

CURRICULUM VITAE

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EDUCATION

- | | | |
|------|-------|--|
| 2011 | Ph.D. | Division of Physical and Health Education, Graduate School of Education, The University of Tokyo, Tokyo, Japan
Thesis: <i>Dynamics of Sleep Stage Transitions: A Novel Approach to Human Sleep Research</i>
Advisor: Yoshiharu Yamamoto, Ph.D. |
| 2008 | M.Sc. | Division of Physical and Health Education, Graduate School of Education, The University of Tokyo, Tokyo, Japan |
| 2006 | B.Sc. | Division of Physical and Health Education, Faculty of Education, The University of Tokyo, Tokyo, Japan |

PROFESSIONAL EXPERIENCE

RESEARCH EXPERIENCE

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|--------------|---|
| 2025–present | Lecturer, Department of Systems Pharmacology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan |
| 2023–present | Group Leader, Human Sleep Measurement Group, ERATO Ueda Biological Timing Project, Tokyo, Japan |
| 2022–2025 | Project Lecturer, Department of Systems Pharmacology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan |
| 2019–2023 | PRESTO Researcher, Japan Science and Technology Agency (JST), Saitama, Japan |
| 2014–2022 | Assistant Professor, Division of Physical and Health Education, Graduate School of Education, The University of Tokyo, Tokyo, Japan |

- 2014 Project Researcher, Division of Physical and Health Education, Graduate School of Education, The University of Tokyo, Tokyo, Japan
- 2013–2014 JSPS Postdoctoral Fellow for Research Abroad, Division of Pulmonary, Critical Care and Sleep Medicine, Department of Medicine, New York University School of Medicine, New York, NY, USA (Advisor: David M. Rapoport, M.D.)
- 2010–2014 Postdoctoral Fellow (Volunteer), Pain & Fatigue Study Center, Beth Israel Medical Center, New York, NY, USA (Advisor: Benjamin H. Natelson, M.D.)
- 2010–2013 Postdoctoral Fellow (Assistant Research Scientist), Division of Pulmonary, Critical Care and Sleep Medicine, Department of Medicine, New York University School of Medicine, New York, NY, USA (Advisor: David M. Rapoport, M.D.)
- 2009–2011 Research Fellow of the Japan Society for the Promotion of Science (DC), Graduate School of Education, The University of Tokyo, Tokyo, Japan (Advisor: Yoshiharu Yamamoto, Ph.D.)

TEACHING EXPERIENCE

- 2022–present Instructor, Fieldwork (Igaku-ni-Sessuru); College of Arts and Sciences, The University of Tokyo
- 2022–present Instructor, UTokyo Amgen Scholars Program; The University of Tokyo
- 2022–present Instructor, Free Quarter; Faculty of Medicine, The University of Tokyo
- 2022–present Adjunct Lecturer, Special Lectures on Information Physics and Computing; Faculty of Engineering, The University of Tokyo
- 2016–2021 Faculty, Laboratories in Physical and Health Education III; Division of Physical and Health Education, Faculty of Education, The University of Tokyo
- 2015–2021 Adjunct Lecturer, Practical Sciences of Cooperative Human-Relationships, Lifestyle, Brain and Development; College of Arts and Sciences, The University of Tokyo
- 2015–present Faculty (Omnibus), Introduction to Physical and Health Education I; Faculty of Education, The University of Tokyo
- 2015–2021 Faculty, Laboratories in Physical and Health Education I; Division of Physical and Health Education, Faculty of Education, The University of Tokyo
- 2014–2021 Faculty, Laboratories in Physical and Health Education II; Division of Physical and Health Education, Faculty of Education, The University of Tokyo
- 2008–2010 Teaching Assistant, Laboratories in Physical and Health Education I; Division of Physical and Health Education, Faculty of Education, The University of Tokyo
- 2008–2010 Teaching Assistant, Laboratories in Physical and Health Education II; Division of Physical and Health Education, Faculty of Education, The University of Tokyo
- 2006–2008 Teaching Assistant, Practice of Health and Activity I; Seibo College of Nursing
- 2006–2008 Teaching Assistant, Practice of Health and Activity II; Seibo College of Nursing

ENGLISH PUBLICATIONS

PEER REVIEWED JOURNAL PUBLICATIONS

- [1] Bechny, M., **A. Kishi**, L. Fiorillo, J. van der Meer, M. Schmidt, C. Bassetti, A. Tzovara, F. Faraci. Novel digital markers of sleep dynamics: causal inference approach revealing age and gender phenotypes in obstructive sleep apnea. *Scientific Reports*. 15:12016, 2025.

