

MICHIKO SAKAKI

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School of Psychology and Clinical Language Sciences

University of Reading

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EDUCATION

University of Tokyo B.A 2001 Educational Psychology

University of Tokyo MA 2003 Educational Psychology

University of Tokyo Ph. D 2007 Educational Psychology

ACADEMIC POSITIONS AND HONORS

ACADEMIC POSITIONS

2013- Senior Research Fellow, University of Reading

2010-2013 Research Assistant Professor, University of Southern California

2009-2010 Postdoctoral Research Fellow, University of Southern California

2007-2009 Visiting Research Fellow, University of Southern California

2007-2009 Postdoctoral Research Fellow, Neuroscience Research Institute of National Institute of Advanced Industrial Science and Technology

2007-2009 JSPS (Japan Society for the Promotion of Science) Postdoctoral Fellow

2006-2007 Academic Affairs Staff, University of Tokyo

2003-2006 JSPS (Japan Society for the Promotion of Science) Research Fellow for Young Scientists

AWARDS & HONORS

2018 Japanese Psychological Association International Contribution Award for Distinguished Early and Middle Career Researchers

2014 Faculty Output Prize, Faculty of Life Sciences, University of Reading

2005 Best Presentation Award, Japanese Society for Cognitive Psychology

PUBLICATIONS

- Ezaki, T., **Sakaki, M.**, Watanabe, T., & Masuda, N. (in press). Age-related changes in the ease of dynamical transitions in human brain activity. *Human Brain Mapping*.
- Sakaki, M.**, Yagi, A., & Murayama, K. (in press). Curiosity in old age: A possible key to achieving adaptive aging. *Neuroscience & Biobehavioral Reviews*.
- 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.
- 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.
- 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.
- 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)

- 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 auto-noetic 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 (in Japanese)

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.

TRANSLATION

Chapter 5. Emotion. In J. P. Byrnes (2001). *Minds, brains, and learning : Understanding the psychological and educational relevance of neuroscientific research*. Guilford Press.
(Translated in 2006)

FUNDING SUPPORT

Grants-in-Aid for Scientific Research for innovative research

Role: Col

9/1/16-8/31/21

“The power of human will and motivation.”

£1,000,000 for the team

Grants-in-Aid for Scientific Research for innovative research

Role: PI

4/1/16-3/31/19

“Effects of social network on stereotype.”

£20,426

Grants-in-Aid for Scientific Research for early career award

Role: Sole PI

4/1/16-3/31/19

“Ageing and emotion regulation.”

£138,287

British Academy & Leverhulme Trust Small Research Grant

Role: Sole PI

9/1/14-8/31/16

“The effects of emotional arousal and physiological arousal on memory consolidation.”

£ 9,497

Marie Curie Career Integration Grant, European Commission

Role: Sole PI

12/1/13-11/30/17

“The effects of emotion on top-down prioritization among younger and older adults”

£ 85,000

Grants-in-Aid for Scientific Research for JSPS fellows (8978)

Role: Sole PI

4/1/07-3/31/10

“Effects of emotion and curiosity on learning.”

£ 25,000

Grants-in-Aid for Scientific Research for JSPS fellows (15-11510)

Role: Sole PI

4/1/03-3/31/06

“Moods and recall of autobiographical memory: The effects of self-knowledge”

£ 12,500

INTERNATIONAL SYMPOSIUM PRESENTATIONS

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. & 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. (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.

INTERNATIONAL CONFERENCE PRESENTATIONS

PAPER PRESENTATION

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.

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., 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. (2005). The impact of mood on recall of autobiographical memory: The effects of structures of self-knowledge. *6th Tsukuba International Conference on Memory*, Paper Presentation, 1. Tsukuba, Japan.

POSTER PRESENTATION

Raw, J., Ellis, J. & **Sakaki, M.** (2017). Memory for the 2016 EU Referendum: Flashbulb memories and emotion. Meeting for the *Experimental Psychology Society*, Reading, UK.

Turkileri, N., Field, D., Ellis, J. & **Sakaki, M.** (to be presented). The effects of emotional arousal on memory-guided attention. Meeting for the *Experimental Psychology Society*, Reading, UK.

Turkileri, N., Field, D., Ellis, J. & **Sakaki, M.** (2016). The effects of emotional arousal on memory-guided attention. *International Conference on Memory*, Budapest, Hungary.

