

東北大学 電気通信研究所  
**研究室外部評価 参考資料**  
(2013 年度-2018 年度)

**Research Laboratory Reference Data  
for External Review**

April 2013 – March 2019  
(FY. 2013–2018)

**Research Institute of Electrical Communication  
Tohoku University**

**高次視覚情報システム研究室**

**Visual Cognition and Systems**

## 1. 研究成果 / Research Achievements

### (1) 査読付学術論文 / Refereed journal papers

- (1) Shioiri, S., Kobayashi, M., Matsumiya, K. & Kuriki, I. Spatial representations of the viewer's surroundings. *Scientific reports*, 8, 7171, doi:10.1038/s41598-018-25433-5 (2018).
- (2) Shioiri, S., Hashimoto, K., Matsumiya, K., Kuriki, I. & He, S. Extracting the orientation of rotating objects without object identification: Object orientation induction. *Journal of Vision*, 18(17), doi:10.1167/18.9.17 (2018).
- (3) Kang, D., Sung, Y. W. & Shioiri, S. Estimation of physiological sources of nonlinearity in blood oxygenation level-dependent contrast signals. *Magnetic Resonance Imaging*, 46, 121-129, doi:10.1016/j.mri.2017.10.017 (2018).
- (4) Nagai, T., Hosaka, Y., Sato, T., & Kuriki, I. Relative contributions of low- and high-luminance components to material perception. *Journal of Vision*, 18(13), 6, 1-19, doi:10.1167/18.13.6 (2018).
- (5) Kaneko, S., Murakami, I., Kuriki, I., & Peterzell, D.H. Individual variability in simultaneous contrast for color and brightness: small-sample factor analyses reveal separate induction processes for short and long flashes. *i-Perception*, 9(5), 1-12, doi: 10.1177/2041669518800507 (2018).
- (6) Kuriki, I. A novel method of color-appearance simulation using achromatic point locus with lightness dependence. *i-Perception*, 9(2), 1-16, doi: 10.1177/2041669518761731 (2018).
- (7) Kuriki, I., Lange R., Muto, Y., Brown, A.M., Fukuda K., Tokunaga, R., Lindsey D.T., Uchikawa K., & Shioiri, S., The modern Japanese color lexicon. *Journal of Vision*, 17(1), doi:10.1167/17.3.1 (2017).
- (8) Kaneko, S., Anstis, S., & Kuriki, I. Brief presentation enhances various simultaneous contrast effects. *Journal of Vision*, 17(4), 7, 1-13. doi:10.1167/17.4.7 (2017).
- (9) Cheng, M., Kato, M., & Tseng, C.H. Gender and autistic traits modulate implicit motor synchrony. *PLOS One*, 10(5), doi: 10.1371/journal.pone.0184083 (2017).
- (10) Chan, M.H.M. & Tseng, C.H. Yawning detection sensitivity and yawning contagion. *i-Perception*, 8(4), 1-22, doi: 10.1177/2041669517726797 (2017).
- (11) Jingling, L., Lu, Y.H., Cheng, M., & Tseng, C.H., Collinear masking effect in visual search is independent of perceptual salience. *Attention, Perception, and Psychophysics*, 79(5), 1366-1383 doi: 10.3758/s13414-017-1308-7 (2017).
- (12) Sobko, T., Jia, Z., Kaplan, M., Lee, A., & Tseng, C. H. Promoting healthy eating and active playtime by connecting to nature families with preschool children. Evaluation of pilot study "Play&Grow". *Pediatric Research*, 81(4), 572-581, doi: 10.1038/pr.2016.251 (2017).
- (13) Shioiri, S., Honjyo, H., Kashiwase, Y., Matsumiya, K. & Kuriki, I. Visual attention spreads broadly but selects information locally. *Scientific reports*, 6, doi:10.1038/srep35513 (2016).

- (14) Matsumiya, K., Sato, M. & Shioiri, S. Contrast dependence of saccadic blanking and landmark effects. *Vision Research*, 129, 1-12, doi:10.1016/j.visres.2016.09.016 (2016).
- (15) Kuriki, I., Omori, N., Kashiwase, Y., Matsumiya, K., Tokunaga, R., & Shioiri, S. Measurement of object-based attention using steady-state visual evoked potentials. *Japanese Journal of Physiological Psychology and Psychophysiology*. 33(1), 33-46. doi: 10.5674/jjppp.1505si (2016).
- (16) Sato, T., Nagai, T., Kuriki, I., & Nakauchi, S. Dissociation of Equilibrium Point for Color-Discrimination and Color-Appearance Mechanisms Under Incomplete Chromatic Adaptation. *Journal of the Optical Society of America A*. 33(3), A150-A163, doi: 10.1364/JOSAA.33.00A150 (2016).
- (17) Yang, J., Kanazawa, S., Yamaguchi, M., & Kuriki, I. Cortical response to categorical color perception in infants investigated by near-infrared spectroscopy. *Proceedings of The National Academy of Sciences of U.S.A.* 113(9), 2370-2375. doi: 10.1073/pnas.1512044113 (2016).
- (18) Chow, D., Jingling, L. & Tseng, C.H. Eye-of-origin guides attention away: An ocular singleton column impairs visual search like a collinear column. *Journal of Vision*, 16(1), 12, doi: 10.1167/16.1.12 (2016)
- (19) Tsui, H.M., Ma, Y. K., Ho, A., Chow, D., & Tseng, C.H. Bimodal emotion congruency is critical to preverbal infants' abstract rule learning. *Developmental Science*, 19(3), 382-393, doi: 10.1111/desc.12319 (2016).
- (20) Hatori, Y., Mashita, T., & Sakai, K. Sparse coding generates curvature selectivity in V4 neurons. *Journal of the Optical Society of America A*, 20, 1, 527-537, doi: 10.1364/JOSAA.33.000527 (2016).
- (21) Shioiri, S., Ogawa, M., Yaguchi, H. & Cavanagh, P. Attentional facilitation of detection of flicker on moving objects. *J Vis*, 15, 3, doi:10.1167/15.14.3 (2015).
- (22) Nakashima, R. & Shioiri, S. Facilitation of visual perception in head direction: visual attention modulation based on head direction. *PLoS one*, 10, e0124367, doi: 10.1371/journal.pone.0124367 (2015).
- (23) Nakashima, R., Fang Y., Hatori Y., Hiratani, A., Matsumiya K., Kuriki I., & Shioiri S. Saliency-based gaze prediction based on head direction. *Vision Research*, 117, 59-66, doi: 10.1016/j.visres.2015.10.001 (2015).
- (24) Matsumiya, K. & Shioiri, S. Smooth pursuit eye movements and motion perception share motion signals in slow and fast motion mechanisms. *Journal of Vision*, 15(11), 12, doi: 10.1167/15.11.12 (2015).
- (25) Fang, Y., Nakashima, R., Matsumiya, K., Kuriki, I. & Shioiri, S. Eye-head coordination for visual cognitive processing. *PLoS One*, 10, e0121035, doi: 10.1371/journal.pone.0121035 (2015).
- (26) Fang, Y., Emoto M., Nakahima R., Matsumiya K., Kuriki I., & Shioiri S. Eye-position distribution depending on head orientation when observing movies on ultrahigh-definition television. *ITE Transactions on Media Technology and Applications*, 3, 149-154, doi: 10.3169/mta.3.149 (2015).
- (27) Kuriki, I., Sun, P., Ueno, K., Tanaka, K., & Cheng, K. Hue selectivity of neurons in human visual cortex revealed by BOLD fMRI. *Cerebral Cortex*, 25, 4869-4884. doi: 10.1093/cercor/bhv198 (2015).
- (28) Kuriki, I. Effect of material perception on mode of color appearance. *Journal of Vision*, 15(8), 4, pp.1-13. doi: 10.1167/15.8.4 (2015).