- [2] Sharan, R. V., H. Takeuchi, **A. Kishi**, Y. Yamamoto. Macro-sleep staging with ECG-derived instantaneous heart rate and respiration signals and multi-input 1-D CNN-BiGRU. *IEEE Transactions on Instrumentation & Measurement*, 73:1–12, 2024.
- [3] Song, M., Z. Yang, A. Triantafyllopoulos, Z. Zhang, H. Takeuchi, T. Nakamura, **A. Kishi**, T. Ishizawa, K. Yoshiuchi, B. W. Schuller, Y. Yamamoto. Empowering mental health monitoring using a macro-micro personalization framework for multimodal-multitask learning: descriptive study. *JMIR Mental Health*, 11:e59512, 2024.
- [4] Suwa, K., T. Nakamura, **A. Kishi**, H. Takeuchi, K. Yoshiuchi, Y. Yamamoto. Daily associations between presenteeism and health-related factors among office workers: an ecological momentary assessment approach. *Journal of Occupational and Environmental Medicine*, 66:e382–e391, 2024.
- [5] Takeuchi, H., T. Ishizawa, **A. Kishi**, T. Nakamura, K. Yoshiuchi, Y. Yamamoto. Just-in-time adaptive intervention for stabilizing sleep hours of Japanese workers: Microrandomized trial. *Journal of Medical Internet Research*, 26:e49669, 2024.
- [6] **Kishi, A.**, H. P. A. Van Dongen. Phenotypic interindividual differences in the dynamic structure of sleep in healthy young adults. *Nature and Science of Sleep*, 15:465–476, 2023.
- [7] Takeuchi, H., K. Suwa, **A. Kishi**, T. Nakamura, K. Yoshiuchi, Y. Yamamoto. The effects of objective push-type sleep feedback on habitual sleep behavior and momentary symptoms in daily life: mhealth intervention trial using a healthcare Internet of Things system. *JMIR mHealth and uHealth*, 10:e39150, 2022.
- [8] Saito, T., H. Suzuki, **A. Kishi**. Predictive modeling of mental illness onset using wearable devices and medical examination data: machine learning approach. *Frontiers in Digital Health*, 4:861808, 2022.
- [9] Shirota, A., M. Kamimura, **A. Kishi**, H. Adachi, M. Taniike, T. Kato. Discrepancies in the time course of sleep stage dynamics, electroencephalographic activity and heart rate variability over sleep cycles in the adaptation night in healthy young adults. *Frontiers in Physiology*, 12:623401, 2021.
- [10] Ojio, Y., **A. Kishi**, T. Sasaki, F. Togo. Association of depressive symptoms with habitual sleep duration and sleep timing in junior high school students. *Chronobiology International*, 37:877–886, 2020.
- [11] **Kishi, A.**, S. Haraki, R. Toyota, Y. Shiraishi, M. Kamimura, M. Taniike, H. Yatani, T. Kato. Sleep stage dynamics in young patients with sleep bruxism. *SLEEP*, 43:1–12, 2020.
- [12] **Kishi, A.**, I. Yamaguchi, F. Togo, Y. Yamamoto. Markov modeling of sleep stage transitions and ultradian REM sleep rhythm. *Physiological Measurement*, 39:084005, 2018.
- [13] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. A robust method with high time resolution for estimating the cortico-thalamo-cortical loop strength and the delay when using a scalp electroencephalography applied to the wake-sleep transition. *Methods of Information in Medicine*, 57:122–128, 2018.
- [14] **Kishi, A.**, H. P. A. Van Dongen, B. H. Natelson, A. M. Bender, L. O. Palombini, L. Bittencourt, S. Tufik, I. Ayappa, D. M. Rapoport. Sleep continuity is positively correlated with sleep duration in laboratory nighttime sleep recordings. *PLoS ONE*, 12:e0175504, 2017.
- [15] Varga, A. W., M. E. Wohlleber, S. Giménez, S. Romero, J. F. Alonso, E. L. Ducca, K. Kam, C. Lewis, E. B. Tanzi, S. Tweardy, **A. Kishi**, A. Parekh, E. Fischer, T. Gumb, D. Alcolea, J. Fortea, A. Lleó, K. Blennow, H. Zetterberg, L. Mosconi, L. Glodzik, E. Pirraglia, O. E. Burschtin, M. J. de Leon, D. M. Rapoport, S. Lu, I. Ayappa, R. S. Osorio. Reduced slow-wave sleep is associated with high cerebrospinal fluid A β 42 levels in cognitively normal elderly. *SLEEP*, 39:2041–2048, 2016.
- [16] Varga, A. W., E. L. Ducca, **A. Kishi**, E. Fischer, A. Parekh, V. Koushyk, P. L. Yau, T. Gumb, D. P. Leibert, M. E. Wohlleber, O. E. Burschtin, A. Convit, D. M. Rapoport, R. S. Osorio, I. Ayappa. Effects of aging on slow wave sleep dynamics and human spatial navigational memory consolidation. *Neurobiology of Aging*, 42:142–149, 2016.

