

Joint Publications by the teams:

1. Joe Z. Tsien, Meng Li, Remus Osan, Guifen Chen, Longian Lin, Phillip Lei Wang, Sabine Frey, Julietta Frey, Dajiang Zhu, Tianming Liu, Fang Zhao, Hui Kuang, On initial Brain Activity Mapping of associative memory code in the hippocampus, in press, *Neurobiology of Learning and Memory*, 2013.
2. Zhichao Lian, Xiang Li, Hongmiao Zhang, Hui Kuang, Kun Xie, Jianchuan Xing, Dajiang Zhu, Joe Z. Tsien, Tianming Liu, Jing Zhang, Detecting cell assembly interaction patterns via Bayesian based change-point detection and graph inference model, ISBI 2014.

Representative Publications by individual investigators:

Joe Tsien:

Jacobs SA, Tsien JZ.	Genetic Overexpression of NR2B Subunit Enhances Social Recognition Memory for Different Strains and Species	<i>PLoS One</i> . 2012;7(4):e36387. Epub 2012 Apr 27.
Lei Phillip Wang, Fei Li, Dong Wang, Kun Xie, Deheng Wang, Xiaoming Shen, Joe Z. Tsien	NMDA Receptors in Dopaminergic Neurons Are Crucial for Habit Learning	<i>Neuron</i> . 2011 December 22, Volume 72, Issue 6:p1055-1067 Video Abstract Link
He X, Yang Z, Tsien JZ	A hierarchical probabilistic model for rapid object categorization in natural scenes	<i>PLoS One</i> . 2011;6(5):e20002. Epub 2011 May 25.
Mei B, Li F, Gu Y, Cui Z, Tsien JZ	NMDA receptors are not required for pattern completion during associative memory recall	<i>PLoS One</i> . 2011 Apr 29;6(4):e19326
Wang DV, Tsien JZ	Convergent processing of both positive and negative motivational signals by the VTA dopamine neuronal populations	<i>PLoS One</i> . 2011 Feb 15;6(2):e17047
Oşan R, Chen G, Feng R, Tsien JZ	Differential consolidation and pattern reverberations within episodic cell assemblies in the mouse hippocampus	<i>PLoS One</i> . 2011 Feb 15;6(2):e16507
Wang DV, Tsien JZ	Conjunctive processing of locomotor signals by the ventral tegmental area neuronal population	<i>PLoS One</i> . 2011 Jan 27;6(1):e16528
Xu J, Yang Z, Tsien JZ	Emergence of visual saliency from natural scenes via context-mediated probability distributions coding	<i>PLoS One</i> . 2010 Dec 29;5(12):e15796
Kuang H, Lin L, Tsien JZ	Temporal dynamics of distinct CA1 cell populations during unconscious state induced by	<i>PLoS One</i> . 2010 Dec 8;5(12):e15209

