

To be made public on 2023 May 23

KAKENHI Transformative Research Area (B)



Understanding the relationship between the structure of qualia and information

Research Area Newsletter (No. 5)

(Only summary. See details for Newsletter No 1-4).

2020 Oct 1- 2023 Mar 31

Organizational Meetings

2022.12.2-4

Qualia Structure Grant Meeting **Nara Kasugano Hall** [Youtube](#)

2022.07.05

AI & Brain Speakers: Yamada, Taniguchi, Suzuki, Shimazaki (2022) [Youtube](#), [International Symposium on Artificial Intelligence and Brain Science \(AIBS2022\)](#)

2022.07.07-08

PI only Qualia week meeting at Kyoto University and Ritsumeikan University

2022.03.7-11

Qualia Week Zoom & Gather

2021.11.30

[Event] Qualia Structure Symposium on Development of Consciousness.

Organizer: Yusuke Moriguchi (Kyoto U, Japan) and Qualia Structure [YouTube in English](#)

2021.07.30

[Event] Qualia Structure Symposium at the Japan Neuroscience Society (qualia structure)

[YouTube in English](#)

[Follow up discussion](#)

2021.07.01-02

[Event] The 1st research area meeting was held by Zoom and Gather.

[Program](#)

2021.05.12

[Event] Information Structure of Brain and Qualia Symposium

[YouTube in English](#)

2021.03.17

[Event] Color qualia symposium was held.

Talk 1: [YouTube in English](#)

Talk 2: Follow-up discussion-1 [YouTube in Japanese](#)

Talk 3: Follow-up discussion-2 [YouTube in English](#)

2020.11.10

[Event] A kick-off meeting was held at Zoom. [YouTube in Japanese](#)

2020.10.02

Our project was launched.

Activity highlights

Increase in the members for qualia structure: Since 2021, Moriguchi, Koizumi, Saigo and Phillips have participated as area members.

2021.11.23

2nd Q-1 Grandprix: Characters, Logos, and Sounds! Sound qualia at Youtube [link1](#) [link2](#) [link3](#)

2021.01.03

1st Q-1 Grandprix: Character and logo mark designs.

2021.11.10

Neuroscience News. [Manuscript](#)

Publications (2020 Oct 1-2023 Mar 31)

Book

1. 西郷(Phillips(5章)、土谷・山田・大泉(6章))
『圏論の地平線』 技術評論社 西郷甲矢人(著)488ページ
2. 土谷尚嗣『クオリアはどこからくるのか？ 統合情報理論のその先へ』岩波科学ライブラリ 308 12月16日 [iwanaami](#) [amazon](#)
3. 森口佑介(2021)『子どもの発達格差 将来を左右する要因は何か』 PHP新書

Collaborative Peer reviewed papers

1. **New Moriguchi, Y.; Phillips, S.** Evaluating the Distinction between Cool and Hot Executive Function during Childhood. Brain Sci. 2023, 13, 313.
<https://doi.org/10.3390/brainsci13020313>
2. Ariel Zeleznikow-Johnston, Yasunori Aizawa, **Makiko Yamada, Naotsugu Tsuchiya** (2023) Journal of Cognitive Neuroscience. Are colour experiences the same across the visual field? DOI: https://doi.org/10.1162/jocn_a_01962 osf.io/yuq2v
3. **Tsuchiya Naotsugu, Hayato Saigo, Steven Phillips.** (2022, Dec, Accepted). An adjunction hypothesis between qualia and reports. Frontiers in Psychology. Volume 13 [doi: 10.3389/fpsyg.2022.1053977](https://doi.org/10.3389/fpsyg.2022.1053977) Retrieved from psyarxiv.com/q8ndj [VIDEO](#)
4. Kawakita, G., Zeleznikow-Johnston, A., **Tsuchiya, N., & Oizumi, M.** (2023, January 7). Is my "red" your "red"? Unsupervised alignment of qualia structures via optimal transport.
<https://doi.org/10.31234/osf.io/h3pqm>
5. Kusztor A, Alemany Gonzalez M, **Tsuchiya N and Koizumi A.** Stage 1 Registered Report: Do psychological diversities contribute to preventing the coronavirus spread? Testing a neurodiversity hypothesis amidst the COVID-19 pandemic [version 1; peer

