

MICHIKO SAKAKI**September, 2021****Present appointment**

Assistant Professor,
Hector Research Institute of Education Sciences and Psychology,
University of Tübingen, Germany

Visiting Associate Professor, Kochi Technology of University, Japan

Visiting Senior Research Fellow, University of Reading, UK

Contact

Eberhard Karls Universität Tübingen
Hector-Institut für Empirische Bildungsforschung
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Education and qualification (with dates)

BA in Education Psychology 01/04/1997-31/03/2001 University of Tokyo, Japan
MA in Education Psychology 01/04/2001-31/03/2003 University of Tokyo, Japan
PhD in Education Psychology 01/04/2003-22/03/2007 University of Tokyo, Japan

Previous appointments (with dates)

20/10/2020-31/5/2021 Research Associate, University of Tübingen
01/08/2018-19/10/2020 Senior Research Fellow (research grade 8; equivalent to associate professors), University of Reading
01/10/2013-31/07/2018 Senior Research Fellow (research grade 7; equivalent to lectures), University of Reading
01/12/2010-13/09/2013 Research Assistant Professor, University of Southern California
01/09/2009-30/11/2010 Postdoctoral Research Fellow, University of Southern California
01/04/2007-07/08/2009 Postdoctoral Research Fellow, Neuroscience Research Institute
National Institute of Advanced Industrial Science and Technology

Awards and honors

2020 JSPS prize
2018 Japanese Psychological Association International Contribution Award for Distinguished Early and Middle Career Researchers
2018 Best poster award, British Association for Cognitive Neuroscience.
2018 Best presentation award, Japanese Psychological Society

- 2014 Faculty Output Prize, Faculty of Life Sciences, University of Reading
 2005 Best Presentation Award, Japanese Society for Cognitive Psychology

Peer-Reviewed Publications (in English)

- Murayama, K., Usami, S., & **Sakaki, M.** (in press). Summary-statistics-based power analysis: A new and practical method to determine sample size for mixed-effects modelling. *Psychological Methods*.
- Raw, J., Rorke, A., Ellis, J., Murayama, K., & **Sakaki, M.** (2021). Memory of the UK's 2016 EU Referendum: the effects of valence on the long-term measures of a public event. *Emotion*.
- Turkileri, N., Field, D., Ellis, J. & **Sakaki, M.** (2021) Emotional arousal enhances the impact of long-term memory in attention. *Journal of Cognitive Psychology*, 33, 119-132.
- Koenig, J., Abler, B., Agartz, I., Åkerstedt, T., Andreassen, O. A., Anthony, M., Bär, K.-J., Bertsch, K., Brown, R. C., Brunner, R., Carnevali, L., Critchley, H. D., Cullen, K. R., de Geus, E. J.C., de la Cruz Monte de Oca, F., Dziobek, I., Ferger, M. D., Fischer, H., Flor, H., Gaebler, M., Gianaros, P. J., Giummarra, M. J., Greening, S. G., Guendelman, S., Heathers, J. A. J., Herpertz, S. C., Hu, M. X., Jentschke, S., Kaess, M., Kaufmann, T., Klimes-Dougan, B., Koelsch, S., Krauch, M., Kumral, D., Lamers, F., Lee, T.-H., Lekander, M., Lin, F., Lotze, M., Makovac, E., Mancini, M., Mancke, F., Månsson, K. N. T., Manuck, S. B., Mather, M., Meeten, F., Min, J., Mueller, B., Muench, V., Nees, F., Nga, L., Nilsson, G., Ordonez Acuna, D., Osnes, B., Ottaviani, C., Penninx, B. W.J.H., Ponzio, A., Poudel, G. R., Reinelt, J., Ren, P., **Sakaki, M.**, Schumann, A., Sørensen, L., Specht, K., Straub, J., Tamm, S., Thai, M., Thayer, J. F., Ubani, B., van der Mee, D. J., van Velzen, L. S., Ventura-Bort, C., Villringer, A., Watson, D. R., Wei, L., Wendt, J., Westlund Schreiner, M., Westlye, L. T., Weymar, M., Winkelmann, T., Wu, G.-R., Yoo, H. J. & Quintana, D. S. (2021) Cortical thickness and resting state cardiac function across the lifespan: a cross-sectional pooled mega analysis. *Psychophysiology*, 58, e13688
- Ezaki, T., dos Reis, E. F., Watanabe, T., **Sakaki, M.** & Masuda, N. (2020) Closer to critical resting-state neural dynamics in individuals with higher fluid intelligence. *Communications Biology*, 3 (1). 52.
- Ohtani, K., Murayama, K., Ishii, R., Fukuzumi, N., **Sakaki, M.**, Ishikawa, S., Suzuki, T. & Tanaka, A. (2020) Parental motivational perseverance predicts adolescents' depressive symptoms: an intergenerational analysis with actor-partner interdependence model. *Journal of Youth and Adolescence*, 49 (1). pp. 212-227.
- Yagi, A., Nouchi, R., Murayama, K., **Sakaki, M.** & Kawashima, R. (2020) The role of cognitive control in age-related changes in well-being. *Frontiers in Aging Neuroscience*, 12 (198).