- [17] Varga, A. W., **A. Kishi**, J. Mantua, J. Lim, V. Koushyk, D. P. Leibert, R. S. Osorio, D. M. Rapoport, I. Ayappa. Apnea-induced rapid eye movement sleep disruption impairs human spatial navigational memory. *The Journal of Neuroscience*, 34:14571–14577, 2014.
This paper was featured in *This Week in The Journal*.
- [18] **Kishi, A.**, F. Togo, D. B. Cook, M. Klapholz, Y. Yamamoto, D. M. Rapoport, B. H. Natelson. The effects of exercise on dynamic sleep morphology in healthy controls and patients with chronic fatigue syndrome. *Physiological Reports*, 1:e00152, 2013.
This paper was selected for inclusion in the *Physiological Reports Virtual Issue: New Directions in Muscle Research*.
- [19] **Kishi, A.**, B. H. Natelson, F. Togo, Z. R. Struzik, D. M. Rapoport, Y. Yamamoto. Sleep-stage dynamics in patients with chronic fatigue syndrome with or without fibromyalgia. *SLEEP*, 34:1551–1560, 2011.
- [20] **Kishi, A.**, H. Yasuda, T. Matsumoto, Y. Inami, J. Horiguchi, M. Tamaki, Z. R. Struzik, Y. Yamamoto. NREM sleep stage transitions control ultradian REM sleep rhythm. *SLEEP*, 34:1423–1432, 2011.
- [21] **Kishi, A.**, H. Yasuda, T. Matsumoto, Y. Inami, J. Horiguchi, Z. R. Struzik, Y. Yamamoto. Sleep stage transitions in healthy humans altered by central monoaminergic antagonist. *Methods of Information in Medicine*, 49:458–461, 2010.
- [22] **Kishi, A.**, Z. R. Struzik, B. H. Natelson, F. Togo, Y. Yamamoto. Dynamics of sleep stage transitions in healthy humans and patients with chronic fatigue syndrome. *American Journal of Physiology, Regulatory, Integrative and Comparative Physiology*, 294:R1980–R1987, 2008.

BOOK CHAPTERS

- [1] Togo, F., **A. Kishi**, B. H. Natelson. Chronic fatigue syndrome and fibromyalgia. In: *Handbook of Sleep Disorders in Medical Conditions*, Savard, J. and M-C. Ouellet, editors. Academic Press, pp.325–343, 2019.
- [2] Togo, F., **A. Kishi**, B. H. Natelson. Sleep and fibromyalgia. In: *New Insights into Fibromyalgia*, William S. Wilke, editor. InTech, pp.3–18, 2012.

PEER REVIEWED CONFERENCE PROCEEDINGS

- [1] Song, M., Z. Yang, A. Triantafyllopoulos, T. Nakamura, Y. Zhang, Z. Ren, H. Takeuchi, **A. Kishi**, T. Ishizawa, K. Yoshiuchi, H. Zhao, K. Qian, B. Hu, B. W. Schuller, Y. Yamamoto. Crossmodal transformer on multi-physical signals for personalised daily mental health prediction. *Proceedings of IEEE International Conference on Data Mining Workshops (ICDMW)*. pp.1299–1305, 2023.
- [2] Song, M., A. Triantafyllopoulos, Z. Yang, H. Takeuchi, T. Nakamura, **A. Kishi**, T. Ishizawa, K. Yoshiuchi, X. Jing, Z. Zhao, V. Karas, K. Qian, B. Hu, B. W. Schuller, Y. Yamamoto. Daily mental health monitoring from speech: a real-world Japanese dataset and multitask learning analysis. *2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. pp.1–5, 2023.
- [3] Wang, Y., K. Qian, J. Nelson, H. Yagi, **A. Kishi**, K. Morita, Y. Yamamoto. Can affective computing better the mental status of the computer games player? A perspective. *2020 IEEE 2nd Global Conference on Life Sciences and Technologies (LifeTech)*. pp.366–367, 2020.
- [4] Yamaguchi, I., **A. Kishi**, F. Togo, Y. Yamamoto. Method to extract latent semantic components from noisy categorical time-series data applied to human sleep stage data. *2019 International Conference on Noise and Fluctuations (ICNF)*, pp.200–203, 2019.
- [5] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. Spectral analysis method for sleep-state cycle based on the cortico-thalamo-cortical loop strength estimation. *2017 International Conference on Noise and Fluctuations (ICNF)*, pp.1–4, 2017.