	<u>ketamine</u>	
Li F, Wang LP, Shen X, Tsien JZ	<u>Balanced dopamine is critical for pattern completion during associative memory recall</u>	<i>PLoS One. 2010 Oct 27;5(10):e15401</i>
Bibb JA, Mayford MR, Tsien JZ, Alberini CM	<u>Cognition enhancement strategies</u>	<i>J Neurosci. 2010 Nov 10;30(45):14987-92. Review</i>
Kuang H, Mei B, Cui Z, Lin L, Tsien JZ	<u>A novel behavioral paradigm for assessing the concept of nests in mice</u>	<i>J Neurosci Methods. 2010 Jun 15;189(2):169-75. Epub 2010 Mar 27</i>
Wang LP, Li F, Shen X, Tsien JZ	<u>Conditional knockout of NMDA receptors in dopamine neurons prevents nicotine-conditioned place preference</u>	<i>PLoS One. 2010 Jan 7;5(1):e8616</i>
Chen G, Wang LP, Tsien JZ	<u>Neural population-level memory traces in the mouse hippocampus</u>	<i>PLoS One. 2009 Dec 16;4(12):e8256</i>
Wang D, Cui Z, Zeng Q, Kuang H, Wang LP, Tsien JZ, Cao X	<u>Genetic enhancement of memory and long-term potentiation but not CA1 long-term depression in NR2B transgenic rats</u>	<i>PLoS One. 2009 Oct 19;4(10):e7486</i>
Li F, Tsien JZ	<u>Memory and the NMDA receptors</u>	<i>N Engl J Med. 2009 Jul 16;361(3):302-3</i>
KUANG H, WANG PL, TSIEN JZ	<u>Towards transgenic primates: What can we learn from mouse genetics?</u>	<i>Sci China C Life Sci. 2009 Jun;52(6):506-14. Epub 2009 Jun 26. Review</i>
Zhao X, Strong R, Zhang J, Sun G, Tsien JZ, Cui Z, Grotta JC, Aronowski J	<u>Neuronal PPARgamma deficiency increases susceptibility to brain damage after cerebral ischemia</u>	<i>J Neurosci. 2009 May 13;29(19):6186-95</i>
Heng MY, Detloff PJ, Wang PL, Tsien JZ, Albin RL	<u>In vivo evidence for NMDA receptor-mediated excitotoxicity in a murine genetic model of Huntington disease</u>	<i>J Neurosci. 2009 Mar 11;29(10):3200-5</i>
Cao X, Wang H, Mei B, An S, Yin L, Wang LP, Tsien JZ	<u>Inducible and selective erasure of memories in the mouse brain via chemical-genetic manipulation</u>	<i>Neuron. 2008 Oct 23;60(2):353-66.</i>
Wang H, Feng R, Phillip Wang L, Li F, Cao X, Tsien JZ	<u>CaMKII activation state underlies synaptic labile phase of LTP and short-term memory formation</u>	<i>Curr Biol. 2008 Oct 28;18(20):1546-54. Epub 2008 Oct 16</i>
Ohtsuka N, Tansky MF, Kuang H, Kourrich S, Thomas MJ, Rubenstein	<u>Functional disturbances in the striatum by region-specific ablation of NMDA receptors</u>	<i>Proc Natl Acad Sci U S A. 2008 Sep 2;105(35):12961-6. Epub 2008 Aug 26</i>

JL, Ekker M, Leeman SE,
Tsien JZ

- Sun Q, Dong J, Yang W,
Jin Y, Yang M, Wang Y,
Wang PL, Hu Y, Tsien JZ Efficient reproduction of cynomolgus monkey using pronuclear embryo transfer technique *Proc Natl Acad Sci U S A.* 2008 Sep 2;105(35):12956-60. Epub 2008 Aug 25
- Tsien JZ Real-time neural coding of memory *Prog Brain Res.* 2007;165:105-22. Review
- Cho MH, Cao X, Wang D,
Tsien JZ Dentate gyrus-specific manipulation of beta-Ca2+/calmodulin-dependent kinase II disrupts memory consolidation *Proc Natl Acad Sci U S A.* 2007 Oct 9;104(41):16317-22. Epub 2007 Oct 3
- Tsien JZ The memory code *Sci Am.* 2007 Jul;297(1):52-9
- Oşan R, Zhu L, Shoham S,
Tsien JZ Subspace projection approaches to classification and visualization of neural network-level encoding patterns *PLoS One.* 2007 May 2;2(5):e404
- Cao X, Cui Z, Feng R,
Tang YP, Qin Z, Mei B,
Tsien JZ Maintenance of superior learning and memory function in NR2B transgenic mice during ageing *Eur J Neurosci.* 2007 Mar;25(6):1815-22
- Lin L, Chen G, Kuang H,
Wang D, Tsien JZ Neural encoding of the concept of nest in the mouse brain *Proc Natl Acad Sci U S A.* 2007 Apr 3;104(14):6066-71. Epub 2007 Mar 27
- Wang H, Hu Y, Tsien JZ Molecular and systems mechanisms of memory consolidation and storage *Prog Neurobiol.* 2006 Jun;79(3):123-35. Epub 2006 Aug 7. Review
- Lin L, Chen G, Xie K,
Zaia KA, Zhang S, Tsien JZ Large-scale neural ensemble recording in the brains of freely behaving mice *J Neurosci Methods.* 2006 Jul 15;155(1):28-38. Epub 2006 Mar 22
- Lin L, Osan R, Tsien JZ Organizing principles of real-time memory encoding: neural clique assemblies and universal neural codes *Trends Neurosci.* 2006 Jan;29(1):48-57. Epub 2005 Dec 1. Review
- Cui Z, Lindl KA, Mei B,
Zhang S, Tsien JZ Requirement of NMDA receptor reactivation for consolidation and storage of nondeclarative taste memory revealed by inducible NR1 knockout *Eur J Neurosci.* 2005 Aug;22(3):755-63
- Lin L, Osan R, Shoham S,
Jin W, Zuo W, Tsien JZ Identification of network-level coding units for real-time representation of episodic experiences in the hippocampus *PNAS* 2005 Apr 26;102(17):6125-30. Epub 2005 Apr 15
- Feng R, Wang H, Wang J,
Shrom D, Zeng X, Tsien Forebrain degeneration and ventricle enlargement caused *PNAS* 2004 May 25;101(21):8162-7. Epub 2004 May 17