- (29) Kuriki I., Lightness dependence of achromatic point loci in color-appearance coordinates. *Frontiers in Psychology*, **6**:67, pp.1-10. doi: 10.3389/fpsyg.2015.00067 (2015).
- (30) Spillman, L., Dresch-Langley, B., & Tseng, C.H. Beyond the classical receptive fields: the effect of contextual stimuli. *Journal of Vision*, **15**(9):7, doi: 10.1167/15.9.7 1-23 (2015).
- (31) Tseng, C.H. & Jingling, L. A salient and task-irrelevant collinear structure hurts visual search. *PLoS One*, **10**(4), doi: 10.1371/journal.pone.0124190 (2015).
- (32) Lau, E., Wong, M., Lau, K., Hui, F., & Tseng, C.H. Rapid-eye-movement-sleep (REM) associated enhancement of working memory performance after a daytime nap. *PLOS One*, **10**(5), doi: 10.1371/journal.pone.0125752 (2015).
- (33) Tseng, C.H., Gobell, J., & Sperling, G. Factors that Determine Depth Perception of Trapezoids, Windsurfers, Runways. *Frontiers in Human Neuroscience*, **9**:182, doi: 10.3389/fnhum.2015.00182 (2015).
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- (42) Hatori, Y., & Sakai, K. Early Representation of Shape by Onset Synchronization of Border-Ownership-Selective Cells in the V1–V2 Network. *Journal of the Optical Society of America A*, **31**, 4, 716-729, doi: 10.1364/JOSAA.31.000716 (2014).

- (43) Shioiri, S., Yamazaki, T., Matsumiya, K. & Kuriki, I. Rotation-independent representations for haptic movements. *Scientific reports*, 3, doi:10.1038/srep02595 (2013).
- (44) Kashiwase, Y., Matsumiya, K., Kuriki, I. & Shioiri, S. Temporal dynamics of visual attention measured with event-related potentials. *PloS one*, 8, e70922, doi: 10.1371/journal.pone.0070922 (2013).
- (45) Yang, J., Kanazawa, S., Yamaguchi, M.K., & Kuriki I. Investigation of color constancy in 4.5-month-old infants under a strict control of luminance contrast for individual subjects. *Journal of Experimental Child Psychology*, 115, 126-136, doi: 10.1016/j.jecp.2012.11.013 (2013).
- (46) Tseng, C.H., Chow, H.M., & Spillmann, L. Falling skyscrapers: when cross-modal perception of verticality fails. *Psychological Science*, 24(7), doi: 10.1177/0956797612472344 1341-7 (2013).
- (47) Chow, H.M., Jingling, L., & Tseng, C.H. Collinear integration affects visual search at V1. *Journal of Vision*, 13(10), 1-20, doi: 10.1167/13.10.24 (2013).
- (48) Jingling, L., Tseng, C.H., & Zhaoping, L. Orientation is different: interaction between contour integration and feature contrasts in visual search. *Journal of Vision*, 13(3), 1-13, doi: 10.1167/13.3.26 (2013)
- (49) Jingling, L., Tang, D.L., & Tseng, C.H. Salient collinear grouping diminishes local salience in visual search: An eye movement study. *Journal of Vision*, 13(12), 1-10, doi: 10.1167/13.12.6 (2013).
- (50) Sun, W., Spruyt, K., Chen, W., Jian, Y, Schonfeld, D., Adams, R., Shen, X., Tseng, C.H., & Fan, J. The relation among sleep duration, homework burden, and sleep hygiene in Chinese School-Aged Children. *Behavioral Sleep Medicine*, 11:1-14, doi: 10.1080/15402002.2013.825837 (2013).
- (2) 原著論文と同等に扱う査読付国際会議発表論文  
Full papers in refereed conference proceedings equivalent to journal papers
- (1) Hatori, Y., Mashita, T., Sakai, K. Sparseness Controls the Receptive Field Characteristics of V4 Neurons: Generation of Curvature Selectivity in V4, Proc. 23rd International Conference on Artificial Neural Network, Sofia, Republic of Bulgaria. *Lecture Notes in Computer Science*, Vol. 8131, pp.327-334, doi: 10.1007/978-3-642-40728-4\_41 (2013).
- (3) 査読付国際会議 / Papers in refereed conference proceedings
- (1) Wang, H., Matsubara, K., Wada, Y., Tseng, C. H., Matsumiya, K., Kuriki, I., & Shioiri, S. The Evaluation of Images based on Human Preference with Convolutional Neural Networks. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018
- (2) Cheng, M., Wang, H., & Tseng, C.H. The role of familiarity in identify-referential advantage formation. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018.
- (3) Wu, W., Tseng, C.H., Matsumiya, K., Kuriki, I., & Shioiri, S. A pooling model based on inter-ocular velocity for human perception of motion direction in depth. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018