Raw, J., Mather, M., & **Sakaki, M.** (2016). Tonic arousal amplifies selective effects of emotion on memory. *The meeting for Experimental Psychological Society*, Durham, UK.

Barber, S., Opitz, P. C., Martins, B., **Sakaki, M.**, & Mather, M. (2015). Thinking about a limited future reduces the negativity of younger and older adults: Support for socioemotional selectivity theory. *The annual conference for the Society for Affective Science Conference*, San Francisco, CA, US.

Clewett, D., **Sakaki, M.**, Nielsen, S., Petzinger, G. & Mather, M. (2015). Noradrenergic mechanisms of arousal-biased competition in memory, *The 45th annual meeting for Society for Neuroscience*, Chicago, IL, US.

- Inseloz, N. T., Field, D., Ellis, J. & **Sakaki, M.** (2015). The effects of emotional arousal on memory-guided attention. *The annual meeting for the British Association for Cognitive Neuroscience*, Essex, UK
- Sakaki, M.**, Ponzio, A., & Mather, M. (2015). Arousal-biased competition: Emotional arousal impairs memory only when the input information competes with each other. *27th APS Annual Convention*, Poster session, New York, US.
- Sakaki, M.**, Fryer, K., & Mather, M. (2013). Whether emotion leads to retrograde amnesia or facilitation depends on the focus of top-down attention. *20th Cognitive Neuroscience Society Annual Meeting*, Poster Session, San Francisco, US.
- Sakaki, M.**, Nga, L., & Mather, M. (2012). Older adults' positivity effect in memory is related to their amygdala-mPFC functional connectivity during rest. *19th Cognitive Neuroscience Society Annual Meeting*, Poster Session, Chicago, US.
- Lee, B., **Sakaki, M.**, Murayama, K., Maier, M., & Pekrun, R. (2011). Acute stress response increases rejections in the Ultimatum Game. *4th Workshop for Judgment and Decision Making*, Bonn, NRW.
- Lee, B., **Sakaki, M.**, Murayama, K., Maier, M., & Pekrun, R. (2011). Acute Stress Response Increases Rejections in the Ultimatum Game. *32nd Annual Conference of the Society for Judgment and Decision Making*, Seattle, WA.
- Nashiro, K., **Sakaki, M.**, Nga, L., & Mather, M. (2011). Differential neural activity during emotional vs. non-emotional reversal learning. *52nd Annual Meeting of the Psychonomic Society*, Seattle, WA, US.
- Sakaki, M.**, Gorlick, M. A., & Mather, M. (2011). Differential interference effects of negative emotional states on subsequent semantic and perceptual processing. *52nd Annual Meeting of Psychonomic Society*, Seattle, US.
- Sakaki, M.**, Sutherland, R. M., Nga, L., & Mather, M. (2011). Age differences in amygdala functional connectivity during rest. *18th Cognitive Neuroscience Society Annual Meeting*, Poster Session, San Francisco, US.
- Sakaki, M.**, Niki, K., & Mather, M. (2010). Brain mechanisms underlying the intrusive nature of previous emotional associations. *17th Cognitive Neuroscience Society Annual Meeting*, Poster Session, Montreal, Canada.
- Lighthall, N. R., **Sakaki, M.**, Vasunilashorn, S, Nga, L, Gorlick, MA, Somayajula, S, Mather, M. (2010). Stress effects on risk- and reward-related decision processing are modulated by sex. *Association for Psychological Science Annual Convention*. Boston, MA.
- Lighthall, N. R., **Sakaki, M.**, Vasunilashorn, S, Somayajula, S, Mather, M. (2010). Stress alters reward-related decision processing but effects are modulated by sex. *University of Southern California, Graduate and Professional Student Senate Poster Symposium*. Los Angeles, CA.
- Sakaki, M.** & Niki, K. (2009). Neural correlates with biological and social emotional stimuli. Poster Session, *16th Cognitive Neuroscience Society Annual Meeting*, San Francisco, USA.