JZ [by double knockout of Alzheimer's presenilin-1 and presenilin-2](#)

Cui Z, Wang H, Tan Y, Zaia KA, Zhang S, Tsien JZ [Inducible and reversible NR1 knockout reveals crucial role of the NMDA receptor in preserving remote memories in the brain](#) *Neuron*. 2004 Mar 4;41(5):781-93

Wang H, Shimizu E, Tang YP, Cho M, Kyin M, Zuo W, Robinson DA, Alaimo PJ, Zhang C, Morimoto H, Zhuo M, Feng R, Shokat KM, Tsien JZ [Inducible protein knockout reveals temporal requirement of CaMKII reactivation for memory consolidation in the brain](#) *PNAS* 2003 Apr 1;100(7):4287-92. *Epub* 2003 Mar 19

Wittenberg GM, Sullivan MR, Tsien JZ [Synaptic reentry reinforcement based network model for long-term memory consolidation](#) *Hippocampus*. 2002;12(5):637-47. *Review*

Wittenberg GM, Tsien JZ [An emerging molecular and cellular framework for memory processing by the hippocampus](#) *Trends Neurosci*. 2002 Oct;25(10):501-5. *Review*

Zhang J, Zhang D, McQuade JS, Behbehani M, Tsien JZ, Xu M [c-fos regulates neuronal excitability and survival](#) *Nat Genet*. 2002 30 :416-420.

Feng R, Rampon C, Tang YP, Shrom D, Jin J, Kyin M, Sopher B, Miller MW, Ware CB, Martin GM, Kim SH, Langdon RB, Sisodia SS, Tsien JZ [Deficient neurogenesis in forebrain-specific presenilin-1 knockout mice is associated with reduced clearance of hippocampal memory traces](#) *Neuron* 2001 32 :911-926

Tang YP, Wang H, Feng R, Kyin M, Tsien JZ [Differential effects of enrichment on learning and memory function in NR2B transgenic mice](#) *Neuropharmacology* 2001 41 :779-790.

Mody M, Cao Y, Cui Z, Tay KY, Shyong A, Shimizu E, Pham K, Schultz P, Welsh D, Tsien JZ [Genome-wide gene expression profiles of the developing mouse hippocampus](#) *PNAS* 2001 98 :8862-8867.

Jiang CH, Tsien JZ, Schultz PG, Hu Y [The effects of aging on gene expression in the hypothalamus and cortex of mice](#) *PNAS* 2001 98 :1930-1934.

Shimizu E, Tang YP, Rampon C, Tsien JZ [NMDA receptor-dependent synaptic reinforcement as a crucial process for memory consolidation](#) *Science* 2000 290 :1170-1174.

Rampon C, Jiang CH, [Effects of environmental](#) *PNAS* 2000 97 :12880-12884.