- (4) Shioiri, S., Zhu, B.G., Matsumiya, K., & Kuriki, I., Implicit learning of layout sequences. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018
- (5) Kuriki, I. The model of apparent color estimation under illuminant color and intensity changes. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018.
- (6) Tseng, C.H., Chow, H.M., Tsui, A., Ma, Y.K., & Ding, J. A new paradigm to study infant sensory integration. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018.
- (7) Jingling, L., Tseng, C.H., Ono S., Miura, T., & Shioiri, S. Both occipital and frontal networks are involved in the collinear masking effect in visual search. The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018.
- (8) Tseng, C.H., Chow, H.M. & Chan, C.Y. Eye-defined singleton required visual awareness to capture attention," The 14th Asia-Pacific Conference on Vision (APCV2018), Hangzhou, China, 2018.
- (9) Harasawa, M., Sawahata, Y., Miyashita, Y., Komine, K., & Shioiri, S. The preferred physical size of moving images varied with viewing distance but not with screen size. European Conference on Visual Perception 2018, Trieste, Italy, 2018
- (10) Shioiri, S., Miura, T., Matsumiya, K., Kuriki, I., & Amano, K. Spatial spread of visual attention measured using Steady-State Visually Evoked Fields (SSVEF) . European Conference on Visual Perception 2018, Trieste, Italy, 2018
- (11) Tseng, C.H., Chen, C.C., & Shioiri, S. The effect of attention on the perceptual grouping. European Conference on Visual Perception 2018, Trieste, Italy, 2018
- (12) Sato, T., Nagai, T. & Kuriki, I. Chromatic selectivity of collinear facilitation, Optical Society of America Fall Vision Meeting 2018, Reno, NV, U.S.A., 2018.
- (13) Hayasaka, M., Nagai, T., Sato, T., Tashiro, T., Yamauchi Y., & Kuriki, I. Contrast sensitivity functions measured on luminance-variegated background, Optical Society of America Fall Vision Meeting 2018, Reno, NV, U.S.A., 2018.
- (14) Kuriki, I. Color appearance estimate around achromatic point locus. Optical Society of America Fall Vision Meeting 2018, Reno, NV, U.S.A., 2018.
- (15) Kaneko, S., Kuriki, I., & Andersen, S. K. SSVEP amplitudes reflect hue selectivity in the human brain. Vision Sciences Society 2018, St Pete Beach, FL, U.S.A., 2018
- (16) Kuriki, I., Maemura, W., Matsumiya, K., & Shioiri, S. Representation dissimilarity analysis of cortical responses to color stimuli. ISMRM-Japanese Chapter 2nd meeting, Wako-shi, Saitama, 2018.
- (17) Tseng, C.H. Semantic congruency in infant learning. The 19th Annual International Multisensory Research Forum, Toronto, Canada., 2018.
- (18) Tseng, C.H. Room Escape: Gamification as A Novel Outreach Education Tool. The International Conference on Open and Innovative Education at Hong Kong, Hong Kong, 2018.

- (19) Shehata, M. Cheng, M., Tseng, C.H. Nakauchi, S. Shimoko, S. Neural correlates of interpersonal flow experience. Human Brain Mapping Conference, Singapore, 2018.
- (20) Lam, Y.C., Lau, K.N.T., Chan, C.S., Tseng, C.H., Chung, K.F., Wing, Y.K., & Lau, E.Y.Y. The moderating effects of nighttime sleep duration in emotional memory consolidation during a daytime nap in depressed individuals. The 9th Congress of Asian Sleep Research Society, Hokkaido, Japan, 2018.
- (21) Tse, D.M.S., Lau, K.N.T., Chan, C.S., Tseng, C.H., Chung, K.F., Wing, Y.K., & Lau, E.Y.Y. The physiological ground of Rapid-eye-movement (REM) sleep on emotion perception in depression. The 9th Congress of Asian Sleep Research Society, Hokkaido, Japan, 2018.
- (22) Kamimura, H., Takahashi, S., Shino, M., Marushima, A., Tsurushima, H., Takahashi, N., Ishii, K., Hatori, Y., Gwak, J., Akamatsu, M., Kitazaki, S., & Komine, H. Driving Performances Measures Influenced by Functional Deficits Caused by Stroke; Possible Application to a Driver Health Detection System. 10th International ACM Conference on Automotive User Interfaces, Toronto, Canada, 2018.
- (23) Ishii, K., Machino, T., Yamagami, F., Nogami, A., Aonuma, K., Tsurushima, H., Hatori, Y., Gwak, J., Takahashi, N., Komine, H., Kitazaki, S., & Akamatsu, M. "Prefrontal and muscle oxygenation responses to supraventricular tachycardia. Experimental Biology 2018, San Diego, California, U.S.A., 2018.
- (24) Kuriki, I., Maemura, W., Matsumiya, K., & Shioiri, S. Representation dissimilarity analysis of cortical responses to color stimuli. Neuroscience 2017. Washington, D.C., U.S.A., 2017.
- (25) Hosaka, Y., Nagai, T., Sato, T., & Kuriki, I., Impacts of lower- and higher-luminance components on the material perception. Optical Society of America Fall Vision Meeting. Washington, D.C., U.S.A., 2017.
- (26) Kaneko, S., Murakami, I., Kuriki, I., & Peterzell, D.H. Individual differences in simultaneous contrast for color and brightness: Preliminary small-sample factor analyses reveal separate processes for short and long flashes, different hues and luminance polarities. European Conference on Visual Perception 2017, Berlin, Germany, 2017.
- (27) Kuriki, I., Ren, W., Matsumiya, K., & Shioiri, S. Interactions of colour- and luminance-defined motion signals in human visual cortex measured by fMRI. International Colour Vision Society 2017, Erlangen, Germany, 2017.
- (28) Tregillus, K.E.M., Vanston, J.E., MacLeod, D.I.A., Kuriki, I., Engel, S.A., & Webster, M.A. Color compensation in anomalous trichromats assessed with fMRI. International Colour Vision Society 2017, Erlangen, Germany, 2017.
- (29) Nonomura, M., Tseng, C.H., Matsumiya, K., Kuriki, I., & Shioiri, S. Shift of visual attention to the illusory hand location. The 13rd Asia-Pacific Conference on Vision, Tainan, Taiwan, 2017.
- (30) Lau, E. Y. Y., Lau, K. N. T., Chan, C.S., Tseng, C. H., Chung, K. F., & Wing, Y. K. Effects of sleep on disrupted affective cognition in individuals with depression. S85: Suicide, sleep and circadian rhythms in

adolescents. Symposium accepted for the presentation at World Sleep 2017 Congress, Prague, Czech Republic, 2017.

