Curriculum Vitae

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Academic Employment

2018.4-present	RIKEN Center for Brain Science, Team Leader
2012.9-2018.3	RIKEN Brain Science Institute, Team Leader
2012.3-2012.9	New York University, School of Medicine, The Neuroscience Institute, Dr. György Buzsáki's Laboratory, Researcher
2005.6-2012.2	Rutgers University, Center for Molecular and Behavioral Neuroscience, Dr. György Buzsáki's Laboratory, Researcher
2005.4-2005.5	The University of Tokyo, Graduate School of Pharmaceutical Sciences, Researcher

Education

2005.3	Ph.D., Pharmaceutical Science Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan Adviser: Dr. Yuji Ikegaya and Dr. Norio Matsuki
2002.3	M.Sc., Engineering Graduate School of Engineering, Kyoto University, Japan Adviser: Dr. Ali Ide-Ektessabi
2000.3	B.Sc., Engineering Department of Engineering, Kyoto University, Japan Adviser: Dr. Ali Ide-Ektessabi

Publications

1. Danjo T, Toyoizumi T, & Fujisawa S* (2018) Spatial representations of self and other in the hippocampus. *Science*, **359**:213-218.
2. Norimoto H, Makino K, Gao M, Shikano Y, Okamoto K, Ishikawa T, Sasaki T, Hioki H, Fujisawa S*, & Ikegaya Y * (2018) Hippocampal ripples down-regulate synapses. *Science*, **359**:524-1527.
3. Agetsuma M*, Hamm JP, Tao K, Fujisawa S, & Yuste R (2017) Parvalbumin-Positive Interneurons Regulate Neuronal Ensembles in Visual Cortex. Cereb Cortex. **28**:1831-1845.
4. Terada S, Sakurai Y, Nakahara H, & Fujisawa S* (2017) Temporal and rate coding for discrete event sequences in the hippocampus. *Neuron*, **94**:1248–62.
5. Berényi A, Somogyvári Z, Nagy AJ, Roux L, Long JD, Fujisawa S, Stark E, Leonardo A, Harris TD, & Buzsáki G* (2014) Large-scale, high-density (up to 512 channels) recording of local circuits in behaving animals. *J Neurophysiol*. **111**:1132-49.
6. Stark E, Eichler R, Roux L, Fujisawa S, Rotstein HG, & Buzsáki G* (2013) Inhibition-induced theta resonance in cortical circuits. *Neuron*, **80**:1263-76.
7. Patel J, Schomburg EW, Berényi A, Fujisawa S, & Buzsáki G* (2013) Local generation and propagation of ripples along the septotemporal axis of the hippocampus. *J. Neurosci*. **33**:17029-41.
8. Patel J, Fujisawa S, Berényi A, Royer S, & Buzsáki G* (2012) Traveling Theta Waves along the Entire Septotemporal Axis of the Hippocampus. *Neuron*, **75**:410-417.
9. Madisen L, Mao T, Koch H, Zhuo JM, Berenyi A, Fujisawa S, Hsu YW, Garcia AJ 3rd, Gu X, Zanella S, Kidney J, Gu H, Mao Y, Hooks BM, Boyden ES, Buzsáki G, Ramirez JM, Jones AR, Svoboda K, Han X, Turner EE & Zeng H* (2012) A toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. *Nature Neurosci*. **15**:793-802.
10. Fujisawa S & Buzsáki G* (2011) A 4-Hz oscillation adaptively synchronizes prefrontal, VTA and hippocampal activities. *Neuron*, **72**:153-165.
11. Sirota A, Montgomery S, Fujisawa S, Isomura Y, Zugaro M & Buzsáki G* (2008) Entrainment of neocortical neurons and gamma oscillations by hippocampal theta rhythm. *Neuron*, **60**:683-697.
12. Fujisawa S, Amarasingham A, Harrison MT & Buzsáki G* (2008) Behavior-dependent short-term assembly dynamics in the medial prefrontal cortex. *Nature Neurosci*., **11**:823-834.
13. Fujisawa S, Matsuki N & Ikegaya Y* (2006) Single neurons can induce phase transitions of cortical recurrent networks with multiple internal states. *Cereb Cortex*, **16**:639-654.

14. Yasui T, Fujisawa S, Tsukamoto M, Matsuki N & Ikegaya Y* (2005) Dynamic synapses as archives of synaptic history: state-dependent redistribution of synaptic efficacy in the rat hippocampal CA1. *J. Physiol*., **566**:143-160.

15. Fujisawa S, Matsuki N & Ikegaya Y* (2004) Chronometric readout from a memory trace: Gamma-frequency field stimulation recruits timed recurrent activity in the rat CA3 network. *J. Physiol.*, **560**:123-131.

16. Koyama R, Yamada MK, Fujisawa S, Katoh-Semba R, Matsuki N, Nishiyama N & Ikegaya Y* (2004) Brain-derived neurotrophic factor induces hyperexcitable reentrant circuits in the dentate gyrus. *J. Neurosci.*, **24**:9215-9224.

17. Fujisawa S, Yamada MK, Nishiyama N, Matsuki N & Ikegaya Y* (2004) BDNF boosts spike fidelity in chaotic neural oscillations. *Biophys. J*., **86**:1820-1828.

18. Baba A, Yasui T, Fujisawa S, Yamada RX, Yamada MK, Nishiyama N, Matsuki N & Ikegaya Y* (2003) Activity-evoked capacitative Ca2+ entry: Implications in synaptic plasticity. *J. Neurosci.*, **23**: 7737-7741.

19. Yoshida S*, Ide-Ektessabi A & Fujisawa S. (2003) Application of synchrotron radiation in neuromicrobiology: role of iron in Parkinson's disease. *Struct. Chem*., **14**: 85-95.

20. Ishihara R, Ide-Ektessabi A, Ikeda K, Mizuno Y, Fujisawa S, Takeuchi T, Ohta T*. (2002) Investigation of cellular metallic elements in single neurons of human brain tissues. *Neuroreport* **13**: 1817-1820.

21. Ide-Ektessabi A*, Fujisawa S, Sugimura K, Kitamura Y, Gotoh A. (2002) Quantitative analysis of zinc in the prostate cancer tissues using synchrotron radiation micro beams. *X-ray Spectrom*. **31**: 7-11.

22. Ide-Ektessabi A*, Fujisawa S, Yoshida S. (2002) Chemical state imaging of iron in nerve cells from a patient with Parkinsonism-dementia complex. *J. Appl. Phys*. **91**:1613-1617.

23. Kawai J*, Takagawa K, Fujisawa S, Ektessabi A, Hayakawa S. (2001) Microbeam XANES and X-ray fluorescence analysis of cadmium in kidney. *J.Trace. Microprobe. T.*, **19**: 541-546.

24. Yoshida S*, Ektessabi A, Fujisawa S. (2001) XANES spectroscopy of a single neuron from a patient with Parkinson's disease. *J. Synchrotron Radiat.* **8**: 998-1000.