Dong H, Tang YP, Lockhart DJ, Schultz PG, Tsien JZ, Hu Y	enrichment on gene expression in the brain	
Bishop AC, Ubersax JA, Petsch DT, Matheos DP, Gray NS, Blethrow J, Shimizu E, Tsien JZ, Schultz PG, Rose MD, Wood JL, Morgan DO, Shokat KM	A chemical switch for inhibitor-sensitive alleles of any protein kinase	<i>Nature</i> 2000 407 :395-401
Rampon C, Tsien JZ	Genetic analysis of learning behavior-induced structural plasticity	<i>Hippocampus</i> 2000 10 :605-609
Tsien JZ	Building a brainier mouse	<i>Scientific American</i> 2000 282 :62-68
Tsien JZ	Linking Hebb's coincidence- detection to memory formation	<i>Curr. Opin. Neurobiol.</i> 2000 10 :266-273
Rampon C, Tang YP, Goodhouse J, Shimizu E, Kyin M, Tsien JZ	Enrichment induces structural changes and recovery from nonspatial memory deficits in CA1 NMDAR1-knockout mice	<i>Nat Neurosci.</i> 2000 3 :238-244
Tang YP, Shimizu E, Dube GR, Rampon C, Kerchner GA, Zhuo M, Liu G, Tsien JZ	Genetic enhancement of learning and memory in mice	<i>Nature</i> 1999 401 :63-69
Tsien, JZ	Brain region-specific and temporally restricted gene knockout using the Cre recombinase system	<i>Molecular-Genetic Techniques for Behavioral Neuroscience, 1999, edited by W.E. Crusio and R. Gerlai(Eds), part of a comprehensive series on " Techniques in the Behavioral and Neural Science ", edited by JP Huston, Elsevier of Amsterdam</i>
Tsien JZ, Chen DF, Gerber D, Tom C, Mercer EH, Anderson DJ, Mayford M, Kandel ER, Tonegawa S	Subregion- and cell type- restricted gene knockout in mouse brain	<i>Cell</i> 1996 87 :1317-1326
Tsien JZ, Huerta PT, Tonegawa S	The essential role of hippocampal CA1 NMDA receptor-dependent synaptic plasticity in spatial memory	<i>Cell</i> 1996 87 :1327-1338
McHugh TJ, Blum KI, Tsien JZ, Tonegawa S, Wilson MA	Impaired hippocampal representation of space in CA1- specific NMDAR1 knockout mice	<i>Cell</i> 1996 87 :1339-1349

Tianming Liu

Jinli Ou*, Zhichao Lian*, Li Xie, Xiang Li, Peng Wang, Yun Hao, Dajiang Zhu, Rongxin Jiang, Yufeng Wang, Yaowu Chen, Jing Zhang**, Tianming Liu**, Atomic Dynamic Functional Interaction Patterns for Characterization of ADHD, *Joint first authors, **Joint corresponding authors, accepted, Human Brain Mapping, 2014.

Jinglei Lv, Lei Guo, Dajiang Zhu, Tuo Zhang, Xintao Hu, Junwei Han, Tianming Liu, Group-wise FMRI Activation Detection on DICCOL Landmarks, Neuroinformatics, in press, 2014.

Tuo Zhang, Hanbo Chen, Lei Guo, Kaiming Li, Longchuan Li, Shu Zhang, Dinggang Shen, Xiaoping Hu, Tianming Liu, Characterization of U-shape Streamline Fibers: Methods and Applications, in press, Medical Image Analysis. 2014.

Xin Zhang, Xiang Li, Changfeng Jin, Hanbo Chen, Kaiming Li, Dajiang Zhu, Xi Jiang, Tuo Zhang, Jinglei Lv, Xintao Hu, Junwei Han, Qun Zhao, Lei Guo, Lingjiang Li, Tianming Liu, Identifying and Characterizing Resting State Networks in Temporally Dynamic Functional Connectomes, in press, Brain Topography, 2014.

Bin He, Todd Coleman, Guy M. Genin, Gary Glover, Xiaoping Hu, Nessa Johnson, Tianming Liu, Scott Makeig, Paul Sajda, Kaiming Ye, Grand Challenges in Mapping the Human Brain: NSF Workshop Report, in press, IEEE Transactions on Biomedical Engineering, 2013

Dajiang Zhu, Tuo Zhang, Xi Jiang, Xintao Hu, Ning Yang, Jinglei Lv, Junwei Han, Lei Guo, Tianming Liu, Fusing DTI and FMRI Data: A Survey of Methods and Applications, in press, NeuroImage, 2013

Jing Zhang*, Xiang Li, Cong Li, Zhichao Lian, Xiu Huang, Guocheng Zhong, Dajiang Zhu, Kaiming Li, Changfeng Jin, Xintao Hu, Junwei Han, Lei Guo, Xiaoping Hu, Lingjiang Li, Tianming Liu*, Inferring Functional Interaction and Transition Patterns via Dynamic Bayesian Variable Partition Models, *Joint corresponding authors, accepted, Human Brain Mapping, 2013.

Dajiang Zhu, Kaiming Li, Douglas P. Terry, A. Nicholas Puente, Lihong Wang, Dinggang Shen, L. Stephen Miller, Tianming Liu, Connectome-scale Assessments of Structural and Functional Connectivity in MCI, in press, Human Brain Mapping, 2013.