- [6] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. Wake-sleep transition from the perspective of cortico-thalamo-cortical loop: Electroencephalogram data analysis and simulation. *Proceedings of the 8th International Workshop on Biosignal Interpretation*, pp.112–115, 2016.
- [7] **Kishi, A.**, I. Yamaguchi, F. Togo, Y. Yamamoto. Markov modeling of sleep stage transitions and ultradian REM sleep rhythm: A simulation study. *Proceedings of the 8th International Workshop on Biosignal Interpretation*, pp.108–111, 2016.
- [8] **Kishi, A.**, B. H. Natelson, F. Togo, Z. R. Struzik, D. M. Rapoport, Y. Yamamoto. Sleep stage transitions in chronic fatigue syndrome patients with or without fibromyalgia. *Conference Proceedings of the 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, IEEE Engineering in Medicine and Biology Society, pp.5391–5394, 2010.
- [9] **Kishi, A.**, H. Yasuda, T. Matsumoto, Y. Inami, J. Horiguchi, Z. R. Struzik, Y. Yamamoto. Sleep stage transitions in healthy humans altered by central serotonergic and dopaminergic antagonist. *Proceedings of the IFMBE/IMIA 6th International Workshop on Biosignal Interpretation*, pp.9–12, 2009.
- [10] **Kishi, A.**, Z. R. Struzik, B. H. Natelson, F. Togo, Y. Yamamoto. Dynamics of sleep stage transitions in health and disease. In: *Noise and Fluctuations*, Tacano, M., Y. Yamamoto, and M. Nakao, editors. American Institute of Physics, pp.671–674, 2007.

OTHER ARTICLES

- [1] Ueda, H. R., **A. Kishi**. Faculty Opinions Recommendation of [Watanabe T, eLife 2021 10:e69079]. In Faculty Opinions, 07 Nov 2022; 10.3410/f.741076573.793596324.

INTERNATIONAL PRESENTATIONS

REFEREED INTERNATIONAL CONFERENCE PRESENTATIONS

- [1] Bechny, M., M. Scutari, J. van der Meer, M., F. D. Faraci, S. Meystre, B. H. Natelson, **A. Kishi**. Unveiling sleep dysregulation in chronic fatigue syndrome with and without fibromyalgia through bayesian networks. *23rd International Conference on Artificial Intelligence in Medicine (AIME 2025)*. Pavia, Italy (June, 2025). [oral presentation; accepted]
- [2] Tanaka, M., M. Haruna, K. Yonezawa, M. Yokoyama, S. Aoyama, M. Pathirathna, Y. Usui, M. Fujita, M. Suzuki, N. Hikita, Y. Suetsugu, Y. Sato, Y. Minami, **A. Kishi**, N. Osako, Y. Imai, S. Fujita, H. Ueda, M. Kamada. Association of accelerometer-derived physical activity and sleep measures with depressive symptoms and anxiety during pregnancy. (*ACSM 2025*). Atlanta, GA, USA (May, 2025). [poster presentation; accepted]
- [3] Bechny, M., M. Scutari, J. van der Meer, M., F. D. Faraci, B. H. Natelson, **A. Kishi**. Unveiling sleep dysregulation in chronic fatigue syndrome with and without fibromyalgia through bayesian networks. *European Causal Inference Meeting (EuroCIM 2025)*. Ghent, Belgium (April, 2025). [poster presentation]
- [4] Bechny, M., **A. Kishi**, L. Fiorillo, J. van der Meer, M., H. Schmidt, C. L. A. Bassetti, A. Tzovara, F. D. Faraci. Quantifying dynamics of sleep in obstructive sleep apnea: a causal framework. *The 27th Congress of the European Sleep Research Society (Sleep Europe 2024)*. Seville, Spain (September, 2024). [poster presentation]
- [5] Song, M., Z. Yang, A. Triantafyllopoulos, T. Nakamura, Y. Zhang, H. Takeuchi, **A. Kishi**, T. Ishizawa, K. Yoshiuchi, H. Zhao, K. Qian, B. Hu, B. W. Schuller, Y. Yamamoto. Crossmodal Transformer on Multi-Physical Signals for Personalised Daily Mental Health Prediction. *1st International Workshop on Data Mining for Mental Disorders held at the 23rd IEEE International Conference on Data Mining (ICDM '23)*. Shanghai, China (December, 2023). [oral presentation]
- [6] **Kishi, A.**, H. P. A. Van Dongen. Phenotypic interindividual differences in the dynamic structure of sleep in healthy young adults. *World Sleep 2023*. Rio de Janeiro, Brazil (October, 2023). [poster presentation]