- (31) Wong, M.L., Tseng, C.H., Wing, Y.K., Rusak, B., Lee, T. M. C., & Lau, E.Y.Y. The association of sleep patterns with risk-related decision-making and planning. SLEEP 2017, the 31st Annual Meeting of the Associated Professional Sleep Societies LLC (APSS), Boston, USA, 2017.
- (32) Matsumiya, K., Sato, M., Shioiri, S. Selective facilitation of the luminance visual pathway by postsaccadic target blanking. The 19th European Conference on Eye Movements (ECEM2017), Wuppertal, Germany, 2017.
- (33) Kuriki, I., Lange, R., Muto, Y., Brown, A.M., Fukuda, K., Tokunaga, R., Lindsey, D.T., Uchikawa, K., & Shioiri, S. Study of the Japanese color lexicon using cluster analysis. Vision Sciences Society 2016, St Pete Beach, FL, U.S.A., 2016.
- (34) Shioiri, S., Nishikawa, R., Matsumiya, K., & Kuriki, I. Visual attention around invisible hands, Vision Sciences Society 2016, St Pete Beach, FL, U.S.A., 2016.
- (35) Miura T., Matsumiya, K., Kuriki, I., & Shioiri, S. Division of Spatial Attention Examined by Evoked Potential. Asia-Pacific Conference on Vision 2016, Fremantle, Australia, 2016.
- (36) Shioiri, S., Ishii, K., Matsumiya, K., & Kuriki, I. Measuring the spotlight of moving attention. Asia-Pacific Conference on Vision 2016, Fremantle, Australia, 2016.
- (37) Kuriki, I., Sun, P., Ueno, K., & Cheng, K. Unifying Histogram for the Population of Hue-Selective Voxels in Human Visual Cortex. OSA Fall Vision Meeting 2016, Rochester NY, U.S.A., 2016.
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- (40) Kaneko, S., Anstis, S., Kuriki, I. Brief presentation enhances various simultaneous contrast effects. Vision Sciences Society 2016, St Pete Beach, FL, U.S.A., 2016.
- (41) Tseng, C.H., & Chen, C.C. Collinear search impairment is luminance contrast invariant. The 39th European Conference on Visual Perception, Barcelona, Spain, 2016.
- (42) Tseng, C.H., & Leung, J. Collinear Gabor structure and visual selective attention. 31st International Congress of Psychology, Yokohama, 2016.
- (43) Tseng, C.H. Gamification of Psychology: Room Escape and Mind Craft. 31st International Congress of Psychology, Yokohama, 2016.
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- (45) Lau, K. N. T., Chan, C. S., Tseng, C.-H., Chung, K. F. Wing, Y. K. & Lau, E. Y. Y. Differential napping effects on the perception of emotional facial expression in depressed versus non-depressed individuals. 23rd Congress of the European Sleep Research Society, Bologna, Italy, 2016.
- (46) Lau, K. N. T., Chan, C. S., Tseng, C.-H., Chung, K. F. Wing, Y. K. & Lau, E. Y. Y. The effects of a daytime nap on processing of facial emotional expression in individuals with remitted depression versus never depressed individuals. 23rd Congress of the European Sleep Research Society, Bologna, Italy, 2016.
- (47) Shioiri, S., Kobayashi, M., Matsumiya, K., Kuriki, I. Contextual cuing for targets in the rear. Vision Sciences Society 2015, St Pete Beach, FL, U.S.A., 2015.
- (48) Yang, J., Kanazawa, S., Yamaguchi, M.K., Kuriki, I. Cortical representation for the categorical color perception in infants investigated by near-infrared spectroscopy. Society for Neuroscience, Chicago, IL, U.S.A., 2015.
- (49) Kuriki, I. Effect of material perception on the mode of color appearance. European Conference of Visual perception. Liverpool, U.K., 2015.
- (50) Shioiri, S., Matsumiya, K., Sato, M. Effects of luminance and isoluminance stimuli on perceived stability across saccadic eye movements: a study of the blanking effect, 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (51) Matsumiya, K., Sato, M., Shioiri, S. Effects of luminance and isoluminance stimuli on perceived stability across saccadic eye movements: a study of the landmark effect. 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (52) Maemura, W., Kuriki, I., Matsumiya, K., Shioiri, S. Differences in fMRI responses to cardinal and unique hues in human visual cortex. 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (53) Kuriki, I., Muto, Y., Fukuda, K., Tokunaga, R., Lindsey, D.T., Brown, A.M., Uchikawa, K., & Shioiri, S. Categorical color clusters of Japanese color lexicon. 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (54) Yang, J., Kanazawa, S., Yamaguchi, M.K., Kuriki, I. Cortical response to categorical color perception in infants investigated by near-infrared spectroscopy. 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (55) Sato, T., Nagai, T., Kuriki, I., Nakauchi, S. Dissociation of neutral chromatic points for color discrimination and color appearance under incomplete chromatic adaptation. 23<sup>rd</sup> Symposium of International Colour Vision Society, Sendai, Japan, 2015.
- (56) Hatori, Y., Kuriki, I., Matsumiya, K., & Shioiri, S. Study on image statistics when color attracts human attention. 2015 AIC midterm meeting, Tokyo, Japan, 2015.
- (57) Lau, E, Wong, L., Lau, K., Hui, F., & Tseng, C.H. Enhancement of working memory performance with a daytime nap. Annual Meeting of America Psychiatric Association, Ontario, Canada, 2015.

- (58) Tseng, C.H., Sun, W., & Chan, N. Chinese infants' familiarity and novelty preference, The 11th Asian-Pacific Conference on Vision, Singapore, 2015.
- (59) Tang, A. & Tseng, C.H. Infants' emotion recognition in biological motions, The 11th Asian-Pacific Conference on Vision, Singapore, 2015.
- (60) Ho, C., Sun, W., & Tseng, C.H. Preverbal infants' sound-shape association with single syllables. The 11th Asian-Pacific Conference on Vision, Singapore, 2015.
- (61) Ng, E., Sun, W., & Tseng, C.H. Infants' familiarity and novelty preference towards emotional faces, The 11th Asian-Pacific Conference on Vision, Singapore, 2015.
- (62) Yeung, Y., Chow, H.M., & Tseng, C.H. Information of ocular origin impairs target discrimination during visual search. The 11th Asian-Pacific Conference on Vision, Singapore, 2015.
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- (10) Tseng, C.H.: Implicit interpersonal communication, Department of Psychology Seminar Talk, University of California, Berkeley, USA, 6/13/2018



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- (22) Ichiro Kuriki: Color representations in higher and lower levels of human visual cortex. Tsinghua University, Beijing, China, 6/29/2017.
- (23) Ichiro Kuriki: Color representations in higher and lower levels of human visual cortex. Institute of Biophysics, Chinese Academy of Science, Beijing, China. 6/29/2017.
- (24) Ichiro Kuriki: Cortical response to categorical color differences in pre-linguistic infants as measured by NIRS. at Beijing Normal University, Beijing, China. 6/28/2017.
- (25) Ichiro Kuriki: Color representation in human visual cortex. 生体医工学会 シンポジウム, 仙台市. 5/3-5/2017.
- (26) Yasuhiro Hatori: Prediction of gaze shifts on movies from integration of eye-head coordination and saliency map. The 4th International Symposium on Brainware LSI, 2/24/2017.
- (27) Ichiro Kuriki: Color in the cortex. (acted as Session organizer) Symposium "Farbe im Kopf (Color in the mind)", University of Tübingen, Tübingen, Germany, 9/22-23/2016.
- (28) Ichiro Kuriki: Cortical response to categorical colors in prelingual infants. Symposium "Seeing Colors: International symposium on color vision", University of Regensburg, Regensburg, Germany, 9/19-21/2016.