Xin Zhang, Lei Guo, Xiang Li, Tuo Zhang, Dajiang Zhu, Kaiming Li, Hanbo Chen, Jinglei Lv, Changfeng Jin, Qun Zhao, Lingjiang Li, Tianming Liu, Characterization of Task-free and Task-performance Brain States via Functional Connectome Patterns, in press, Medical Image Analysis, 2013.

Fan Deng, Xi Jiang, Dajiang Zhu, Tuo Zhang, Kaiming Li, Lei Guo, Tianming Liu, A functional model of cortical gyri and sulci, accepted, Brain Structure and Function, 2013.

Hanbo Chen, Kaiming Li, Dajiang Zhu, Xi Jiang, Yixuan Yuan, Peili Lv, Tuo Zhang, Lei Guo, Dinggang Shen*, Tianming Liu*, Inferring Group-wise Consistent Multimodal Brain Networks via Multi-view Spectral Clustering, *Joint corresponding authors, accepted, IEEE Transactions on Medical Imaging, 2013.

Junwei Han, Xiang Ji, Xintao Hu, Dajiang Zhu, Kaiming Li, Xi Jiang, Guangbin Cui, Lei Guo, and Tianming Liu, Representing and Retrieving Video Shots in Human-Centric Brain Imaging Space, accepted, IEEE Transactions on Image Processing, 2013.

Tuo Zhang, Dajiang Zhu, Xi Jiang, Bao Ge, Xintao Hu, Junwei Han, Lei Guo, Tianming Liu, Predicting Cortical ROIs via Joint Modeling of Anatomical and Connectional Profiles, accepted, Medical Image Analysis, 2013.

Xiang Li, Dajiang Zhu, Xi Jiang, Changfeng Jin, Xin Zhang, Lei Guo, Jing Zhang, Xiaoping Hu, Lingjiang Li, Tianming Liu, Dynamic Functional Connectomics Signatures for Characterization and Differentiation of PTSD Patients, accepted, Human Brain Mapping, 2013.

Xintao Hu; Dajiang Zhu; Peili Lv; Kaiming Li; Junwei Han; Lihong Wang; Dinggang Shen; Lei Guo, Tianming Liu, Fine-Granularity Functional Interaction Signatures for Characterization of Brain Conditions, in press, Neuroinformatics, 2013.

Degang Zhang, Lei Guo, Dajiang Zhu, Kaiming Li, Longchuan Li, Hanbo Chen, Qun Zhao, Xiaoping Hu**, and Tianming Liu**, Diffusion Tensor Imaging Reveals Evolution of Primate Brain Architectures, **Joint corresponding authors, accepted, Brain Structure and Function, 2012.

Yixuan Yuan*; Xi Jiang*; Dajiang Zhu; Hanbo Chen; Kaiming Li; Peili Lv; Xiang Yu; Xiaojin Li; Shu Zhang; Tuo Zhang; Xintao Hu; Junwei Han; Lei Guo, Tianming Liu, Meta-analysis of Functional Roles of DICCOLs, *Joint first authors, in press, Neuroinformatics. 2012.

Bao Ge; Lei Guo; Tuo Zhang; Xintao Hu; Junwei Han, Tianming Liu, Resting State fMRI-guided Fiber Clustering: Methods and Applications, accepted, Neuroinformatics. 2012.

Xiang Li*, Chulwoo Lim*, Kaiming Li, Lei Guo, Tianming Liu, Detecting Brain State Changes via Fiber-Centered Functional Connectivity Analysis, *Joint first authors, in press, Neuroinformatics, 2012.

Fan Deng, Dajiang Zhu, Lei Guo and Tianming Liu, FMRI Signal Analysis Using Empirical Mean Curve Decomposition, accepted, IEEE Transactions on Biomedical Engineering, 2012.

Hanbo Chen*, Tuo Zhang*, Lei Guo, Kaiming Li, Xiang Yu, Longchuan Li, Xintao Hu, Junwei Han, Xiaoping Hu**, Tianming Liu**, Coevolution of Gyral Folding and Structural Connection Patterns in Primate Brains, *Joint first authors, **Joint corresponding authors, accepted, Cerebral Cortex, 2012.