- Sakaki, M.**, Raw, J., Findlay, J., & Thottam, M. (2019). Advanced aging enhances the positivity effect in memory: Due to cognitive control or age-related decline in emotional processing? *Collabra: Psychology*.
- Sakaki, M.***, Ueno, T. *, Ponzio, A., Harley, C., & Mather, M. (2019). Emotional arousal amplifies competitions across goal-relevant representation: A neurocomputational framework. *Cognition*, 187, 108-125. *equal contribution
- Bell, L., Vogt, J., Willemse, C., Routledge, T., Butler, L. T., & **Sakaki, M.** (2018). Beyond self-report: A review of physiological and neuroscientific methods to investigate consumer behavior. *Frontiers in Psychology*, 9, 1655.
- Ezaki, T., **Sakaki, M.**, Watanabe, T., & Masuda, N. (2018). Age-related changes in the ease of dynamical transitions in human brain activity. *Human Brain Mapping*, 39, 2673–2688.
- Lee, T.-H., Greening, S., Ueno, T., Clewett, D., Ponzio, A., **Sakaki, M.**, & Mather, M. (2018). Arousal increases neural gain via the locus coeruleus-norepinephrine system in younger adults but not in older adults. *Nature Human Behaviour*, 2, 356-366.
- Masuda, N., **Sakaki, M.**, Ezaki, T., & Watanabe, T. (2018). Clustering coefficients for correlation networks. *Frontiers in Neuroinformatics*, 12:7.
- Sakaki, M.**, Yagi, A., & Murayama, K. (2018). Curiosity in old age: A possible key to achieving adaptive aging. *Neuroscience & Biobehavioral Reviews*, 88, 106-116.
- Yoo, H. J., Thayer, J., Greening, S., Lee, T.-H., Ponzio, A., Min, J., **Sakaki, M.**, Nga, L., Mather, M. and Koenig, J. (2018). Brain structural concomitants of resting state heart rate variability in the young and old – Evidence from two independent samples. *Brain Structure and Function*, 223, 727-737.
- Nashiro, K., **Sakaki, M.**, Braskie, M. N., & Mather, M. (2017). Resting-state networks associated with cognitive processing show more age-related decline than those associated with emotional processing. *Neurobiology of Aging*, 54, 152-162.
- Clewett, D., **Sakaki, M.**, Huang, R., Nielsen, S. E., & Mather, M. (2017). Arousal amplifies biased competition between high and low priority memories more in women than in men: the role of elevated noradrenergic activity. *Psychoneuroendocrinology*, 80, 80-91.
- Clewett, D., **Sakaki, M.**, Nielsen, S. E., Petzinger, G., & Mather, M. (2017). Noradrenergic mechanisms of arousal's bidirectional effects on episodic memory. *Neurobiology of Learning and Memory*, 137, 1-14.
- Mather, M., Clewett, D., **Sakaki, M.**, & Harley, C. W. (2016). GANEing traction: the broad applicability of NE hotspots to diverse cognitive and arousal phenomena. *Behavioral and Brain Sciences*, 39, e228.