- (29) 塩入 諭:注意範囲の計測とその利用, 第 18 回感性工学会大会, 東京, 9/9/2016.
- (30) 塩入 諭:読書を用いた視機能評価方法の開発, 第 52 回日本眼光学学会, 東京, 9/3/2016.
- (31) Ichiro Kuriki: Representation of color in human brain at higher and lower levels. CiNet seminar, Osaka, 11/19/2015.
- (32) Tseng, C.H.: Walking in pairs: synchronization in joint improvisation, International Workshop on Improvised Joint Motion, Paris, 11/5/2015.
- (33) Ichiro Kuriki: Hue selectivity of human visual cortex revealed by fMRI. Vision Talk, Department of Psychology, U.C., San Diego, San Diego, CA, 10/23/2015.
- (34) Tseng, C.H.: Multisensory development during infancy, Department of Experimental Psychology, Oxford University, 8/21/2015.
- (35) Shioiri, S., Honjyo, H., Kashiwase, Y., Matsumiya, K. and Kuriki, I.: Different spatial tunings of visual attention with different EEG measures. Asia-Pacific Conference on Vision (APCV), Nanyang Technological University, Singapore, 7/10-12/2015.
- (36) 塩入 諭:視覚と脳処理 —我々はなにを見ているか—, 東北データベースソサエティ平成 27 年特別講演会, 6/24/2015
- (37) Shioiri S.: Eye-head coordination for visual perception and attention the 4th International Conference on Informatics, Electronics & Vision (ICIEV), Kitakyushu, Japan, 6/15-18, 2015
- (38) Ichiro Kuriki, Pei Sun, Kenichi Ueno, Keiji Tanaka, & Kang Cheng: Color selectivity of neurons in human visual cortex revealed by fMRI. International workshop on “Level-processing of color vision - optics, cone and color perception”, Yokohama, 3/4/2015.
- (39) Ichiro Kuriki: Measurement of the internal representation and flow of visual information in human visual cortex. 10th AEARU workshop on Computer Science and Web Technology, University of Tsukuba, 2/26/2015.
- (40) 栗木一郎:「脳内における視覚特徴情報の内部表現およびフローについて」電子情報通信学会, ニューロコンピューティング研究会, 仙台市. 11/22/2014.
- (41) 羽鳥康裕:頭部運動を用いた自然光景動画観察時の視線予測, 人間の視覚的注意モデリングに対するマルチモーダルアプローチおよび行動認識・理解への応用に関する調査, 長野, 9/25/2014.
- (42) Tseng, C.H.: Infant Cross-modal Learning, Symposium “Infant visual perception and beyond” in Asian-Pacific Conference on Visual Perception, Takamatsu, Japan, 7/22/2014.
- (43) Jiale Yang, So Kanazawa, Masami K. Yamaguchi, Ichiro Kuriki: Development of Categorical Color perception in Infants. Symposium “Infant Visual Perception and Beyond” in Asia-Pacific Conference on Vision, Takamatsu, 7/22/2014.
- (44) Tseng, C.H.: Perceptual Dissociation of Body Coordinate and Space Coordinate, Symposium in Asian-Pacific Conference on Visual Perception, Takamatsu, 7/20/2014.

- (45) 塩入 諭: “視覚的注意における空間特性の多重性” 生理学研究所研究会「視知覚の現象・機能・メカニズム - 生理学的、心理物理学的、計算論的アプローチ」, 6/13/2014.
- (46) Shioiri S.: Spread of visual attention and attentional selection. National Taiwan University Psychology Seminar Talk, Taiwan, 4/27/2014.
- (47) Shioiri S.: Visual attention around an invisible hand. China Medical University talk, Taiwan, 4/29/2014.
- (48) Tseng, C.H.: Visual attention and its modeling challenges, Harvard Medical School Seminar, Boston, MA, USA, 5/20/2013.
- (49) Tseng, C.H.: Social and cognitive learning in infancy, Department of Psychology Colloquium, University of Massachusetts, Boston, USA, 5/22/2013.

## 2. 学会活動 / Activities in academic societies

### (1) 学会役員等の活動 / Activities on committees of academic societies

Name	Year	Organization/post
Shioiri, S.	2009-2013	Vision Society of Japan/President
Shioiri, S.	2014-	Vision Society of Japan/Secretary
Shioiri, S.	2016	Tohoku branch of The Institute of Image Information and Television Engineers/Branch chief
Shioiri, S.	2006-	Tohoku branch of The Institute of Image Information and Television Engineers/Branch official
Tseng C.H.	2014	Hong Kong Psychology Association Annual Meeting/Scientific Committee
Kuriki, I.	2011-2019	Vision Society of Japan/Secretary

### (2) 学術的国際会議の企画・運営

Planning and organizing academic international conferences.

Name	Year	Organization/post
Shioiri S..	2014	Asian Pacific Conference on Vision 2014 Chair
Shioiri S..	2013-2015	Asian Pacific Conference on Vision / Council Member
Tseng, C.H.	2017	Asian Pacific Conference on Vision / Organization Committee
Tseng, C.H.	2014-2016	Asian Pacific Conference on Vision / Council Member
Kuriki, I.	2011-2015	International Colour Vision Society 2015 / Organization Committee (local chair)

Kuriki, I.	2013-2014	Asian Pacific Conference on Vision / Organizing committee (local chair)
Symposia at RIEC, Tohoku University		
Name	Year	Organization/post
Shioiri S.	2019	Symposium of understanding the brain mechanisms of "mind"/Organization Committee
Shioiri S.	2019	Symposium of Yotta Informatics - Research Platform for Yotta-Scale Data Science /Organization Committee
Shioiri S.	2017	Symposium of Yotta-scale data science /Organization Committee
Shioiri S.	2018	When AI meets human science 2nd Tohoku U - NTU symposium /Organization Committee
Shioiri S.	2017	When AI meets human science 1st NTU - Tohoku U symposium /Organization Committee
Shioiri S.	2018	The 5th RIEC International Symposium on Brainware LSI/Organization Committee
Shioiri S.	2017	The 4th RIEC International Symposium on Brainware LSI/Organization Committee
Shioiri S.	2016	The 3rd RIEC International Symposium on Brainware LSI/Organization Committee
Shioiri S.	2015	The 2nd RIEC International Symposium on Brainware LSI/Organization Committee
Shioiri S.	2014	The 1st RIEC International Symposium on Brainware LSI/Organization Committee
Shioiri S.	2014	RIEC International Symposium on Perception and Communication/Organization Committee

(3) 学術論文誌の編集・査読 / Editor and reviewer for academic journals.