review: awaiting peer review]. F1000Research 2022, 11:432

DOI:<https://doi.org/10.12688/f1000research.111280.1>

6. *森口 佑介, 土谷 尚嗣, 西郷 甲矢人「認知発達と構造——圏論からのアプローチ——」心理学評論 (2023 Feb 6 accepted)
7. **Tsuchiya Naotsugu, Steven Phillips, and Hayato Saigo**. “Enriched Category as a Model of Qualia Structure Based on Similarity Judgements.” *Consciousness and Cognition* 101 (May 1, 2022): 103319. <https://doi.org/10.1016/j.concog.2022.103319>. OSF preprints <https://osf.io/ucjnz/> (free PDF till 2022 July 4 <https://www.sciencedirect.com/science/article/pii/S1053810022000514?dgcid=author>) <https://doi.org/10.1016/j.concog.2022.103319>
8. **Naotsugu Tsuchiya & Hayato Saigo** “A relational approach to consciousness: categories of level and contents of consciousness” (2021) [Neuroscience of Consciousness](#)
9. Kotaro Ishizu, Tomoyo I. Shiramatsu, Rie Hitsuyu, **Masafumi Oizumi, Naotsugu Tsuchiya**, Hirokazu Takahashi “Information flow of spontaneous and auditory-evoked neural activity in the rat thalamo-cortical system”, 2021, [Scientific Reports](#)

Other peer reviewed publications

10. Chuyin, Z., Koh, Z., Gallagher, R., Nishimoto, S., & **Tsuchiya, N.** (2022) F1000Research. What can we experience and report on a rapidly presented image? Intersubjective measures of specificity of freely reported contents of consciousness. DOI: <https://doi.org/10.31234/osf.io/d2s38> Behavioral [data](#), analysis [code](#), [stimuli](#), [experimental code](#) are all available [version 2; peer review: 2 approved]. F1000Research 2022, 11:69 DOI: <https://doi.org/10.12688/f1000research.75364.2>
11. Epping, G., Fisher, E., Zeleznikow-Johnston, A., Pothos, E., & **Tsuchiya, N.** (2022, Dec 1, accepted by Cognitive Sciences). A Quantum Geometric Framework for Modeling Color Similarity Judgements (PsyArxiv version) DOI: <https://doi.org/10.31234/osf.io/vtzrq> [Cognitive Science Volume 47, Issue 1](#) e13231 <https://doi.org/10.1111/cogs.13231>
12. *Leung A, *Mahmoud A (*for equal contribution), Jeans R, Fulcher BD, van Swinderen B, **Tsuchiya N.** (2022, Oct 12, Stage 1 accepted registered report) PLoS Biology, Towards blinded classification of loss of consciousness: distinguishing wakefulness from general anesthesia and sleep in flies using a massive library of univariate time series analyses DOI: https://osf.io/cve7k/?view_only=0067864857ce4673ac6a352ac326d7ca [TwitterThread](#)
13. Leung, A., & **Tsuchiya, N.** (2023, January 15). Separating weak integrated information theory (IIT) into IIT-inspired and aspirational-IIT approaches. Retrieved from psyarxiv.com/kxywt
14. Shunsuke Kamiya, Genji Kawakita, Shuntaro Sasai, Jun Kitazono, **Masafumi Oizumi** (2023) Optimal Control Costs of Brain State Transitions in Linear Stochastic Systems. *Journal of Neuroscience*, 43 (2), 270-281
15. Jun Kitazono, Yuma Aoki, **Masafumi Oizumi** (2022) Bidirectionally connected cores in a mouse connectome: Towards extracting the brain subnetworks essential for consciousness. *Cerebral Cortex*.