- [7] Song, M., A. Triantafyllopoulos, Z. Yang, H. Takeuchi, T. Nakamura, **A. Kishi**, T. Ishizawa, K. Yoshiuchi, X. Jing, Z. Zhao, V. Karas, K. Qian, B. Hu, B. W. Schuller, Y. Yamamoto. Daily mental health monitoring from speech: a real-world Japanese dataset and multitask learning analysis. *2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. Rhodes Island, Greece (June, 2023). [poster presentation]
- [8] **Kishi, A.**, F. Togo, Y. Yamamoto. Slow-oscillatory galvanic vestibular stimulation promotes sleep physiology in healthy young adults. *5th International Brain Stimulation Conference*. Lisbon, Portugal (February, 2023). [poster presentation]
- [9] **Kishi, A.**, F. Togo, Y. Yamamoto. The effects of slow-oscillatory galvanic vestibular stimulation on sleep physiology in healthy humans. *The SLEEP 2022 36th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Charlotte, NC, USA (June, 2022). [poster presentation]
- [10] **Kishi, A.**, T. Kitajima, R. Kawai, M. Hirose, N. Iwata, Y. Yamamoto. Dynamics of sleep stage transitions in patients with narcolepsy and other hypersomnias. *The SLEEP 2020 34th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Virtual Meeting (August, 2020). [poster presentation]
- [11] Takeuchi, H., **A. Kishi**, M. Hirose, T. Nakamura, T. Kitajima, Y. Yamamoto. A novel method for estimating endogenous circadian rhythm using actigraphy data. *The 2020 Society for Research on Biological Rhythms*. Virtual Meeting (May, 2020). [poster presentation]
- [12] Suwa, K., **A. Kishi**, K. Yoshiuchi, Y. Yamamoto. Daily association between presenteeism and momentary mood, physical symptoms, and pain. *The Society of Behavioral Medicine's 41st Annual Meeting & Scientific Sessions*. Virtual Meeting (April, 2020). [poster presentation]
- [13] Wang, Y., K. Qian, J. Nelson, H. Yagi, **A. Kishi**, K. Morita, Y. Yamamoto. Can affective computing better the mental status of the computer games player? A perspective. *The 2020 IEEE 2nd Global Conference on Life Sciences and Technologies (LifeTech 2020)*. Kyoto, Japan (March, 2020). [poster presentation]
- [14] **Kishi, A.**, Y. Miyake. The effect of mood status on the subjective–objective sleep discrepancy in healthy young subjects: A multilevel modeling approach. *World Sleep 2019*. Vancouver, Canada (September, 2019). [poster presentation]
- [15] Yamaguchi, I., **A. Kishi**, F. Togo, Y. Yamamoto. Method to extract latent semantic components from noisy categorical time-series data applied to human sleep stage data. *The 25th International Conference on Noise and Fluctuations*. Neuchâtel, Switzerland (June, 2019). [oral presentation]
- [16] **Kishi, A.**, Y. Miyake. The mood of happiness on awakening predicts the discrepancy between subjective and objective sleep duration in healthy young adults. *The 9th Congress of Asian Sleep Research Society*. Hokkaido, Japan (July, 2018). [poster presentation]
- [17] Ojio, Y., S. Sabouri, **A. Kishi**, F. Togo. Association of depressive symptoms with sleep duration and timing in Japanese adolescents. *The 9th Congress of Asian Sleep Research Society*. Hokkaido, Japan (July, 2018). [poster presentation]
- [18] **Kishi, A.**, T. Kato. Sleep stage dynamics in patients with sleep bruxism. *The SLEEP 2018 32nd Annual Meeting of the Associated Professional Sleep Societies, LLC*. Baltimore, MD, USA (June, 2018). [poster presentation]
- [19] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. Spectral analysis method for sleep-state cycle based on the cortico-thalamo-cortical loop strength estimation. *The 24th International Conference on Noise and Fluctuations*. Vilnius, Lithuania (June, 2017). [oral presentation]
- [20] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. Wake-sleep transition from the perspective of cortico-thalamo-cortical loop: Electroencephalogram data analysis and simulation. *The 8th International Workshop on Biosignal Interpretation*. Osaka, Japan (November, 2016). [oral presentation]
- [21] **Kishi, A.**, I. Yamaguchi, F. Togo, Y. Yamamoto. Markov modeling of sleep stage transitions and ultradian REM sleep rhythm: A simulation study. *The 8th International Workshop on Biosignal Interpretation*. Osaka, Japan (November, 2016). [oral presentation]