[Editor]

Name	Year	Journal name
Kuriki, I.	2011-2019	Optical Review

[Reviewer]

Name	Journal name
Shioiri, S.	Frontiers in Psychology, Vision Research Acta Psychologica Journal of Vision
Kuriki, I.	Cerebral Cortex Frontiers in Psychology,

	i-Perception Journal of Innovative Optical Health Sciences Journal of Neuroscience Journal of the Optical Society of America A Journal of Vision Neuroscience Review Optics Express Optical Review Scientific Reports Vision The journal of the Vision Society of Japan The journal of the Institute of Image Information and Television Engineers Journal of the Color Science Association of Japan
Tseng, C.H.	Psychological Review Scientific Reports Journal of Experimental Psychology Psychological Sciences Vision Research Journal of Vision Perception Chinese Journal of Psychology
Hatori Y.	Computer Vision and Image Understanding International Joint Conference on Artificial Neural Network International Conference on Neural Information Processing Journal of Information Processing

### 3. 社会貢献 / Contributions to society

#### (1) 教育活動 / Educational activities outside university

Year	Organizer/Organization	Nature of activity	Instructor
2018	Tsinghua University	Lecture of color vision	Kuriki, I.
2018	Chinese Academy of Sciences	Lecture of color vision	Kuriki, I.
2015	The University of Hong Kong	Lecture at Xmas Taster Program	Tseng, C.H.
2013	The University of Hong Kong	Public Lecture on attention	Tseng, C.H.

#### (2) 産業界における指導・啓蒙 / Instruction and education for industry

Year	Organizer/Organization	Nature of activity	Instructor
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2018	INDUSTRY AND SCIENCE SYSTEMS CO., LTD	Seminar of vision science	Shioiri, S.
2018	Technical Information Institute Co., LTD	Seminar of vision science in VR/AR technology	Shioiri, S.
2018	Ricoh Co., LTD	Seminar of computational theory in brain	Kuriki, I.

(3) 国・地方自治体・公共団体における活動

Activities for national and local governments, and public organizations

Year	Organizer/Organization	Nature of activity	Instructor
2010-2012	Ministry of Internal Affairs and Communication	Assessment committee of 3D display	Shioiri, S.,
2006-2011	NHK Science & Technology Research Laboratories	Visiting Research	Shioiri, S.,
2011--	NHK Science & Technology Research Laboratories	Research Adviser	Shioiri, S.,

(4) アウトリーチ活動 / Outreach activities

Year	Organizer/Organization	Nature of activity	Instructor
2018	Japan Broadcasting Corporation	Interview about color vision	Kuriki, I.
2017, 2018	Junior high school students in Sendai	Lecture and introductory experiment of vision science for Junior high school students	Shioiri, S., Tseng, C.H.
2018	Sendai III high school	A trial lecture for high school students	Shioiri, S.
2017, 2018	Yokote high school	A trial lecture for high school students	Kuriki, I.
2016	Kakegawa Nishi high school	A trial lecture for high school students	Kuriki, I.
2016	Hitachi 1st high school	A trial lecture for high school students	Kuriki, I.
2015	iCable	Broadcasted TV programs to design psychology experiments in local Hong Kong context	Tseng, C.H.
2014	Koyamadai high school	A trial lecture for high school students	Kuriki, I.
2014	Hoshino high school	A trial lecture for high school students	Kuriki, I.
2014	The University of Hong Kong	Served as faculty advisor for a student knowledge exchange project "Hong	Tseng, C.H.

		Kong Youth Leadership Program”	
2014	Citizens of Shengzen	Public Lecture on Psychology and Communication	Tseng, C.H.
2014	Parents of infants	Talk on 0-1 year infants’ visual world	Tseng, C.H.
2014	Psychology Student Society	Conducted the Room Escape Game to promote psychology	Tseng, C.H.
2014	The University of Hong Kong Academic of Talents Opening Ceremony	High Table Dinner Guest Speaker	Tseng, C.H.
2014	AM 730 (a free newspaper in Hong Kong)	Coordinated the column “Psychology and Brain Science”	Tseng, C.H.
2013	Sendai III high school	A trial lecture for high school students	Shioiri, S.
2013	High school students in Sendai	Lecture and introductory experiment of vision science for high school students	Shioiri, S.
2013	The University of Hong Kong	Coordinated the “HKU Young Brain Scientist Program” for secondary students to increase their awareness of the potential impact from brain science research	Tseng, C.H.
2013	Medical educators	Public Lecture on infant development	Tseng, C.H.

#### 4. 競争的資金の獲得状況 / Research funds/grants received

##### (1) 科学研究費補助金 / Grant-in-Aid for Scientific Research (KAKENHI)

Category	Name	Project year	Principal/Co-investigator	Total budget (Unit:1,000 yen)	Title of research project
Grant-in-Aid for Scientific Research on Innovative Areas	Shioiri, S.	2016-2018	Principal investigator	3,380	Estimation of representation of phantom limbs and application using flash lag effect and hand related illusion
Grant-in-Aid for Challenging	Shioiri, S.	2016-2017	Principal investigator	7,280	Identification of material perception

Exploratory Research					using flash lag effect
Grant-in-Aid for Scientific Research (B)	Shioiri, S.	2010-2013	Principal investigator	19,630	Function and role of parallel processing in motion perception
Grant-in-Aid for Scientific Research on Innovative Areas	Kuriki, I.	2018-2020	Principal investigator	6,400	Property of visual and material perception under wide luminance range environment
Grant-in-Aid for Scientific Research on Innovative Areas	Kuriki, I.	2016-2018	Principal investigator	6,100	Role of partial information of luminance histogram and contribution of spatial resolution in material perception
Grant-in-Aid for Challenging Exploratory Research	Kuriki, I.	2015-2018	Principal investigator	2,900	Measurement of spatial distribution of visual attention by using SSVEP evoked by dichoptic stimulation
Grant-in-Aid for Scientific Research (B)	Kuriki, I.	2015-2018	Principal investigator	15,400	Interactions of bottom-up and top-down signal of vision in human brain
Grant-in-Aid for Scientific Research on Innovative Areas	Kuriki, I.	2013-2016	Principal investigator	4,500	Relationships between mode of color appearance and material perception, and its neural basis.
Grant-in-Aid for Scientific Research on	Tseng C.H.	2018-2020	Principal investigator	4,290	Non-verbal communication through yawning: a cross-cultural comparison



