganglion cells, but not photoreceptors, transforms tissue properties of long-range occipital-callosal fibers. SfN 2013.

**Takemura**, Pestilli, Rokem, Winawer, Yeatman & Wandell. The visual dorsal and ventral streams communicate through the vertical occipital fasciculus. OHBM 2013.

**Takemura**, Ashida, Amano, Kitaoka & Murakami. Neural correlates of induced motion revealed by fMRI. VSS 2012.

**Takemura**, Ashida, Amano, Kitaoka & Murakami. Neural correlates of induced motion perception in the human visual cortex. SfN 2011.

Sugiura, **Takemura**, Yamamoto & Tsuchiya. A direct interview with a patient who recovered from the persistent vegetative state. ASSC 2011.

**Takemura**, Tajima & Murakami. Modulation of motion integration and segregation by surrounding motion: psychophysics and model. CoSyNe 2011.

**Takemura** & Murakami. Effects of surrounding motion on motion segregation. APCV 2010 (Best Student Poster Award).

**Takemura** & Murakami. Directional judgment between leftward and rightward motions modulated by angular deviation from the horizontal axis. VSS 2010.

**Takemura** & Murakami. Enhancement of motion detection sensitivity by orthogonal illusory motion. SfN 2009.

Tajima, **Takemura**, Murakami & Okada. Motion detection sensitivity modulated by a task-irrelevant illusory motion in an orthogonal direction: a population decoding model. SfN 2009.

**Takemura** & Murakami. Induced motion influences the detection of motion with aperture problem. SfN 2008.

**Takemura** & Murakami. Motion detection sensitivity enhanced by induced motion. VSS 2008.

## **Professional Associations**

*Organization for Human Brain Mapping (OHBM), Vision Society of Japan (VSJ), Japan Neuroscience Society (JNSS), Japan Human Brain Mapping Society (JHBM)*

## **Invited talks**

- 2025** The 15th CiNet Symposium, Japan
- 2024** Japan Society for the Promotion of Science, Japan
- 2024** National Taiwan University, Taiwan
- 2024** Keio University, Japan
- 2024** Japanese Ophthalmological Society Annual Meeting, Japan
- 2024** RIKEN CBS, Japan
- 2023** CNIR IBS, Republic of Korea
- 2023** Chuo University, Japan
- 2023** Hebrew University of Jerusalem, Israel
- 2023** University of Bordeaux, France
- 2023** Basque Center on Cognition, Brain and Language, Basque Country, Basque Country, Spain
- 2022** Princeton University, USA
- 2022** Rutgers University, New Ark, USA
- 2022** Tamagawa University, Japan
- 2022** Nagoya University, Japan
- 2021** The Japanese Neuro-Ophthalmology Society, Tokyo (hybrid meeting), Japan
- 2020** Tokyo Clinical Brain Imaging Analysis Research Meeting (virtual meeting), Japan
- 2020** Japanese Human Brain Imaging meeting (virtual meeting), Japan
- 2020** National Institute for Physiological Sciences, Japan
- 2020** Tamagawa University, Japan
- 2019** ISMRM JPC, QST, Chiba, Japan
- 2019** Hebrew University of Jerusalem, Israel
- 2019** STYP meeting, Waseda University, Japan
- 2019** Nanyang Technological University, Singapore
- 2019** The Jikei University School of Medicine, Japan
- 2018** Omron Keihanna Technology Innovation Center, Japan
- 2018** 4th CiNet Conference, CiNet, Japan
- 2017** International Symposium on Nanomedicine, Tohoku University, Japan
- 2017** International workshop on Vision, Action and Brain, Kyoto University, Japan
- 2017** Human Brain Imaging meeting, Tamagawa University, Japan
- 2017** Forschungszentrum Jülich, Germany