16. Genji Kawakita, Shunsuke Kamiya, Shuntaro Sasai, Jun Kitazono, **Masafumi Oizumi** (2022) Quantifying brain state transition cost via Schrödinger's bridge. *Network Neuroscience*, 6 (1), 118–134.
17. 大泉匡史 (2022) 意識の数理的な理論はどのように実験的に検証されるべきか？生体の科学, 73(1), 1-5.
18. Sakata, C., Ueda, Y., & **Moriguchi, Y.** (2023). The contextual cueing effect disappears during joint search in preschool children. *Journal of Experimental Child Psychology*, 227, 105592.
19. Yamaguchi, M., Xianwei, M., Ishibashi, M., **Moriguchi, Y.**, Mitsuishi, H., & Itakura, S. (2022). Individual differences in children's anthropomorphic tendencies to their special objects. *Cognitive Development*, 63, 101224.
20. Okanda, M., Meng, X., Kanakogi, Y., Uragami, M., Yamamoto, H., & **Moriguchi, Y.** (2022). Gender stereotypes about intellectual ability in Japanese children. *Scientific reports*, 12(1), 1-14.
21. Matsuyoshi D, Isato A, **Yamada M.** Machine learning unveils latent architecture of superiority illusion that predicts visual illusion perception and metacognitive performance. *bioRxiv*. 2022 Oct 25. doi: <https://doi.org/10.1101/2022.10.24.513462>.
22. Isato A, Yokokawa K, Higuchi M, Suhara T, **Yamada M.** Resting-state functional connectivity relates to interindividual variations in positive memory. *Behav Brain Res* 419, 2022 Feb 15: 113663. doi:10.1016/j.bbr.2021.113663. PMID:34780857.
23. Yahata N, Isato A, Kimura Y, Yokokawa K, Zhang MR, Ito H, Suhara T, Higuchi M, **Yamada M.** Neural network of superiority illusion predicts the level of dopamine in striatum. *bioRxiv*. 2022 Feb 2. doi:10.1101/2022.02.01.478593.
24. Kojima K, Hirano S, Kimura Y, Seki C, Ikoma Y, Takahata K, Ito T, Yokokawa K, Hashimoto H, Kawamura K, Zhang MR, Ito H, Higuchi M, Kuwabara S, Suhara T, **Yamada M.** Brain 5-HT_{2A} receptor binding and its neural network related to behavioral inhibition system. *Brain Imaging Behav*, 2022 Jan 10. doi:10.1007/s11682-021-00609-2. Online ahead of print. PMID:35006540.
25. 山田真希子 (2022) 意識していることへの意識～意識の再帰性を考える. 生体の科学 (2022).
26. Alemany-Gonzalez M., Wokke E. M., Chiba, T. Narumi, T., Watanabe, K., Nakazawa, K., Imamizu, H., & **Koizumi, A.** Fear in action: Fear conditioning and alleviation through body movements. *BioRxiv*, 2022 DOI: <https://doi.org/10.1101/2022.06.20.496915>.
27. **Phillips, S.** (2022a). Transitive inference in non-humans: Not so fast! In, *Proceedings of the 44th Annual Conference of the Cognitive Science Society*, pp. 2416-2422. Austin, TX: Cognitive Science Society. Toronto, Canada. July 27-30.
28. **Phillips, S.** (2022b). What is category theory to cognitive science? Compositional representation and comparison. *Frontiers in Psychology*, 13, 1048975. DOI: <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1048975/full>
29. Nicolas Decat, Jasmine Walter, Zhao H. Koh, Piengkwan Sribanditmongkol, Ben D. Fulcher, Jennifer M. Windt, Thomas Andriillon, **Naotsugu Tsuchiya** (2022, June 14 accepted) "Beyond traditional visual sleep scoring: massive feature extraction and unsupervised clustering of sleep time series" *Sleep Medicine* <https://doi.org/10.1016/j.sleep.2022.06.013>

