

Curriculum Vitae

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Family name:	Makuuchi
Forename:	Michiru
Date of birth:	3 Nov. 1970
Place of birth:	Takasaki
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Education

1990 Apr - 1995 Mar

Faculty of Agriculture, University of Tokyo

Awarded the degree of B.Sc. in Agricultural Chemistry

1995 Apr - 1997 Mar

Department of Cognitive Neuroscience, Graduate School of Medicine,
University of Tokyo

Awarded the degree of M.Sc. in Medical Science.

1997 Apr – 2001 Mar

Department of Cognitive Neuroscience, Graduate School of Medicine,
University of Tokyo

Awarded the degree of Ph. D. in Medicine.

Positions

2001 May - 2004 Mar

Research associate, Department of Cognitive Neuroscience,
Graduate School of Medicine, University of Tokyo

2002 Sep – 2004

Mar Post-doctoral research fellow, Division of Human brain research, Neuroscience,
Karolinska institutet

2004 Apr – 2007 Mar

Research associate, Department of Speech Physiology,
Graduate School of Medicine, University of Tokyo

2007 Mar – 2012 Feb

Research staff, Max Planck Institute for Human Cognitive and Brain Sciences

2012 Mar – present

Chief, Section of Neuropsychology,

Research Institute of National Rehabilitation Center for Persons with Disabilities

Publications

18. Michiru Makuuchi, Kimihiro Nakamura, Yoshiaki Someya, Seiji Ogawa, Yoshihiro Takayama. Reading an opaque orthography: Network dynamics in cognitive controls over the print-to-sound conversion system. in preparation.
17. Michiru Makuuchi, Kimihiro Nakamura, Yoshiaki Someya, Seiji Ogawa, Yoshihiro Takayama. Categorical decision making on concepts: Complementary neuronal mechanisms across two hemispheres. in preparation.
16. Nakamura K, Makuuchi M and Nakajima Y (2014) Mirror-image discrimination in the literate brain: a causal role for the left occipitotemporal cortex. *Front. Psychol.* 5:478. doi: 10.3389/fpsyg.2014.00478.
15. Michiru Makuuchi, Angela D. Friederici. Hierarchical functional connectivity between the core language system and the working memory system. *Cortex*, 2013. <http://dx.doi.org/10.1016/j.cortex.2013.01.007>.
14. Michiru Makuuchi, Jörg Bahlmann, Angela D. Friederici . An approach to separating the levels of hierarchical structure building in language and mathematics. *Philosophical Transactions of the Royal Society B*, 2012b 367, 2033-2045.
13. Michiru Makuuchi, Yosef Grodzinsky, Katrin Amunts, Andrea Santi, Angela D. Friederici. Processing non-canonical sentences in Broca's region: Reflections of movement distance and type. *Cerebral Cortex*, 2012a Mar 20. [Epub ahead of print]
12. Jörg Bahlmann, Jutta L Müller, Michiru Makuuchi, Angela D. Friederici. Perisylvian functional connectivity during processing of sentential negation. *Front Psychol.* 2011;2:104. Epub 2011 May 31.
11. Angela D. Friederici, Jörg Bahlmann, Roland Friedrich, Michiru Makuuchi. The neural basis of recursion and complex syntactic hierarchy. *Biolinguistics* (2011) 5 (1-2) 87-104.
10. Michiru Makuuchi, Yoshiaki Someya, Seiji Ogawa, Yoshihiro Takayama. and shape selection in pantomimed grasping: interaction between the dorsal and the ventral visual streams and convergence on the ventral premotor area. *Hum Brain Mapp.* 2011 Jul 7. doi: 10.1002/hbm.21323. [Epub ahead of print]