- [22] Yamaguchi, I., **A. Kishi**, F. Togo, T. Nakamura, Y. Yamamoto. An EEG analysis method to estimate the thalamocortical connectivity. *1st International Conference on Sleep Spindling*. Budapest, Hungary (May, 2016). [poster presentation]
- [23] Varga, A. W., E. L. Ducca, **A. Kishi**, A. Parekh, E. Fischer, V. Koushyk, T. Gumb, D. P. Leibert, O. E. Burschtin, A. Convit, R. S. Osorio, I. Ayappa, D. M. Rapoport. Effects of aging on slow wave sleep dynamics and human spatial navigational memory consolidation. *14th International Symposium on Sleep and Breathing*. Pernambuco, Brazil (October, 2015). [oral presentation]
- [24] Yamaguchi, I., F. Togo, **A. Kishi**, T. Nakamura, Y. Yamamoto. Wake-sleep transition as an opening of cortico-thalamo-cortical loop. *37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*. Milano, Italy (August, 2015). [poster presentation]
- [25] Varga, A. W., E. L. Ducca, D. P. Leibert, J. Lim, **A. Kishi**, V. Koushyk, T. Gumb, A. Parekh, R. S. Osorio, O. E. Burschtin, D. M. Rapoport, I. Ayappa. Effects of aging on slow wave sleep disruption and reduced overnight consolidation of spatial navigational memory. *The SLEEP 2015 29th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Seattle, WA, USA (June, 2015). [oral presentation]
- [26] Varga, A. W., **A. Kishi**, J. Mantua, J. Lim, V. Koushyk, D. P. Leibert, R. S. Osorio, D. M. Rapoport, I. Ayappa. Apnea induced REM sleep disruption impairs human spatial navigational memory. *The 6th World Congress on Sleep Medicine*. Seoul, Korea (March, 2015). [oral presentation]
- [27] **Kishi, A.**, D. M. Rapoport, I. Ayappa. Sleep structure and continuity in sleepy and non-sleepy patients with obstructive sleep apnea. *The SLEEP 2014 28th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Minneapolis, MN, USA (June, 2014). [poster presentation]
- [28] **Kishi, A.**, A. M. Bender, I. Ayappa, D. M. Rapoport, H. P. A. Van Dongen. Trait-like interindividual differences in dynamics of sleep stage transitions in healthy young adults. *The SLEEP 2014 28th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Minneapolis, MN, USA (June, 2014). [poster presentation]
- [29] Varga, A. W., J. Lim, J. Mantua, V. Koushyk, **A. Kishi**, D. Leibert, D. M. Rapoport, I. Ayappa. Effect of REM-specific obstructive sleep apnea on spatial navigational learning and memory. *The SLEEP 2014 28th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Minneapolis, MN, USA (June, 2014). [poster presentation]
- [30] **Kishi, A.**, F. Togo, D. M. Rapoport, B. H. Natelson. The effect of exercise on sleep stage dynamics in healthy controls and patients with chronic fatigue syndrome. *The SLEEP 2013 27th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Baltimore, MD, USA (June, 2013). [poster presentation]
- [31] **Kishi, A.**, F. Togo, D. M. Rapoport, B. H. Natelson. Effect of exercise on sleep morphology in healthy controls and patients with chronic fatigue syndrome. *American Psychosomatic Society 71st Annual Scientific Meeting*. Miami, FL, USA (March, 2013). [poster presentation]
- [32] **Kishi, A.** Non-REM sleep stage transitions control ultradian REM sleep rhythm. *Fifth HOPE Meeting with Nobel Laureates*. Tokyo, Japan (February, 2013). [oral and poster presentation]
- [33] **Kishi, A.**, B. H. Natelson, L. O. Palombini, R. Santos-Silva, L. R. A. Bittencourt, S. Tufik, I. Ayappa, D. M. Rapoport. Sleep continuity is statistically correlated with objective sleep duration independent of other factors. *The SLEEP 2012 26th Annual Meeting of the Associated Professional Sleep Societies, LLC*. Boston, MA, USA (June, 2012). [poster presentation]
- [34] **Kishi, A.**, H. Yasuda, T. Matsumoto, Y. Inami, J. Horiguchi, M. Tamaki, Z. R. Struzik, Y. Yamamoto. Non-REM sleep stage transitions control ultradian REM sleep rhythm. *The 6th World Congress of the World Sleep Federation*. Kyoto, Japan (October, 2011). [poster presentation]
- [35] **Kishi, A.**, B. H. Natelson, F. Togo, Z. R. Struzik, Y. Yamamoto. Sleep stage transitions in chronic fatigue syndrome patients with or without fibromyalgia. *The 6th Congress of Asian Sleep Research Society*. Osaka, Japan (October, 2009). [poster presentation]

- [36] **Kishi, A.**, H. Yasuda, T. Matsumoto, Y. Inami, J. Horiguchi, Z. R. Struzik, Y. Yamamoto. Sleep stage transitions in healthy humans altered by central serotonergic and dopaminergic antagonist. *The 6th International Workshop on Biosignal Interpretation*. New Haven, CT, USA (June, 2009). [oral presentation]
- [37] **Kishi, A.**, Z. R. Struzik, B. H. Natelson, F. Togo, Y. Yamamoto. Transition-specific properties of sleep stage dynamics in humans. *The 38th Annual Meeting of the Society for Neuroscience*. Washington, DC., USA (November, 2008). [poster presentation]
- [38] **Kishi, A.** Dynamics of sleep stage transitions in health and disease. *BioStatPhys in UT '07*. Tokyo, Japan (September, 2007). [oral presentation]
- [39] **Kishi, A.**, Z. R. Struzik, B. H. Natelson, F. Togo, Y. Yamamoto. Dynamics of sleep stage transitions in health and disease. *The 19th International Conference on Noise and Fluctuations*. Tokyo, Japan (September, 2007). [oral presentation]