- Mather, M., Clewett, D., **Sakaki, M.**, & Harley, C. W. (2016). Norepinephrine ignites local hot spots of neuronal excitation: How arousal amplifies selectivity in perception and memory. *Behavioral and Brain Sciences*, 39, e200.
- Barber, S. J., Opitz, P. C., Martins, B., **Sakaki, M.**, & Mather, M. (2016). Thinking about a limited future enhances the positivity of younger and older adults' recall: Support for socioemotional selectivity theory. *Memory & Cognition*, 44, 869-882.
- Sakaki, M.**, Yoo H-Y., Nga, L., Lee, T-H., Thayer, J. F., & Mather, M. (2016). Heart rate variability is associated with amygdala functional connectivity with MPFC across younger and older adults. *NeuroImage*, 139, 44-52.
- Lee, T. H., **Sakaki, M.**, Cheng, R., Velasco, R., & Mather, M. (2014). Emotional arousal amplifies the effects of biased competition in the brain. *Social Cognitive and Affective Neuroscience*, 9, 2067-2077.
- Murayama, K., **Sakaki, M.**, Yan, V., & Smith, G. (2014). Type-1 error inflation in the traditional by-participant analysis to metamemory accuracy: A generalized mixed-effects model perspective. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 40, 1287-1306.
- Sakaki, M.**, Fryer, K., & Mather, M. (2014). Emotion strengthens high priority memory traces but weakens low priority memory traces. *Psychological Science*, 25, 387-395.
- Sakaki, M.**, Kuhbandner, C., Mather, M., & Pekrun, R. (2014). Memory suppression can help people "unlearn" behavioral responses—but only for non-emotional memories. *Psychonomic Bulletin & Review*, 21, 136-141.
- Sakaki, M.**, Ycaza-Herrera, E. A., & Mather, M. (2014). Association learning for emotional harbinger cues: When do previous emotional associations impair and when do they facilitate subsequent learning of new associations? *Emotion*, 14, 115-129.
- Nashiro, K., **Sakaki, M.**, Huffman, D., & Mather, M. (2013). Both younger and older adults have difficulty updating emotional memories. *Journal of Gerontology: Psychological Sciences*, 68 (2), 224-227.
- Nashiro, K., **Sakaki, M.**, Nga, L., & Mather, M. (2013). Age-related similarities and differences in brain activity underlying reversal learning. *Frontiers in Integrative Neuroscience*, 7:37.
- Sakaki, M.** & Murayama, K. (2013). Automatic ability attribution after failure: A dual process view of achievement attribution. *PLoS ONE*, 8 (5), e63066.
- Sakaki, M.**, Nga, L., & Mather, M. (2013). Amygdala functional connectivity with medial prefrontal cortex at rest predicts the positivity effect in older adults' memory. *Journal of Cognitive Neuroscience*, 25, 1206-1224.
- Sakaki, M.** & Mather, M. (2012). How reward and emotional stimuli induce different reactions

across the menstrual cycle. *Social and Personality Psychology Compass*, 6, 1-17.

Sakaki, M., Niki, K., & Mather, M. (2012). Beyond arousal and valence: The importance of the biological versus social relevance of emotional stimuli. *Cognitive, Affective, & Behavioral Neuroscience*, 12, 115-139.

Lighthall, R. N., **Sakaki, M.**, Vasunilashorn, S., Nga, L., Somayajula, S., Chen, E. Y., Samii, N., Mather, M. (2012). Sex differences in reward-related decision processing under stress. *Social, Cognitive & Affective Neuroscience*, 7 (4): 476-484.

Nashiro, K., **Sakaki, M.**, Nga, L., & Mather, M. (2012). Differential brain activity during emotional vs. non-emotional reversal learning. *Journal of Cognitive Neuroscience*, 24 (8), 1794-1805.

Nashiro, K., **Sakaki, M.**, & Mather, M. (2012). Age differences in brain activity during emotion processing: Reflections of age-related decline or increased emotion regulation? *Gerontology*, 58, 156-163.

Sakaki, M., Gorlick, M. A., & Mather, M. (2011). Differential interference effects of negative emotional states on subsequent semantic and perceptual processing. *Emotion*, 11, 1263-78.

Sakaki, M., Niki, K., & Mather, M. (2011). Updating existing emotional memories involves the frontopolar/ orbitofrontal cortex in ways that acquiring new emotional memories does not. *Journal of Cognitive Neuroscience*, 23, 3498-3514.

Sakaki, M. & Niki, K. (2011). Effects of the brief viewing of emotional stimuli on understanding of insight solutions. *Cognitive, Affective, & Behavioral Neuroscience*, 11, 526-540.

Sakaki, M. (2007). Mood and recall of autobiographical memory: The effect of focus of self-knowledge. *Journal of Personality*, 75, 421-449.

Sakaki, M. (2007). Semantic self-knowledge and episodic self-knowledge: Independent or interrelated representations? *Memory*, 15, 1-16.

Sakaki, M. (2004). Effects of self-complexity on mood-incongruent recall. *Japanese Psychological Research*, 46, 127-134.