30. McFadyen J, **Tsuchiya N**, Mattingley JB and Garrido MI (2022) Surprising Threats Accelerate Conscious Perception. *Front. Behav. Neurosci.* 16:797119. doi: 10.3389/fnbeh.2022.797119
31. Liang Q, Gallagher R, **Tsuchiya N** (2022, Apr 28 accepted) Apr 5, Stage 2 manuscript: "How much can we differentiate at a brief glance: Revealing the truer limit in conscious contents through the Massive Report Paradigm (MRP)" *Royal Society Open Science* 8 <https://doi.org/10.1098/rsos.210394>(pdf) https://psyarxiv.com/us6pv/#_
32. Angus Leung, **Naotsugu Tsuchiya** (2022) *Entropy* 2022, 24(5), 625; <https://doi.org/10.3390/e24050625> Emergence of integrated information at macro timescales in real neural recordings (bioRxiv <https://doi.org/10.1101/2022.03.07.483390>)
33. Shivam Kalhan, Jessica McFadyen, **Naotsugu Tsuchiya**, Marta I. Garrido (2022, Apr 9, accepted by Human Brain Mapping) "Neural and computational processes of accelerated perceptual awareness and decisions: A 7T fMRI Study" DOI: 10.1002/hbm.25889
34. Gambarota, F., **Tsuchiya, N.**, Pastore, M., Di Polito, N., & Sessa, P. (2022, Accepted Mar 10). *Neuroscience and Behavior Reviews* "Unconscious Visual Working Memory: a critical review and Bayesian meta-analysis."
35. Oliver M. Cliff, Joseph T. Lizier, **Naotsugu Tsuchiya** and Ben D. Fulcher (2022, Jan 31), Unifying Pairwise Interactions in Complex Dynamics <https://arxiv.org/abs/2201.11941> arxiv, [codes available](#)
36. Hagihara, H., Yamamoto, H., **Moriguchi, Y.**, & Sakagami, M. A. (2022). When "shoe" becomes free from "putting on": The link between early meanings of object words and object-specific actions. *Cognition*, 226, 105177.
37. Hagihara, H., Ishibashi, M., **Moriguchi, Y.**, & Shinya, Y. (2022). Object labeling activates young children's scale errors at an early stage of verb vocabulary growth. *Journal of Experimental Child Psychology*, 222, 105471.
38. Asada, K., Itakura, S., Okanda, M., **Moriguchi, Y.**, Yokawa, K., Kumagaya, S., ... & Konishi, Y. (2022). Understanding of the Gricean maxims in children with autism spectrum disorder: Implications for pragmatic language development. *Journal of Neurolinguistics*, 63, 101085.
39. **Phillips, S.** (2021). A formal comparison/contrast of associative and relational learning: a case study of relational schema induction. In T. Fitch et al (Eds.), *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. Vienna, Austria. July 26-29
40. **Saigo, H.** Category Algebras and States on Categories. *Symmetry* 2021, 13, 1172. <https://www.mdpi.com/2073-8994/13/7/1172>
41. **Tsuchiya** & Miyata (2022) Towards understanding structures of emotional qualia and their neural substrates 感情クオリア構造とその神経基盤の解明に向けて Google [Doc](#) 生体の科学
42. Mohammad Shehata, Miao Cheng, Angus Leung, **Naotsugu Tsuchiya**, Daw-An Wu, Chia-huei Tseng, Shigeki Nakauchi, Shinsuke Shimojo (2021) [eNeuro](#) "Team flow is a unique brain state associated with enhanced information integration and neural synchrony"