Jiehuan Sun*, Xintao Hu*, Xiu Huang, Yang Liu, Kaiming Li, Xiang Li, Junwei Han, Lei Guo, Tianming Liu**, Jing Zhang**, Inferring Consistent Functional Interaction Patterns from Natural Stimulus FMRI Data, *Joint first authors, **Joint corresponding authors, accepted, NeuroImage, 2012.

Kaiming Li; Lei Guo; Carlos Faraco; Dajiang Zhu; Hanbo Chen; Yixuan Yuan; Jinglei Lv; Fan Deng; Xi Jiang; Tuo Zhang; Xintao Hu; Degang Zhang; Lloyd Miller, Tianming Liu, Visual Analytics of Brain Networks, accepted, NeuroImage, 2012.

Dajiang Zhu*, Kaiming Li*, Lei Guo, Xi Jiang, Tuo Zhang, Degang Zhang, Hanbo Chen, Fan Deng, Carlos Faraco, Changfeng Jin, Chong-Yaw Wee, Yixuan Yuan, Peili Lv, Yan Yin, Xiaolei Hu, Lian Duan, Xintao Hu, Junwei Han, Lihong Wang, Dinggang Shen, L Stephen Miller, Lingjiang Li, Tianming Liu, DICCOL: Dense Individualized and Common Connectivity-based Cortical Landmarks, *Joint first authors, accepted, Cerebral Cortex, 2012.

Kaiming Li*, Dajiang Zhu*, Lei Guo, Zhihao Li, Mary Ellen Lynch, Claire Coles, Xiaoping Hu**, Tianming Liu**, Connectomics Signatures of Prenatal Cocaine Exposure Affected Adolescent Brains, *Joint first authors, **Joint corresponding authors, accepted, Human Brain Mapping, 2012.

Kaiming Li; Lei Guo; Dajiang Zhu; Xintao Hu; Junwei Han, Tianming Liu, Individual Functional ROI Optimization via Maximization of Group-wise Consistency of Structural and Functional Profiles, accepted, Neuroinformatics, 2012.

Jingxin Nie, Lei Guo, Kaiming Li, Yonghua Wang, Guojun Chen, Longchuan Li, Hanbo Chen, Fan Deng, Xi Jiang, Tuo Zhang, Ling Huang, Carlos Faraco, Degang Zhang, Cong Guo, Pew-Thian Yap, Xintao Hu, Gang Li, Jinglei Lv, Yixuan Yuan, Dajiang Zhu, Junwei Han, Dean Sabatinelli, Qun Zhao, L Stephen Miller, Bingqian Xu, Ping Shen, Simon Platt, Dinggang Shen, Xiaoping Hu, Tianming Liu, Axonal Fiber Terminations Concentrate on Gyri, accepted, Cerebral Cortex, 2011.

Dajiang Zhu, Kaiming Li, Carlos Faraco, Fan Deng, Degang Zhang, Xi Jiang, Hanbo Chen, Lei Guo, Stephen Miller, Tianming Liu, Optimization of Functional Brain ROIs via Maximization of Consistency of Structural Connectivity Profiles, accepted, NeuroImage, 2011.

Tuo Zhang, Lei Guo, Kaiming Li, Changfeng Jing, Yan Yin, Dajiang Zhu, Guangbin Cui, Lingjiang Li, Tianming Liu, Predicting Functional Cortical ROIs via DTI-derived Fiber Shape Models, in press, Cerebral Cortex, 2011.

Kaiming Li, Lei Guo, Carlos Faraco, Dajiang Zhu, Fan Deng, Tuo Zhang, Xi Jiang, Degang Zhang, Hanbo Chen, Xintao Hu, L. Stephen Miller, Tianming Liu, Individualized ROI Optimization via Maximization of Group-wise Consistency of Structural and Functional Profiles, accepted, NIPS 2010.

Kaiming Li, Lei Guo, Gang Li, Jingxin Nie, Carlos Faraco, Guangbin Cui, Qun Zhao, Stephen Miller, Tianming Liu, Gyral folding pattern analysis via surface profiling, accepted, NeuroImage, 2010.

Jingxin Nie, Lei Guo, Gang Li, Carlos Faraco, Stephen Miller, Tianming Liu, A Computational Model of Cerebral Cortex Folding, Journal of Theoretical Biology, accepted, 2010.

Gang Li, Lei Guo, Jingxin Nie, Tianming Liu, An automated pipeline for sulci fundi extraction, Medical Image Analysis, accepted, 2010.