**2017** ATR, Japan  
**2016** National Institute for Physiological Sciences, Japan  
**2016** Duke-NUS Medical School, Singapore  
**2016** Nanyang Technological University, Singapore  
**2016** Kochi University of Technology, Japan  
**2015** NAIST, Japan  
**2015** RIKEN CLST, Japan  
**2015** NIPS symposium, Japan  
**2015** Indiana University Bloomington, USA  
**2015** Vision Society of Japan/Tutorial Talk on diffusion MRI  
**2014** Kyoto University, Japan  
**2014** UCSF, USA  
**2014** UC Berkeley, USA  
**2014** ATR, Japan  
**2014** RIKEN BSI, Japan  
**2014** CiNet, Japan  
**2013** NIH, USA  
**2013** Univ. Pennsylvania, USA  
**2013** New York University, USA  
**2013** Caltech, USA  
**2013** RIKEN BSI, Japan  
**2013** Tamagawa University, Japan  
**2013** CiNet, Japan  
**2013** NIPS, Japan  
**2012** Kyoto University, Japan  
**2012** University of Nevada, Reno, USA  
**2012** Kyushu University, Japan  
**2012** ATR, Japan  
**2011** Chiba University, Japan  
**2010** UTCP, Japan

### **Ad hoc Reviewer (journal)**

*Aperture Neuro*

*Attention, Perception & Psychophysics*

*Brain Structure and Function*

*Cerebral Cortex*

*Cognitive Processing*

*Communications Biology*

*Cortex*

*Current Biology*

*eNeuro*

*Frontiers in Neuroscience*

*Frontiers in Neuroanatomy*

*Human Brain Mapping*

*IEICE Transactions on  
Information and Systems*

*Journal of Neurophysiology*

*Journal of Neuroscience*

*Journal of Vision*

*Journal of Visualized Experiments*

*Nature Communications*

*Nature Human Behaviour*

*Nature Methods*

*Neurobiology of Language*

*NeuroImage*

*PLoS Biology*

*PLoS ONE*

*PNAS*

*Science*

*Scientific Reports*

*Vision Research*

## **Ad hoc Academic Editor**

*PLoS Biology*

## **Ad hoc Reviewer (grant)**

*Netherland Organization for Scientific Research, Israel Science Foundation*

## **Ad hoc Reviewer (Ph.D. dissertation)**

*Hebrew University of Jerusalem, The University of Queensland, SOKENDAI*

## **Outreach**

**2022-2024** The organizer of the OHBM Multilingual Live Kids Reviews, Japanese event

**2017** Public lecture at Yamaguchi Gakugei University (organized by Research Institute for Time Studies, Yamaguchi University, Japan)

**2010** Invited talk at science café, organized by The University of Tokyo Center for Philosophy (UTCP), Tokyo, Japan

## **Other professional activities**

**2024-present** Council member, Japan Human Brain Mapping Society

**2023-present** Council member (Secretary), Organization for Human Brain Mapping

**2020-present** Handling Editor, *Aperture Neuro*

**2018-present** Section Editor, *Brain Structure and Function*

**2025** Program Committee Chair, Japan Human Brain Mapping Society

**2024** Organizer, International Symposium on Brain Structure and Function

**2023** Meeting Chair, The 7th Japanese Meeting for Human Brain Imaging

**2022** Meeting Chair, The 7th CiNet Conference

**2021-2022** Editor of *Brain Structure and Function* Special issue “Structure and Function of the Visual system” (co-edited with Marcello Rosa)

**2020** Editor of *Brain Structure and Function* Special issue “Structural connectivity of the cerebral cortex” (co-edited with Michel Thiebaut de Schotten)

<b>2020-2023</b>	Program Committee, Organization for Human Brain Mapping
<b>2020</b>	Executive committee of ISMRM Japanese Chapter Annual Meeting
<b>2017-present</b>	Organizing committee of Japanese Meeting for Human Brain Imaging
<b>2019</b>	Organizer of CiNet MRI Study Group
<b>2019</b>	Abstract Review Committee, Asia-Pacific Conference on Vision
<b>2016-2019</b>	Organizer of CiNet Diffusion Reading Club
<b>2015-2016</b>	Organizer of CiNet Vision Seminar Series, CiNet
<b>2014-2015</b>	Organizer of Vision Lunch Seminar Series, Stanford University
<b>2008-2011</b>	Vice President, Society for Young Researchers on Neuroscience, Japan.

## **References for Hiromasa Takemura**

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**Franco Pestilli, Ph.D. Professor, The University of Texas, Austin** Department of Psychology, The University of Texas, Austin pestilli [at]

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