Innovative Areas					
Grant-in-Aid for Young Scientists (B)	Hatori, Y.	2017-2019	Principal investigator	3,900	Investigation of attention induced by voluntary actions
Grant-in-Aid for Scientific Research (A)	Kuriki, I.	2015-2019	Co-investigator	22,500	Study of visual illusions
Grant-in-Aid for Scientific Research (A)	Kuriki, I.	2013-2016	Co-investigator	2,000	Approach in Physiological optics and psychophysics to reveal universal color vision mechanism compensating for individual difference in the cone number ratio in the retina

(2) 受託研究費 / Other grants and subsidies

Category	Name	Project year	Principal/Co-investigator	Total budget (Unit:1,000 yen)	Title of research project
Supports from MEXT	Shioiri, S.	2018-2022	Principal investigator	30,000/year	Establishment of Advanced Institute of Yotta Informatics
JST Crest	Shioiri, S.	2010-2015	Major Co-investigator	55,580	Behavior Understanding based on Intention-Gait Model.
RIEC matching fund	Shioiri, S.	2011-2013	Principal investigator	2,500	Investigation of index for visual comfortability

Category	Name	Project year	Principal/Co-investigator	Total budget (Unit:HKD)	Title of research project
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Health and Medical Research Fund, Food and Health Bureau, HK	Tseng, C.H.	2015-2017	Principal investigator	620,718	An efficient and portable test of visual contrast sensitivity for preverbal infants
GRF (General Research Fund), Research Grant Council, HK	Tseng, C.H.	2015-2017	Co-Principal investigator	388,990	Sleep and Risk-related Decision-making in Adolescents and Young Adults
Health and Medical Research Fund, Food and Health Bureau, HK	Tseng, C.H.	2015-2017	Co-Principal investigator	526,856	Effects of sleep disturbances on disrupted affective cognition in individuals with depression
GRF (General Research Fund), Research Grant Council, HK	Tseng, C.H.	2012-2014	Principal investigator	494,023	Perceptual grouping in attentional Search

#### 5. 国際共同研究・連携研究・連携教育活動の実績

International joint research, collaborative research, and collaborative education

Name	Project year	Collaborator	Title of research project	Achievement
Shioiri, S.	2017-	Su-Ling Yeh, Li-Chen Fu (National Taiwan University)	AI and Human Studies	MOU for Collaboration between Research Institute of Electrical Communication of Tohoku University and AI and Advanced Robotics Center of National Taiwan University
Shioiri, S.	2010-2015	Patrick Cavanagh (University of Minnesota)	Attentional facilitation of detection of flicker on moving	A paper published in Journal of vision 15 (14),1-11 (2015)

Shioiri, S.	2009-2018	Sheng He (University of Minnesota)	Extracting the orientation of rotating objects without object identification: Object orientation induction	A paper published in Journal of vision 18 (9), 17 (2018)
Shioiri, S., Kuriki, I.	2011-2018	Delwin Lindsey (Ohio State University, USA) I-Ping Chen (National Chiao Tung University, Taiwan) Chanprapha Phuangsuan (Rajamangala University of Technology Tanyaburi, Thailand)	Cultural and individual differences in color lexicon	The modern Japanese color lexicon Journal of vision 17 (3), 1,1-17 (2017)
Kuriki, I.	2016-2019	Prof. Michael A. Webster (University of Nevada, Reno)	Cortical responses to color in anomalous trichromats assessed with fMRI.	International Conference Presentation:1 (Tregillus et al., International Colour Vision Society 2017). Journal paper in preparation:1
Tseng, C.H.	2014-2017	Dr. Jingling Li (China Medical University, Taiwan)	Attention and Perceptual Learning	International Conference Presentation:6 Journal paper: 4
Tseng, C.H.	2014-2018	Dr. Doris Chow (University of Massachusetts, Boston, USA)	Infant social and cognitive learning	International Conference Presentation: 4 Journal paper: 2
Tseng, C.H.	2013.3-6	Professor Lothar Spillmann (Freiburg University, Germany)	Foundation of vision science	Development of 8-week graduate seminar course Journal paper:1

6. 共同利用・共同研究拠点活動の実績

Achievements of work done under the framework of Joint Usage/Research Center

[RIEC Cooperative Research Project]

Category	Name	Project year	Principal/Co-investigator	Title of research project
Type B: Research Project	Shioiri, S.	2018	Principal investigator	Research on information quality and value
Type B: Research Project	Shioiri, S.	2018-	Co-investigator	Understanding the brain mechanisms of "mind"
Type B: Research Project	Shioiri, S.	2015-2017	Co-investigator	Parallel processes of brain functions
Type B: Research Project	Shioiri, S.	2012-2014	Co-investigator	Study of human perceptual/cognitive and decision processes
Type A: Research Project	Shioiri, S.	2016-2018	Co-investigator	Study of the cooperative environment system for building visual cognition models
Type A: Research Project	Shioiri, S.	2018-	Co-investigator	Faculty of Humanity-oriented Science and Engineering
Type A: Research Project	Shioiri, S.	2013-2015	Co-investigator	Cooperative Simulation Environment for Modeling Visual Systems
Type A: Research Project	Shioiri, S.	2014-2016	Co-investigator	Cultural and individual differences in color lexicon
Type B: Research Projects Seminar	Kuriki, I.	2016-2018	Principal investigator	Visual mechanisms for SHITSUKAN perception
Type B: Research Projects Seminar	Kuriki, I.	2013-2015	Principal investigator	Studies on cortical mechanisms for visual perception of object-surface attributes.
Type A: Research Project	Kuriki, I.	2013-2015	Principal investigator	Multi-channel color representation in human brain
Type A: Research Project	Kuriki, I.	2018-2019	Co-investigator	Quantification of basic visual properties in high dynamic range scenes
Type A: Research Project	Kuriki, I.	2017-2019	Co-investigator	Cultural and individual differences in color lexicon

Type A: Research Project	Kuriki, I.	2016-2017	Co-investigator	Display technology for high dynamic range images using a stochastic dithering method
Type A: Research Project	Tseng, C.H.	2016-2019	Principal investigator	Social communication: behavioral and brain representations
Type A: Research Project	Tseng, C.H.	2016-2019	Co-investigator	The effect of attention on the integration of image components in the human visual system
Type A: Research Project	Tseng, C.H.	2016-2018	Co-investigator	Mind and environment interface: Human attention in the brain
Type A: Research Project	Tseng, C.H.	2018-2019	Co-investigator	Pre-verbal infant learning: Infants' preference and understanding from eye movements and pupil dilation