Gang Li, Lei Guo, Jingxin Nie, Tianming Liu, Automatic Cortical Sulcal Parcellation Based on Surface Principal Direction Flow Field Tracking, Neuroimage, 2009.

Tianming Liu, Jingxin Nie, Ashley Tarokh, Lei Guo, Stephen TC Wong, Reconstruction of Central Cortical Surface from MRI Brain Images: Method and Application. *NeuroImage*, 40(3):991-1002, 2008.

Tianming Liu, Hai Li, Kelvin Wong, Ashley Tarokh, Lei Guo, Stephen Wong, Brain Tissue Segmentation Based on DTI Data, *NeuroImage*, 38(1):114-23, 2007.

Tianming Liu, Geoffrey Young, Ling Huang, Nan-Kuei Chen, Stephen Wong. 76-space Analysis of Grey Matter Diffusivity: Methods and Applications. *Neuroimage*. 2006;15(31):51-65.

Tianming Liu, Dinggang Shen, and Christos Davatzikos. Deformable Registration of Cortical Structures via Hybrid Volumetric and Surface Warping. *NeuroImage*. 2004;22(4):1790-801.

Bernard S. Chang, M.D.* Tami Katzir, Ph.D.* Tianming Liu, Kathleen Corriveau, Mirit Barzillai, Kira A Apse, Adria Bodell, David Hackney, David Alsop, Stephen Wong, Christopher A. Walsh, A structural basis for reading fluency: White matter fiber tracts and reading disability in a neuronal migration disorder *These authors contributed equally to this work, *Neurology*, 69: 2146-2154, 2007.

V Mok, Tianming Liu, W.W.M. Lam, A Wong, X Hu, L Guo; XY Chen, KS Wong, S Wong, [Neuroimaging predictors for cognitive impairment in confluent white matter lesion: Volumetric analyses of 99 brain regions](#), *Dementia and Geriatric Cognitive Disorders*, 25(1):67-73, 2007.

Sibel Kantarci, Lihadh Al-Gazali, Robert S. Hill, Dian Donnai, Graeme C.M. Black, Eric Bieth, Nicolas Chassaing, Didier Lacombe, Koen Devriendt, Ahmad Teebi, Maria Loscertales, Caroline Robson, Tianming Liu, David T. MacLaughlin, Kristin M. Noonan, Meaghan K. Russell, Christopher A. Walsh, Patricia K. Donahoe, Barbara R. Pober, Mutations in megalin, a multi-ligand receptor, cause Donnai-Barrow syndrome characterized by corpus callosum, ocular, neurosensory, craniofacial, and diaphragmatic defects, *Nature Genetics*, 39(8):957-959, 2007.

Tianming Liu, Gang Li, Jingxin Nie, Ashley Tarokh, Xiaobo Zhou, Lei Guo, Jarema Malicki, Weiming Xia, Stephen TC Wong, [An Automated Cell Detection Method for Cell Detection in Zebrafish](#), *Neuroinformatics*, 6(1):5-21, 2008.

Tianming Liu, Jingxin Nie, Gang Li, Lei Guo, Stephen Wong, ZFIQ: a software package for zebrafish biology, *Bioinformatics*, 24(3):438-9, 2007.

William A. Campbell, Henrik Zetterberg, Stephanie Baulac, Tianming Liu, Stephen T. C. Wong, Tao Zhong, Weiming Xia. [Zebrafish lacking Alzheimer presenilin enhancer 2 \(Pen-2\) demonstrate excessive p53-dependent apoptosis and neuronal loss](#). *Journal of Neurochemistry*. 2006;96:1423-40.

Gang Li, Tianming Liu, Jingxin Nie, Lei Guo, Jarema Malicki, Andrew Mara, Scott Holley, Weiming Xia, Stephen Wong. Detection of Blob Objects in Microscopic Zebrafish Images Based on Gradient Vector Diffusion. *Cytometry A*. 71(10):835-45, 2007.

Tianming Liu, J Lu, Y Wang, William A Campbell, Ling Huang, J Zhu, Weiming Xia, Stephen Wong. [Computerized Image Analysis for Quantitative Neuronal Phenotyping in Zebrafish](#). *Journal of Neuroscience Methods*. 2006;153(2):190-202.

Gang Li, Tianming Liu, Jingxin N, Guo L, Andrew M, Holley S, Zhu J, Chen J, Wong STC. Segmentation of touching cell nuclei using gradient flow tracking, *Journal of Microscopy*, 231(1): 47-58, 2008.