Peer-Reviewed Publications (in Japanese with English abstract)

Ishii, R., Murayama, K., Fukuzumi, N., Ishikawa, S., Ohtani, K., **Sakaki, M.**, Suzuki, T., & Tanaka, A. (2019). Development of a short surrogate index for children's socioeconomic status using house possessions and investigation of its validity. *Japanese Journal of Psychology*, 90, 493-502.

Sakaki, M. (2007). The organization of emotionally autobiographical memories: How emotional knowledge for personal events is represented in autobiographical

knowledge base? *Japanese Journal of Educational Psychology*, 55, 184-196.

Sakaki, M. (2006). Distinction between semantic and episodic memory: The underlying mechanisms for autonoetic consciousness. *Japanese Psychological Review*, 49, 627-643.

Sakaki, M. (2006). Effects of structure of self-knowledge on mood-incongruent effect. *Japanese Journal of Psychology*, 77, 217-226.

Sakaki, M. (2006). The measurement of self-complexity: A comparison of H and SC measures. *Japanese Journal of Personality*, 15, 58-60.

Sakaki, M. (2005). Nature of autobiographical memory that facilitates improvement of negative moods. *Japanese Journal of Psychology*, 76, 169-175.

Book chapters

Turkileri, N. & **Sakaki, M.** (2017). Neural mechanisms underlying the effects of emotional arousal on memory. In T. Tshukiura & S. Umeda (Eds.), *“Memory in Social Context: Brain, Mind, and Society,”* Springer, Tokyo.

Sakaki, M. (2015). Effects of emotion on memory. In S. Kitagami & H. Hayashi (Eds.), *How the mind works*. Kyoto: Nakashiniya.

Sakaki, M. (2014). Research methods in social psychology. In H. Shimoyama (Ed.), *Encyclopedia of Psychology*. Tokyo: Seishin.

Sakaki, M. (2013). Emotion and memory. In Y. Hakota (Ed.), *Handbook of Cognitive Psychology*. Tokyo: Yuhikaku.

Sakaki, M. (2010). Self-knowledge and its function. In K. Murata (Ed.), *Advances in cognitive psychology* (Vol 6), *Social affective cognitive sciences*, Kyoto: Kitaoji-shobo

Sakaki, M. (2006). Emotion and memory. In H. Kitamura & H. Kimura (Eds.), *Advances in affective science* (pp. 93-111). Kyoto: Nakanishiya.

Kimura, H., **Sakaki, M.**, & Kitamura, H. (2006). Research methods for affective science. In H. Kitamura & H. Kimura (Eds.), *Advances in affective science* (pp. 43-64). Kyoto: Nakanishiya.

Invited talks (selected; 2010-)

2019 University of Lubeck

2018 Doshisha University, Japanese Psychological Society

2017 Hiroshima University

2016 Max Planck Institute, Swansea University, University of Tokyo, University of Kyoto

2015 University of Geneva/Swiss Center for Affective Sciences

- 2014 Gent University, Japanese Society for Social Psychology
 2013 Lancaster University, University of Sussex, University of Cambridge, Aston University
 2012 University of Essex, Nagoya University, University of Tokyo
 2010 University of Munich

Conference symposium/Paper presentation (selected; 2010-)

- Sakaki, M.** (2021). Does resting-state functional connectivity predict emotional memory enhancement effects? Paper presented in the symposium "*Role of emotion and arousal in shaping our cognition and behavior: Recent methodological developments and emerging perspectives*," at the Psychologie und Gehirn 2021, Tübingen, Germany (an online meeting).
- Sakaki, M.** (2020). Cognitive and emotional flexibility: within- and between-person perspectives. Paper presented in the *Reading Emotions Symposium*, Reading, UK (an online meeting).
- Sakaki, M.** (2019). How emotion affects memory and learning? Paper presented in the SIG invited symposium "Emotional influences on the neural mechanisms of learning" at the *European Association for Research on Learning and Instruction (EARLI)*, Aachen, Germany.
- Sakaki, M.** (2019). Emotional arousal interacts with priority in affecting cognition. Paper presented in the symposium "The influence of emotions on cognitive functioning" at the *International Society for Research on Emotions (ISRE)*, Amsterdam, Netherland.
- Sakaki, M.** (2018). How emotional arousal interacts with top-down goal in affecting memory. Paper presented in the symposium "Current research and emerging directions in emotional memory: Evidence from healthy functioning, psychopathology, and interventions" at the *4th International Conference of the European Society for Cognitive and Affective Neuroscience*, Leiden, Netherland.
- Sakaki, M.**, Ponzio, A., Ueno, T., Harley, C. & Mather, M. (2018). Mechanisms underlying the opposing effects of emotional arousal on memory: A neurocomputational framework. *The Consortium of European Research on Emotion*, Glasgow, UK.
- Turkileri, N., Ozsari, A., Field, D., & **Sakaki, M.** (2018) Effects of emotional arousal on ambiguous motion perception. *The 4th International Conference of the European Society for Cognitive and Affective Neuroscience*, Leiden, Netherland.
- Mather, M., Nielsen, S., **Sakaki, M.**, Raw, M. (2017). A potential role for norepinephrine hot spots in long-term memory for negative stimuli. Paper presented in the symposium, "Memory Neuromodulation: How do different states of learning influence episodic memory?" at the annual meeting for the Cognitive Neuroscience Society, San Francisco, US
- Sakaki, M.** (2016). How emotion shapes memory. *Oxford Memory Research Day*, 13/7/2016. St Anne's College, Oxford, UK