- Lighthall, N. R., **Sakaki, M.**, Vasunilashorn, S, Somayajula, S, Nga, L, Mather, M. (2009). Stress modulates sex differences in BOLD response and behavior during decision making. *Society for Neuroeconomics*. Evanston, IL.
- Lighthall, N, **Sakaki, M.**, Vasunilashorn, S, Somayajula, S, Chen, E, Nga, L, & Mather, M. (2009). Sex differences in stress effects on brain activation and behavior during risk taking. *Cognitive Neuroscience Society Annual Meeting*. San Francisco, CA.
- Sakaki, M.** & Niki, K. (2008). Emotion and insight problem solving: Facilitation by positive emotion and interference by negative emotion. *38th Annual Meeting for Society of Neuroscience*, Poster Session, SS15, Washington DC, USA.
- Niki, K. & **Sakaki, M.** (2008). The effects of positive and negative emotions on insight problem solving. *Human Brain Mapping 2008*, Poster session, Melbourne, Australia.
- Sakaki, M.** & Niki, K. (2008). The effects of positive and negative emotions on insight problem solving. *9th Annual Meeting of Society for Personality and Social Psychology (Emotion Preconference)*. Poster Session, Albuquerque, USA.
- Sakaki, M.** (2008). The effects of emotion on memory: Distinct mechanisms for biologically emotional information and socially emotional information. *9th Annual Meeting of Society for Personality and Social Psychology*. Poster Session, E158, Albuquerque, USA.
- Sakaki, M.** (2007). The attentional holding effect for emotional pictures: Do biological emotional stimuli and social emotional stimuli equally hold attention? *8th Annual Meeting of Society for Personality and Social Psychology*, Poster Session, E78. Memphis, USA.
- Sakaki, M.** (2006). Mood and recall of autobiographical memory: The effect of structure of self-knowledge. *7th Annual Meeting of Society for Personality and Social Psychology*, Poster Session, E107. Palm Springs, USA.
- Sakaki, M.** (2005). Nature of autobiographical memory that facilitates improvement of negative moods. *International Symposium on New Perspectives in Affective Science*. Poster Session. Kyoto, Japan.
- Sakaki, M.** (2004). Structures of self-knowledge: Relation between self-concept and autobiographical memory. *5th Tsukuba International Conference on Memory*, Poster Session, 48. Tsukuba, Japan.
- Sakaki, M.** (2004). Structure of self-knowledge: Is self-concept represented independently of autobiographical memory. *28th International Congress of Psychology*. Poster Session, 3118.79. Beijing, China.

INVITED TALKS

2017

Hiroshima University

2016

Max Planck Institute

Swansea University

University of Tokyo

University of Kyoto

2015

Kochi University of Technology

Swiss Center for Affective Sciences

2014

Gent University

Japanese Society for Social Psychology

2013

Lancaster University

University of Reading

University of Sussex

University of Cambridge

Aston University

2012

University of Essex

Nagoya University

University of Tokyo

2010

Ludwig-Maximilians-Universitaet Muenchen (University of Munich)

2009

Chubu University

2006

University of California, Santa Cruz

EDITORIAL/CONFERENCE WORK

Program committee for 2016 International Conference of Psychology

Consulting Editor in *Emotion* (2013-2016)

Editorial board in *Japanese Journal of Educational Psychology* (2014-)

GRANT REVIEWER

Biotechnology and Biological Sciences Research Council (BBSRC), UK

Croatian Science Foundation

PHD SUPERVISION

Nilgun Turkileri (2014-)

Jasmine Raw (2016-)

Ifeoma Egbuniwe (2018-)

AD HOCK REVIEWER

Aging, Neuropsychology and Cognition

Cognitive, Affective & Behavioral Neuroscience

Cognition & Emotion

Emotion

Experimental Aging Research

Frontiers in Integrative Neuroscience

Frontiers in Psychology

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 Psychopathology

Journal of Gerontology: Psychological Science

Journal of Neuroscience

Journal of Personality

Journal of Psychophysiology

Memory

PLoS One

Psychoneuroendocrinology

Psychological Medicine

Psychological Science
Psychology & Aging
Psychonomic Bulletin & Review
Psychiatry Research
Social, Cognitive and Affective Neuroscience
Trends in Cognitive Sciences

SOCIETY AFFILIATIONS

Association for Psychological Science
Cognitive Neuroscience Society
Psychonomic Society
Society for Neuroscience
Experimental Psychology Society
Japanese Psychological Association
Japanese Society for Cognitive Psychology
Japanese Association of Educational Psychology