9. Masako Hirotsu, Michiru Makuuchi, Shirley-Ann Rüschemeyer, Angela D. Friederici. Who was the Agent? The Neural Correlates of Reanalysis Processes during Sentence Comprehension. *Hum Brain Mapp.* 2011 Mar 9. doi: 10.1002/hbm.21146. [Epub ahead of print]
8. Nakamura K, Kouider S, Makuuchi M, Kuroki C, Hanajima R, Ugawa Y, Ogawa S. Neural control of cross-language asymmetry in the bilingual brain. *Cereb Cortex.* 2010 20(9):2244-51
7. Michiru Makuuchi
fMRI studies on drawing revealed two new neural correlates that coincide with the language network. *Cortex.* 2010 46(2):268-9
6. Makuuchi M, Bahlmann J, Anwender A, Friederici AD.
Segregating the core computational faculty of human language from working memory. *Proc Natl Acad Sci U S A.* 2009 106(20):8362-7
5. Friederici AD, Makuuchi M, Bahlmann J.
The role of the posterior superior temporal cortex in sentence comprehension. *Neuroreport.* 2009 20(6):563-8.
4. Michiru Makuuchi
Is Broca's area a crucial cortex for imitation?
Cereb Cortex 2005; 15: 563 - 570.
3. Michiru Makuuchi, Tatsuro Kaminaga, Morihiro Sugishita
Brain activation during ideomotor praxis: imitation and movements executed by verbal command
J Neurol Neurosurg Psychiatry 2005;76:1 25-33.
2. Michiru Makuuchi , Tatsuro Kaminaga, Morihiro Sugishita
Both parietal lobes are involved in drawing: a functional MRI study and implications for constructional apraxia.
Brain Res Cogn Brain Res 2003; 16(3):338-47.

1. Kimura K. Miyake S. Makuuchi M. Morita R. Usui T. Yoshida M. Horinouchi S. Fukui Y. Phosphatidylinositol-3 kinase in fission yeast: a possible role in stress responses. *Biosci Biotechnol Biochem* 1995; 59(4):678-82.

Conference presentations

12. Michiru Makuuchi, Yosef Grodzinsky, Katrin Amunts, Andrea Santi, Angela D. Friederici.

System dynamics of language and working memory: Shift from parietal to frontal mediation,

Neuroscience meeting, Washington DC, USA, Nov 2011.

11. Michiru Makuuchi, Yosef Grodzinsky, Katrin Amunts, Andrea Santi, Angela D. Friederici.

System dynamics of language and working memory: shift from parietal to frontal mediation

Neuroscience meeting, San Diego, USA, Nov 2010.

10. Michiru Makuuchi, Yosef Grodzinsky, Katrin Amunts, Andrea Santi, Angela D. Friederici.

Neural mechanisms for the processing of movement and scrambling constructions
Neurobiology of Language Conference, San Diego, USA, Nov 2010.

9. Makuuchi M., Bahlmann J. Friederici A. D.

Recursive integration of information in language and arithmetic.

7th FENS Forum of European Neuroscience, Amsterdam, Netherland, July 2010.

8. Makuuchi M., Bahlmann J. Friederici A. D.

Segregating the core computational faculty of human language from working memory.

52th TeaP, Saarbrücken, Germany, Mar 2010

7. Makuuchi M, Masako Hirotani, Angela D. Friederici

Broca's area supports the processing of dependent expression in sentence.

Human Brain Mapping, June 2009, San Francisco, CA, USA

6. Michiru Makuuchi, Jörg Bahlmann, Alfred Anwander, Angela Friederici

Segregating the core computational faculty of human lg. from working memory.

RECURSION CONFERENCE, University of Massachusetts May, 2009

5. Makuuchi M, Bahlmann J, Friederici A. D.
Segregating the core computational faculty of human lg. from working memory.
Neuroscience meeting, Washington DC, USA, Oct 2008

4. Michiru Makuuchi, Yoshiaki Someya, Seiji Ogawa, Yoshihiro Takayama
Left Brodmann area 44 has three subregions: common and selective activation by
speech production and by hand movement.
Neuroscience meeting, Atlanta, USA. Oct 2006.

3. Michiru Makuuchi, Yoshiaki Someya, Seiji Ogawa, Yoshihiro Takayama
Two successive motor responses by speech and by finger movement.
activate the brain in contrasting manners.
Human Brain Mapping, June 2006, Frolence, Italy.

2. Makuuchi M, Y. Someya, S. Ogawa, Y. Takayama.
Two successive motor responses by speech and by finger movement activate the brain
in contrasting manners. Human Brain Mapping, Toronto, Canada, 2005, June.

1. M. Sugishita, K. Yoshikawa, T. Kaminaga, M. Makuuchi, T. Ogiso, K. Katanoda, K.
Omura.
Functional MRI (fMRI) study of phoneme-to-grapheme conversion in Japanese.
Neuroscience meeting, Miami, Oct 1999.

Invited talks

2. Recursion in Broca's area
AGL and FLT workshop, 23-24 November 2010, Nijmegen, Netherlands

1. PPI analysis in sentence processing Experiment.
4th International Summer School in Biomedical Engineering - Brain connectivity and
information transfer, Aug 2009, Leipzig.