INVITED PRESENTATIONS AND SYMPOSIUM/SEMINAR TALKS

- [1] **Kishi, A.** Slow-oscillatory galvanic vestibular stimulation improves sleep quality in humans. *6th International Conference on Brain Stimulation*. Hyogo, Japan (February, 2025).
- [2] **Kishi, A.** Landscape of human sleep phenotypes revealed by large-scale sleep analysis. *The 27th Congress of the European Sleep Research Society (Sleep Europe 2024)*. Seville, Spain (September, 2024).
- [3] **Kishi, A.**, Y. Minami, H. R. Ueda. Landscape of human sleep phenotypes revealed by ACCEL. *ERATO UK-Japan Joint Symposium on Circadian Rhythm and Sleep*. University of Oxford, Oxford, United Kingdom (March, 2024).
- [4] **Kishi, A.** Toward human sleep augmentation via NIBS. *Sleep Data Club*. Icahn School of Medicine at Mount Sinai, New York, USA (October, 2023; Online).
- [5] **Kishi, A.** Towards understanding and controlling human sleep dynamics. *4th International 33rd National Biophysics Congress*. Adiyaman University, Adiyaman, Turkey (September, 2022; Online).
- [6] **Kishi, A.** Dynamics of sleep stage transitions: Toward understanding the basic physiology and clinical aspects of sleep in humans. *International Congress on Biological and Medical Sciences 2018*. Nigde Ömer Halisdemir University, Nigde, Turkey (October, 2018).
- [7] **Kishi, A.** Dynamics of sleep stage transitions: Research progress and future directions. *Research Workshop*. Danish Research Center for Magnetic Resonance, Copenhagen, Denmark (June, 2018).
- [8] **Kishi, A.** Dynamics of sleep stage transitions and ultradian REM sleep rhythm in humans. *HBSL State-of-the-Art Conference: Leading-Edge Biosignal Processing for Sleep Science*. Nagoya City University Hospital, Aichi, Japan (October, 2016).
- [9] **Kishi, A.** Sleep disturbances in ME/CFS. *Diagnostic Criteria for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Committee Meeting*. Institute of Medicine of the National Academies, Washington, D.C., USA (May, 2014).
- [10] **Kishi, A.** Sleep stage dynamics in chronic fatigue syndrome patients with or without fibromyalgia. *NY Area Clock Group Meeting*. NYU Silver Center, New York, NY, USA (December, 2010).
- [11] **Kishi, A.** Sleep stage dynamics in chronic fatigue syndrome patients with or without fibromyalgia. *WRIISC Research Meeting*. New Jersey War Related Illness and Injury Study Center, East Orange, NJ, USA (October, 2010).
- [12] **Kishi, A.**, B. H. Natelson, F. Togo, Z. R. Struzik, D. M. Rapoport, Y. Yamamoto. Sleep stage transitions in chronic fatigue syndrome patients with or without fibromyalgia. *32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*. Buenos Aires, Argentina (September, 2010).
- [13] **Kishi, A.** Dynamics of sleep stage transitions in humans. *NYU Sleep Program Conference*. NYU School of Medicine, New York, NY, USA (June, 2009).

FUNDING INFORMATION

PRINCIPAL INVESTIGATOR

- 2024–2027 Principal Investigator, Grant-in-Aid for Scientific Research (C), Ministry of Education, Science and Culture, Japan, *Development and Application of the Adaptive Non-invasive Brain Stimulation System to Promote Sleep Induction*.
- 2023–2026 Principal Investigator, Fusion Oriented Research for Disruptive Science and Technology (FOREST), Japan Science and Technology Agency, Japan, *Human Sleep Augmentation by Artificial Manipulation of Sleep Dynamics*.
- 2021–2024 Principal Investigator, Grant-in-Aid for Scientific Research (C), Ministry of Education, Science and Culture, Japan, *Mechanism of Sleep Induction and Facilitation by Galvanic Vestibular Stimulation*.
- 2019–2023 Principal Investigator, Strategic Basic Research Programs (PRESTO), Japan Science and Technology Agency, Japan, *Artificial Manipulation of Human Sleep Dynamics*.
- 2018–2021 Principal Investigator, Grant-in-Aid for Early-Career Scientists, Ministry of Education, Science and Culture, Japan, *Artificial Manipulation of Sleep Dynamics Using Noninvasive Transcranial Brain Stimulation*.
- 2017–2019 Principal Investigator, Research Activity Start-up, The University of Tokyo Excellent Young Researcher, Japan, *Analysis, Modeling and Controlling of the Dynamics of Sleep Stage Transitions and Their Applications in Humans*.
- 2017–2018 Principal Investigator, Research Grant (A), Tateisi Science and Technology Foundation, Japan, *The Effects of Galvanic Vestibular Stimulation on Sleep Physiology in Humans*.
- 2015–2017 Principal Investigator, Grant-in-Aid for Young Scientists (B), Ministry of Education, Science and Culture, Japan, *Analysis and Modeling of the Dynamics of Sleep Stage Transitions in Humans*.
- 2013–2014 Principal Investigator, JSPS Postdoctoral Fellowships for Research Abroad, Japan Society for the Promotion of Science, *Analysis and Modeling of Dynamics of Sleep Stage Transitions in Humans*.
- 2011–2014 Principal Investigator, Grant-in-Aid from the Foundation for Research in Sleep Disorders, USA, *Transition Analysis of Sleep Stages*.
- 2008–2011 Principal Investigator, Grant-in-Aid for JSPS Fellows, Ministry of Education, Science and Culture, Japan, *Mathematical and Physiological Assessment of Sleep Dynamics*.