43. Sharon Daniel, Thomas Andrillon, **Naotsugu Tsuchiya**, Jeroen van Boxtel (2021) Divided Attention in The Tactile Modality. [Attention, Perception, and Psychophysics](#)
44. Quettier, T., Gambarota, F., **Tsuchiya, N.**, & Sessa, P. (2021). Blocking facial mimicry during binocular rivalry modulates visual awareness of others' facial expressions of emotion [Sci Rep](#) 11, 9972 (2021). <https://doi.org/10.1038/s41598-021-89355-5> . data & codes available at <https://osf.io/xk25b/>
45. Thomas Andrillon, Angus Burns, Teigane MacKay, Jennifer Windt, **Naotsugu Tsuchiya** (2021) "Predicting lapses of attention with sleep-like slow waves" *Nat Commun* 12, 3657 (2021). <https://doi.org/10.1038/s41467-021-23890-7>
46. Keisuke Ota, Yasuhiro Oisi, Takayuki Suzuki, Muneki Ikeda, Yoshiki Ito, Tsubasa Ito, Kenta Kobayashi, Midori Kobayashi, Maya Odagawa, Chie Matsubara, Yoshinori Kuroiwa, Masaru Horikoshi, Junya Matsushita, Hiroyuki Hioki, Masamichi Ohkura, Junichi Nakai, **Masafumi Oizumi**, Atsushi Miyawaki, Toru Aonishi, Takahiro Ode, Masanori Murayama (2021) Fast scanning high optical invariant two-photon microscopy for monitoring a large neural network activity with cellular resolution. *Neuron*.
47. Wang, J., Sakata, C., & **Moriguchi, Y.** (2021). The neurobehavioral relationship between executive function and creativity during early childhood. *Developmental Psychobiology*, 63(7), e22191.
48. Kosokabe, T., Mizusaki, M., Nagaoka, W., Honda, M., Suzuki, N., Naoi, R., & **Moriguchi, Y.** (2021). Self-directed dramatic and music play programs enhance executive function in Japanese children. *Trends in Neuroscience and Education*, 24, 100158.
49. **Moriguchi, Y.** (2021). Relationship between cool and hot executive function in young children: A near-infrared spectroscopy study. *Developmental science*, e13165.
50. Nakano, T., Takamura, M., Nishimura, H., Machizawa, M., Ichikawa, N., Yoshino, A., Okada, G., Okamoto, Y., Yamawaki, S., **Yamada, M.**, Suhara, T., & Yoshimoto, J. (2021). Resting-state brain activity can predict target-independent aptitude in fMRI-neurofeedback training. *NeuroImage*, 118733. Advance online publication.
51. Kimura, Y., Takahata, K., Shimazaki, T., Kitamura, S., Seki, C., Ikoma, Y., Ichise, M., Kawamura, **K.**, **Yamada, M.**, Zhang, M. R., Higuchi, M., Nishino, I., & Suhara, T. (2021). Pharmacokinetic and pharmacodynamic assessment of histamine H3 receptor occupancy by enersant: a human PET study with a novel H3 binding ligand, [11C]TASP457. *EJNMMI*, 10.1007/s00259-021-05571-1. Advance online publication.
52. Yota Kawashima, Rannee Li, Spencer Chin-Yu Chen, Richard Martin Vickery, John W Morley, **Naotsugu Tsuchiya** (2021, Feb 12, accepted by PLoS One) "Steady state evoked potential (SSEP) responses in the primary and secondary somatosensory cortices of anesthetized cats: nonlinearity characterized by harmonic and intermodulation frequencies" *bioRxiv* 2020.09.22.307652; doi: <https://doi.org/10.1101/2020.09.22.307652>
53. Angus Leung, Dror Cohen, Bruno van Swinderen, **Naotsugu Tsuchiya**, Integrated information structure collapses with anesthetic loss of conscious arousal in *Drosophila melanogaster* (2021, Jan 19 editorial acceptance by PLoS Comp doi: 10.1371/journal.pcbi.1008722) (2020, May) *bioRxiv* 2020.05.17.090001; <https://www.biorxiv.org/content/10.1101/2020.05.17.090001v2>

54. Matthew James Davidson, Will Mithen, Hinze Hogendoorn, Jeroen James van Boxtel, **Naotsugu Tsuchiya** (2020, Apr 22, Nov 9 accepted by **eLife**) A neural representation of invisibility: when stimulus-specific neural activity negatively correlates with conscious experience **bioRxiv** <https://www.biorxiv.org/content/10.1101/2020.04.20.051334v1>
55. Maier, A., & **Tsuchiya, N.** (2020, Oct 6). Growing Evidence for Separate Neural Mechanisms for Attention and Consciousness. <https://doi.org/10.31234/osf.io/cs8f4>
Attention, Perception, and Psychophysics
56. Haun, A., & **Tsuchiya, N.** (2020, Oct 6). Reasonable criteria for functionalists; scarce criteria from phenomenological perspective. <https://doi.org/10.31234/osf.io/7csfv>
Cognitive Neuroscience
57. Jun Kitazono, Ryota Kanai, **Masafumi Oizumi** (2020) Efficient search for informational cores in complex systems: Application to brain networks. *Neural Networks*, 132, 232-244.
58. Ishibashi, M., & **Moriguchi, Y.** (2021). Neural Basis of Scale Errors in Young Children. *Developmental Neuropsychology*, 46(2), 109-120.
59. Meng, X., & **Moriguchi, Y.** (2021). Neural basis for egalitarian sharing in five-to six-year-old children. *Neuropsychologia*, 154, 107787.
60. **Moriguchi, Y.** (2021). Beyond Bias to Western participants, authors, and editors in developmental science. *Infant and Child Development*.
61. Senzaki, S., Pott, U., Shinohara, I., & **Moriguchi, Y.** (2021). Roles of culture and COMT Val58Met gene on neural basis of executive function: A comparison between Japanese and American children. *Developmental Psychobiology*.
62. Yanaoka, K., **Moriguchi, Y.**, & Saito, S. (2020). Cognitive and neural underpinnings of goal maintenance in young children. *Cognition*, 203, 104378.
63. 山田 真希子, 伊里 綾子. 無意識の優越感が抑うつ症状に果たす役割. *臨床精神医学*, 50(5), 475-481, 2021-05