- Sakaki, M.**, Ponzio, A., Ueno, T. & Mather, M. (2015). Emotional arousal impairs memory only when the input information competes with each other. *56th Annual Meeting of Psychonomic Society*, Chicago, US.
- Sakaki, M.** & Mather, M. (2014). Selective effects of emotional arousal on memory: The role of top-down goal relevance. Paper presented at the symposium, "Memory for emotional events" at the meeting for *Experimental Psychology Society*, NewCastle, UK
- Sakaki, M.**, Ycaza, A., & Mather, M. (2012). When do previous emotional associations impair and when do they facilitate subsequent learning of new associations? *53rd Annual Meeting of Psychonomic Society*, Minneapolis, US.
- Sakaki, M.** (2011). Age differences in amygdala functional connectivity during rest. Paper presented at the symposium, " Normal and pathological aging of the emotional brain: Clinical relevance and theoretical outcomes" at *the 2011 International Society for Research on Emotion*, Kyoto, Japan.

Scholarly activities

Associate Editor, *Frontiers in Psychology* (Emotion Science Section; 2021-)
 Symposium host at the Psychologie und Gehirn 2021, Tübingen, Germany.
 Program committee for 2016 International Conference of Psychology
 Consulting Editor in *Emotion* (2013-2016)
 Editorial board in *Japanese Journal of Educational Psychology* (2014-2017, 2021-)

Grant Reviewer

Dutch Research Council, Netherland
 Biotechnology and Biological Sciences Research Council (BBSRC), UK
 Croatian Science Foundation

Society Affiliations

Cognitive Neuroscience Society
 Psychonomic Society
 Society for Neuroscience
 Experimental Psychology Society
 European Association for Research on Learning and Instruction
 European Society for Cognitive and Affective Neuroscience
 Japanese Psychological Association
 Japanese Society for Cognitive Psychology
 Japanese Association of Educational Psychology

Local school engagement

01/04/2003-31/03/2007 Teaching assistant at the Ebara 3rd junior high school, Japan.

2 hours for every week

Ad hoc Reviewer for Journals

Aging, Neuropsychology and Cognition
 Behavior Research Methods
 Cognition
 Cognitive, Affective & Behavioral
 Neuroscience
 Cognition & Emotion
 Collabra
 Emotion
 Experimental Aging Research
 Frontiers in Integrative Neuroscience
 Frontiers in Psychology
 Frontiers in Human Neuroscience
 Group Processes & Intergroup Relation
 Human Brain Mapping
 Journal of Cognitive Psychology
 Journal of Cognitive Neuroscience
 Journal of Experimental Psychology:
 General
 Journal of Experimental Psychology:
 Learning, Memory & Cognition

Journal of Experimental Psychology:
 Human Perception and Performance
 Journal of Experimental Psychopathology
 Journal of Gerontology: Psychological
 Science
 Journal of Neuroscience
 Journal of Personality
 Journal of Psychophysiology
 Memory
 Neuropsychologia
 PLoS One
 Psychoneuroendocrinology
 Psychological Medicine
 Psychological Science
 Psychology & Aging
 Psychonomic Bulletin & Review
 Psychiatry Research
 Social, Cognitive and Affective
 Neuroscience
 Trends in Cognitive Sciences

Media engagement

Irish Examiner: 16/07/2018
 Interview: BBC "Inside Out" 27/10/2016
 Scientific American (Nov-Dec, 2015, pp. 67-68)
 New York Times 19/10/2014
 The Sydney Morning Herald 29/08/2016
 Daily Mail 6/6/2011