CO-INVESTIGATOR

- 2019–2021 Consultant (PI: Benjamin H. Natelson, M.D.), NIH Exploratory/Developmental Research Grant Award (R21), National Institutes of Health, USA, *Use of Rocking Bed to Demonstrate Pathophysiologic Sleep Differences between Chronic Fatigue Syndrome with and without Co-existing Fibromyalgia*.
- 2019–2022 Co-Investigator (PI: Taiki Komatsu, Ph.D.), Grant-in-Aid for Scientific Research (C), Ministry of Education, Science and Culture, Japan, *Optimal Lifestyle and Sleep Habits Guidelines based on the Survey of Sleep in Student Athelets*.
- 2015–2018 Co-Investigator (PI: Fumiharu Togo, Ph.D.), Grant-in-Aid for Scientific Research (B), Ministry of Education, Science and Culture, Japan, *Causality between Rotating Shift Work, Changes in Lifestyle Behaviors, and Mental and Physical Problems and Its Physiological Mechanisms*.

- 2015–2018 Co-Investigator (PI: Ikuhiro Yamaguchi, Ph.D.), Grant-in-Aid for Scientific Research (C), Ministry of Education, Science and Culture, Japan, *Estimation of Cortico-Thalamic Feedback Coefficient Using Electroencephalogram*.
- 2015–2017 Co-Investigator (PI: Fumiharu Togo, Ph.D.), Grant-in-Aid for Challenging Exploratory Research, Ministry of Education, Science and Culture, Japan, *Lifestyle Behaviors, Mental and Physical Health, and High Tolerance to Night Work in Rotating Shift Workers*.
-

AWARDS AND HONORS

- 2024 The 29th Encouraging Prize of Japanese Society of Sleep Research
- 2017 The University of Tokyo Excellent Young Researcher, The University of Tokyo
- 2014 Inoue Research Award for Young Scientists, Inoue Foundation for Science
- 2013 JSPS HOPE Fellow, Japan Society for the Promotion of Science
- 2011 Travel Award, The 6th World Congress of the World Sleep Federation
- 2008 Academic Research Grant Program, The University of Tokyo
-

PROFESSIONAL SOCIETIES

- 2024– Japanese Society of Sleep and Environment, Member
- 2017– Japanese Society for Chronobiology, Member
- 2016– The Society of Instrument and Control Engineers, Member
- 2014– Japanese Society of Sleep Research, Member
- 2011– Sleep Research Society, Member
- 2008– Society for Neuroscience, Member
-

PROFESSIONAL SERVICES

EDITOR AND COMMITTEE

- 2022 Science Board, 4th International 33rd National Biophysics Congress
- 2019– Councilor, Japanese Society for Chronobiology
- 2018 International Scientific Committee, International Congress on Biological and Medical Sciences 2018
- 2012– Review Editorial Board, *Frontiers in Computational Physiology and Medicine*

REVIEWER

- 2025– Proceedings of the Japan Academy, Series B
- 2024– Sleep and Biological Rhythms
- 2024– Royal Society Open Science
- 2024– Biological Rhythm Research

2023–	Journal of Medical Internet Research
2022–	Journal of Training Science for Exercise and Sport
2021–	BioPsychoSocial Medicine
2021–	Advanced Robotics
2021–	IEICE Nonlinear Theory and Its Applications
2020–	Psychoneuroendocrinology
2019–	IEEE Journal of Biomedical and Health Informatics
2019–	SLEEP
2018–	Scientific Reports
2018–	Computational and Mathematical Methods in Medicine
2017–	Frontiers in Neuroscience
2017–	Frontiers in Physiology
2016–	Methods of Information in Medicine
2015–	Frontiers in Psychology
2015–	IEEE Transactions on Biomedical Engineering
2014–	PLoS ONE
2013–	Clinical Psychology Review
2012–	Psychiatry Research

NOTE

For a reference including my academic records in Japan (Japanese), please see the following:
www.p.u-tokyo.ac.jp/~kishikishi/cv/cv_kishikishi_jp.pdf