Book chapters

1. **Tsuchiya** (2022, Oct) Category theoretical understanding of the relations between qualia structures and information strictures クオリア構造と情報構造の関係性を圏論的に理解する 認知科学講座2 心と脳 川合伸幸 編集(東京大学出版会)
2. 布山美慕 & 西郷甲矢人 (2022, sep) 圏論による認知の理解 認知科学講座4 心をとらえるフレームワークの展開 横澤一彦 編集(東京大学出版会)

Media, Youtube

Early career researcher events

“Let’s discuss a paper soon after reading it!” - Youtube & podcast initiated by PhD student Ryoichi Watanabe (Moriguchi lab), RA Yota Kawashima (Tsuchiya lab), PhD student Aniko Kustzor (Tsuchiya lab), PhD student Qianchen Liang (Tsuchiya lab) [From Episode 1-50](#)

2022.01-07 Qualia Structure Journal Club - by Postdoctoral fellow Ariel Zelznikow-Johnston & PhD student Niccolo Negro [From Episode 1-6](#)

2022.02.04 Lab Journal Club - by Postdoctoral fellow Ariel Zelznikow-Johnston [Youtube](#)

2022.09.17 Consciousness Radio: Interview of Tsuchiya & Moriguchi by five graduate students [Youtube](#)

Q&A with students

2022.11.28 Category theory Q&A with students (Nao Tsuchiya), Youtube part [1](#), part [2](#), part [3](#), part [4](#)

2022.07.04 With Nishimoto-san at Okinawa [Youtube in Japanese](#)

2022.04.12 With Inoue-san at [Youtube in Japanese](#)

2022.02.02 With Phil Vukovic at [Youtube in English](#)

2021.07.29 Q & A with a high school student [YouTube in Japanese](#)

2021.09.11 Q & A for studying abroad at an American graduate school- [YouTube in English](#)

Q & A for studying abroad at an American graduate school-Part 1 [YouTube in Japanese](#)

Q & A for studying abroad at an American graduate school-Part 2 [YouTube in Japanese](#)

Lectures, tutorials

2021 version lecture videos on neural basis of consciousness: [playlist](#)

2022.07.20 & 2022.07.21 Category Theory Tutorial by Steven Phillips (Qualia Structure): “Introducing categories to cognitive science: From basics to universal constructions” part 1 [Youtube in English](#), Part 2 [Youtube in English](#)

2020.03.09 & 2020.03.24 Tutorial on category theory. Introduction to consciousness researchers. By Tsuchiya, Saigo & Phillips Part 1 [Youtube in English](#), Part 2 [Youtube in English](#)