Gang Li, Tianming Liu, Ashley Tarokh, Jingxin Nie, Lei Guo, Andrew Mara, Scott Holley, Stephen TC Wong, [3D Cell Segmentation Based on Gradient Flow Tracking](#), *BMC Cell Biology*, 8(1):40, 2007.

Tianming Liu, Xintao Hu, Xiaojin Li, Mo Chen, Junwei Han, Lei Guo, Merging Neuroimaging and Multimedia: Methods, Opportunities and Challenges, in press, *IEEE Transactions on Human-Machine Systems*, 2014.

Junwei Han, Kaiming Li, Xintao Hu, Sheng He, Lei Guo, Tianming Liu. Video abstraction based on fMRI-driven visual attention model, accepted, *Information Sciences*, 2014.

Junwei Han, Sheng He, Xiaoliang Qian, Dongyang Wang, Lei Guo, and Tianming Liu, An object-oriented visual saliency detection framework based on sparse coding representations, in press, *IEEE Transactions on Circuits and Systems for Video Technology*. 2012.

Xintao Hu, Kaiming Li, Junwei Han, Xian-Sheng Hua, Lei Guo, Tianming Liu, Bridging the Semantic Gap via Functional Brain Imaging, in press, *IEEE Transactions on Multimedia*, 2012.

Xintao Hu, Fan Deng, Kaiming Li, Tuo Zhang, Hanbo Chen, Xi Jiang, Jinglei Lv, Dajiang Zhu, Li Xie, Carlos, Faraco, Degang Zhang, Arsham Mesbah, Junwei Han, Xian-Sheng Hua, Stephen Miller, Lei Guo, Tianming Liu, Bridging Low-level Features and High-level Semantics via fMRI Brain Imaging for Video Classification, accepted as a full paper, ACM Multimedia, 2010.

Tianming Liu, Hong-Jiang Zhang, and Feihu Qi. A Systematic Rate Controller for MPEG-4 FGS Video Streaming. ACM/Springer Multimedia Systems. 2004;8(5):369-379.

Tianming Liu, Hong-Jiang Zhang, and Feihu Qi. [A Novel Video Key Frame Extraction Algorithm based on Perceived Motion Energy Model](#). IEEE Transactions on Circuits and Systems for Video Technology. 2003;13(10):1006-1013.

Guantao Chen:

Homeomorphically Irreducible Spanning Trees, *J. Combin. Theory B*, 103 (2013), no. 4, 409-414 (with S. Shan)

The circumference of a graph with no $K_{3,t}$ -minor II, *J. Combin. Theory B*, 102 (2012), no. 6, 1211-1240 (with X. Yu and W. Zang)

Homeomorphically Irreducible Spanning Trees in Locally Connected Graphs, *Combinatorics, Probability, and Computing*, 21 (2012), no. 1-2, 107-111 (with H. Ren and S. Shan)

Linked graphs with restricted lengths, *J. Combin. Theory Ser. B*, 98 (2008), no. 4, 735-751 (with Y. Chen, S. Gao, and Z. Hu)

Cycle extendability of hamiltonian interval graphs, *SIAM J. Discrete Math.*, 20 (2006), no. 3, 682—689 (with R. Faudree, R. Gould, and M. Jacobson)

King-Ip (David) Lin

Eric Lo, Kevin Ip, King-Ip Lin, David Cheung, "Progressive Skylining over Web-Accessible Database", *Journal of Data and Knowledge Engineering*, 57(2), pp122-147, May 2006.

Euripides Petrakis, Christos Faloutsos, KingIp Lin, "ImageFetch: A Fast Image Indexing System Based on Spatial Similarity", *IEEE Transactions on Knowledge and Data Engineering*, vol 14, number 5, p 978-987, Sep/Oct 2002.

Jason Tsong-Li Wang, Xiong Wang, King-Ip Lin, Dennis Shasha, Bruce Shapiro, Kaizhong Zhang, "An Index Structure for Data Mining and Clustering", *Knowledge and Information Systems*, vol 2, p 161-184, May 2000.

King-Ip Lin, H.V. Jagadish, Christos Faloutsos, "The TV-tree - an index structure for high-dimensional data." *the VLDB Journal*, vol. 3, p. 517-542, Oct. 1994.