## 7. 研究教育指導 / Research supervision

### (1) 担当講義リスト / List of lectures

Course title	Year	Instructor
Freshman seminar: What do we see? - Exploring visual functions.	2013-2019	Shioiri, S.
Image Processing	2013-2019	Shioiri, S.
Numerical Computing	2013-2019	Shioiri, S. Kuriki, I.
Advanced cognitive psychology	2013-2015	Tseng, C.H.
Introduction to psychology	2013-2015	Tseng, C.H.
Social Innovation Internship	2014-2015	Tseng, C.H.
Perception	2013-2014	Tseng, C.H.
Statistical Analysis	2017	Hatori, Y.
Higher Order Vision Science	2013-2019	Shioiri, S. Kuriki, I. Tseng, C.H. (2018-)

### (2) 学位取得者リスト

List of bachelor's, master's and doctoral degree students supervised

## [Doctoral degree students]

Title of thesis	Name	Year	Note
Study on Eye-Head Coordination for Gaze Movement	Fang, Y.	2015	
Development of a multi-echo EPI (echo-planar imaging) technique for fMRI and its application to vision science	Kang, D.H.	2017	

## [Master degree students]

Title of thesis	Name	Year	Note
Investigation of motion perception by using speed-sensitive adaption effect	Yamada, Y.	2014	
Explicit/Implicit learning effect to the spatial layout of one's surrounding	Kobayashi, M.	2015	
Spatial characteristics during the movement of attention location measured by Steady-State Visual Evoked Potential	Ishii, K.	2016	
Measurement of visual attention and EEG around invisible hands	Nishikawa, R.	2016	
Modeling the visual process contextual cuing effect	Yuan, Z.	2016	
Implicit learning of a penalty rule from feedback signals during visual search	Miyamoto, K.	2017	
fMRI measurement of cortical responses to unique hues	Maemura, W.	2017	
Contextual cuing effect for target sequence	Zhu, B.G.	2017	
Interaction between color- and luminance-defined motion perception	Ren, W.	2017	
Investigation of spatial spread of attention by visual evoked potential	Miura, T.	2018	
Voluntary hand movements modulate visual attention around near hand space	Nonomura, M.	2018	
The enhancement of smooth pursuit eye movements to own hand movements	Oikawa, R.	2019	
The effect of spatial position for serial dependence effect	Sakai, T.	2019	
Comparison of attention deployment around dominant and non-dominant hands	Sasada, T.	2019	

The Estimation of Higher-Order Image Features with Convolutional Neural Networks	Wang, H.	2019	
Comparison between temporal characteristics of material and early visual feature processing	Takakura, K.	2019	
Monocular motion processing for perception of motion in depth	Kusaka, R.	2019	

[Bachelor degree students]

Title of thesis	Name	Year	Note
Investigation of spatial characteristics during the movement of attention location	Ishii, K.	2014	
Modulation of visual attention to the prei-hand space	Nishikawa, R.	2014	
Alert sounds alter behaviors during visual search	Miyamoto, K.	2015	
Comparison of cortical responses to cardinal and unique hues	Maemura, W.	2015	
Division of spatial attention examined by evoked potential	Miura, T.	2016	
The sense of hand position affects attention deployment in the peri-hand space	Nonomura, M.	2016	
Hand movements affect smooth pursuit eye movements	Oikawa, R.	2017	
Examination of material perception by using flash-lag effect	Goto, N.	2017	
Cross-modal interaction between visual and auditory attention measured by steady-state evoked potential	Nagasawa, H.	2017	
Measurement of the interaction between visual and auditory attention	Ono, S.	2018	
Investigation of color- and luminance-defined motion examined by motion aftereffect	Koshizaka, W.	2018	
Study on the effect of luminance contrast change before and after saccade on blanking effect	Takano, S.	2018	
Implicit learning of a penalty rule contingent on one's action	Ishii, M.	2019	
Dominant hand affects the deployment of attention in the peri-hand space	Iwai, K.	2019	

Influence of the High Dynamic Range environment on material perception	Watanabe, G	2019	
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#### 8. 叙勳・受賞・表彰 / Honors, awards, and prizes

- (1) Best Paper Award, Lau, K., Chan, C., Tseng, C.H., Lam, Y.C., Cheng, W., Tse, D., Chung, KF, Wing, Y.K., & Lau, E. The role of napping in reducing negative attentional bias in depression. The Health Research Symposium, 2019.
- (2) Innovative Practice Award 2018 Champion, Tseng, C.H., Room Escape: an integrated milestone for university education. International Conference on Open and Innovative Education, 2018.
- (3) Best Student Paper second place, Cheng, M., & Tseng, C.H. Implicit interpersonal communication measured by walking synchronization. Hong Kong Psychology Society Annual Conference, 2015.
- (4) Excellent Paper Award, Hatori, Y., Fang Y., Matsumiya K., Kuriki, I., & Shioiri, S. The role of head orientation for the estimation of gaze shifts during watching a large display. Fuzzy, Artificial Intelligence, Neural Network, and Computational Intelligence 2015, 2015.
- (5) Excellent Presentation Award, Hatori, Y. The role of head orientation for the estimation of gaze shifts during watching a large display. Fuzzy, Artificial Intelligence, Neural Network, and Computational Intelligence 2015, 2015.
- (6) Best Student Paper, Sun, W., Jian, Y., Tseng, C.H., & Jian, F. Infant night waking and its association with neurodevelopment. Sleep Conference in Hong Kong, 2014.
- (7) Best Student Paper second place, Chan, N. & Tseng, C.H. I prefer the new over the old!" Chinese infants prefer novelty for nature images and foreign faces. Hong Kong Psychology Society Annual Conference, 2014.
- (8) RGC Undergraduate Research Awards, Yao, S. supervised by Tseng, C.H. Joint action measured without awareness. 2013.
- (9) Student Travel Award, Ma, Y.K., & Tseng, C. H. 8-10 month-olds do not need emotional and social cues to learn a bimodal abstract rule. The 9th Asian Pacific Conference on Vision, 2013.
- (10) Student Travel Award, Chow, H.M., & Tseng, C.H. Invisible collinear integration impairs visual search. The 9th Asian Pacific Conference on Vision, 2013.



(11)

Best Presentation

Award, Nakashima, R. & Shioiri, S. Visual attention modulation based on head direction, The Japanese Psychonomic Society Annual meeting, 2014

9. その他 / Others