Discussion with researchers outside Qualia structures

- 2022.09.30** Discussion with Dr Ariel Zeleznikow-Jonston and Prof Alex Maier at a recent conference. (the Models of Consciousness Meeting in 2022) [Youtube in English](#)
- 2022.10.07** Discussion with Dr Masatoshi Yoshida on How to teach consciousness. [Youtube in Japanese](#)
- 2022.06.24** Discussion with Prof Tadahiro Taniguchi on Natural and Artificial Consciousness [Youtube in Japanese](#)
- 2022.03.31** Interview with Prof Gary Egan : Neuroimaging of primordial emotional consciousness [Youtube in English](#)
- 2022.03.01** Discussion with Prof Shigeru Taguchi on Phenomenology & Consciousness [Youtube in Japanese](#)
- 2022.02.21** Discussion with Prof Hayato Saigo on Consciousness, Carlo Rovelli's Relational quantum mechanics, Nagarjuna [Youtube in Japanese](#)
- 2022.02.16 (1-4)** Discussion with Prof Mile Gu (Singapore) and Kavan Modi (Monash) Quantum Information and Consciousness, [Youtube in English](#)
- 2022.01.22** Discussion with Dr Katsunori Miyahara on Phenomenology Philosophy [Youtube in English](#)
- 2022.05 Special Edition: Summer school in Italy** Lucia Melloni Christof Koch Ralph Adolphs Gabriel Kreimann Marcello Massimini & Marco Rosanova Melanie Boly Larissa Albantakis & Bill Marshall Romy Beate, Enrique Velasco Serna, Andrew Shelton
- 2022.04.12 Alex Maier** - [on function of consciousness](#) On [causal power analysis](#)
- 2021.11.26** Collaboration planning with other areas 1st: Hiro Hamada (Araya) [YouTube in Japanese](#)
- 2021.11.13** Interview with Mutsumi Imai (Keio, Cognitive Psychology) [YouTube in Japanese](#)
- 2021.08.28** Interview with Hiroshi Ishiguro (Osaka, Robotics) [Youtube in Japanese](#)
- 2021.08.24** Interview with Takashi Ikegami (Tokyo, Artificial Life) [Youtube in Japanese](#)
- 2021.04.22** Collaboration planning with other areas 1st: Moonshot Ryota Kanai [YouTube in English](#) Follow-up discussion in Japanese. [YouTube in Japanese](#)
- 2021.04.27** Joint project with other research field: Junji Watanabe (NTT Communication Science Laboratories) [YouTube in Japanese](#)
- 2021.05.25** Outreach planning Interview with Tomonori Takeuchi [YouTube in Japanese](#)

Seminar talks

- 2022.05.23** Neural representations of visually evoked emotional experiences by Dr. Tomoyasu Horikawa (NTT) [Youtube in Japanese](#)
- 2022.03.17** Daniel Bennett: A computational model of subjective emotional experience [Youtube in English](#)
- 2022.03.15** Qualia Structure Seminar: Tadahiro Taniguchi: Symbol Emergence in Robotics

Saigo organized Mathematical Humanity Talks (online zoom based seminar series) since 2021)

International collaborations :

Asia Pacific Consciousness Network was launched.
[Slack](#) (Currently, there are 130 registrants.) [Web site](#)

Members' talks

- Yamada talked at Consciousness Club Tokyo. [YouTube in English](#)
- 2022.03.10** SISReC-Monash Joint Symposium - [Youtube in English](#)
- 2022.07.19** Organization for Computation and Neural System: [Workshop on Highly Comparative Analysis of Neural Dynamics](#)
- 2022.07.19** Organization for Computation and Neural System: [Methods of Information Theory in Computational Neuroscience](#)
- 2022.07.19** Colour and Consciousness at [Wheeler center](#)
- 2021.10.17** [Event] At Consciousness Key, Tsuchiya gave a talk on consciousness research for the general public. [YouTube in English](#)
- 2020.11.27** [Event] At the Natural Sciences Cafe, Tsuchiya gave a talk on consciousness research for the general public. [YouTube in Japanese](#)

Consciousness Talks (Online discussion seminar series)

We are holding Consciousness Talks: Consciousness Talks was established to connect consciousness researchers in the Asia-Pacific region and hold one to three discussion-oriented seminars each month.
[Click here](#) to past Consciousness Talks.

Paper abstract videos

Decat et al 2022 Sleep Medicine [YouTube](#)

Qianchen et al 2022 Royal Society [YouTube in English](#)

Epping et al 2022 ArXiv A Quantum Geometric Model of Color Similarity Judgements
[Youtube in English](#)

2021. Member interviews

2021.08.22 Masafumi Oizumi (Tokyo) [YouTube in Japanese](#)

2021.10.10 Makiko Yamada (QST) Shared within members

2021.11.05 Yusuke Moriguchi (Kyoto) [YouTube in Japanese](#)

2021.11.19 Ai Koizumi (SONY) Shared within members

2021.12.03 Steven Phillips (AIST) [YouTube in English](#)

2021.10.11 Hayato Saigo's interviews with Tsuchiya, Yamada, Oizumi (Horizon of category theory) [Youtube in Japanese part1](#), [part2](#) [part3](#)

2021.03.26 Hayato Saigo (category theory) [YouTube in Japanese](#)

2020.01 A video for Japanese college students was uploaded to Youtube. 1. Interviews with 5 graduate students who are helping with public relations: How did you decide to pursue consciousness research? [YouTube in Japanese](#)