

Gang Chen

P. O. Box 3221, Hangzhou, China. 310029
Phone: +86-571-86726530, Email: Dr_GangChen@ZJU.edu.cn

Education

- Ph.D., Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China. 2005.
Mentor, Chaoyi Li (Chinese Academy of Sciences member)
- Ph.D. candidate, Shanghai Institute of Physiology, Chinese Academy of Sciences, Shanghai, China. 1998-1999. Mentor, Chaoyi Li (CAS member)
- Bachelor of Science, Nanjing University, China. 1998

Positions

- Zhejiang University Interdisciplinary Institute for Neuroscience and Technology, Hangzhou, China (03/2014-present)
Professor
- Vanderbilt University, Department of Radiology and Radiological Sciences, Nashville, TN (03/2014-present)
Adjunct Instructor
- Vanderbilt University Institute of Imaging Science, Nashville, TN (3/2011-2/2014)
Faculty member. Coordinator/director of the 4.7T vertical scanner
- Vanderbilt University, Department of Radiology and Radiological Sciences, Nashville, TN (03/2011-02/2014)
Instructor
- Vanderbilt University, Department of Psychology, Nashville, TN (06/2005-02/2011)
Research Associate. Mentor, Anna W. Roe

Professional Activities

- *National Science Foundation* grant review panel on East Asia and Pacific Summer Institutes
- Served as *ad hoc* reviewer for *Brain Research Bulletin*, *Neuroimage*, *Neuroscience Letters*, *Magnetic Resonant Imaging*, *Ophthalmic and Physiological Optics*
- Member of *Association for Advancement of Science*
- Member of *International Society for Cerebral Flow & Metabolism*
- Member of *International Society for Optics and Photonics*
- Member of *Organization for Human Brain Mapping*
- Member of *Society for Neuroscience*

Gang Chen

P. O. Box 3221, Hangzhou, China. 310029
Phone: +86-571-86726530, Email: Dr_GangChen@ZJU.edu.cn

- Member of *Vision Sciences Society*
- Member of *Chinese Society for Cognitive Science*

Invited Talks

1. Chinese Society of Magnetic Resonance in Medicine Conference, Xi'an, China, 2014
2. Zhejiang University, Hangzhou, China, 2013
3. Infrared Neural Stimulation Summit, Nashville, TN, 2012
4. Institute of Biophysics, Chinese Academy of Sciences. Beijing, China, 2012
5. Peking University, School of Life Science, Beijing, China, 2012
6. Institute of Neuroscience, Chinese Academy of Sciences. Shanghai, China, 2012
7. Tsinghua University, Dept of Biomedical Engineering, Beijing, China, 2012

Patents

Roe AW, **Chen G**, Mahadevan-Jansen A, Cayce JM, Friedman RM, Jansen ED (2012)
Infrared Neural Stimulation for use in fMRI of cortical activation (invention disclosure filed)

Publications and Abstracts

Papers

1. **Chen G**, Dan Y, Li CY "Stimulation of non-classical receptive field enhances orientation selectivity." *Journal of Physiology (London)*. 564(1): 233-43. (2005). *Cover figure*
2. **Chen G**, Lu HD, Roe AW "A map for horizontal disparity in monkey V2." *Neuron*. 58(3): 442-450. (2008)
3. Lu HD*, **Chen G***, Ts'o DY, Roe AW "A rapid topographic mapping and eye alignment method using optical imaging in Macaque visual cortex." *Neuroimage*. 44(3): 636-46. (2009). **Authors contributed equally*
4. Lu HD, **Chen G**, Tanigawa H, Roe AW "A direction map in macaque V2." *Neuron*. 68(5): 1002-13. (2010). *Neuron Video Abstract*
5. **Chen G***, Wang F*, Dillenburger BC, Friedman RM, Chen LM, Gore JC, Avison MJ, Roe AW "Functional magnetic resonance imaging of awake monkeys: some approaches for improving imaging quality." *Magn Reson Imaging*. 30(1): 36-47. (2012). **Authors contributed equally*
6. **Chen G**, Wang F, Gore JC, Roe AW "Identification of cortical lamination in awake monkeys by high resolution magnetic resonance imaging." *NeuroImage*. 59(4): 3441-3449. (2012)
7. **Chen G****, Wang F, Gore JC, Roe AW "Layer-specific BOLD activation in awake monkey V1 revealed by ultra-high spatial resolution functional magnetic resonance imaging." *NeuroImage*. 64(1): 147-155. (2013). ***Corresponding author*
8. Lu HD, **Chen G**, Cai J, Roe AW "Intrinsic signal optical imaging of visual brain activity:

Gang Chen

P. O. Box 3221, Hangzhou, China. 310029

Phone: +86-571-86726530, Email: Dr_GangChen@ZJU.edu.cn

- tracking of fast cortical dynamics." *Neuroimage*, 148:160-168. (2017).
9. Tanigawa H, **Chen G**, Roe AW "Cortical organization of attentional modulation in macaque area V4. *Frontiers in Neural Circuits*", 10:1-13. (2016)
 10. Chernov M, **Chen G**, Luke A. Torre-Healy, Friedman RM, Roe AW Microelectrode array stimulation combined with intrinsic optical imaging: a novel tool for functional brain mapping. *J Neurosci Meth*, 263:7-14. (2016)
 11. Roe AW, Chernov M, Friedman RM, **Chen G** In vivo mapping of cortical columnar networks in the monkey with focal electrical and optical stimulation and imaging. *Frontiers in Neuroanatomy*, 9:135. (2015)

Book Chapters

1. Roe AW, **Chen G**, Lu HD "Functional architecture of area V2." In Squire, L. (ed.) *Encyclopedia of Neuroscience*. Elsevier, Oxford, UK. (2009)

Conference Presentations

1. **Chen G**, Cayce JM, Ye X, Jansen ED, Mahadevan-Jansen A, Roe AW "Optical control the visual perception of awake non-human primate with infrared neural stimulation." Talk delivered at SPIE Photonics West Annual Meeting. San Francisco, CA. (2013)
2. Chernov M, **Chen G**, Roe AW "Histological assessment of thermal damage thresholds for infrared neural stimulation of the brain." Talk delivered at SPIE Photonics West Annual Meeting. San Francisco, CA. (2013)
3. **Chen G**, Cayce JM, Friedman RM, Wang F, Tang C, Jansen ED, Mahadevan-Jansen A, Gore JC, Roe AW "Functional tract tracing in non-human primates using pulsed infrared laser light with optical imaging and fMRI." Poster delivered at the Society for Neuroscience Annual Meeting. New Orleans, LA. (2012)
4. **Chen G**, Wang F, Gore JC, Roe AW "The spatial and temporal limits of brain mapping in awake subjects: an alert primate MRI study." Poster delivered at the Organization for Human Brain Mapping Annual Meeting. Beijing, China. (2012)
5. **Chen, G**, Cayce, J., Friedman, R.M., Mahadevan-Jansen A, Jansen ED, Roe AW "fMRI mapping of cortical networks in primates with laser stimulation." Talk delivered at the International Society for Optics and Photonics-Photonics West Annual Meeting. San Francisco, CA. (2012)
6. **Chen G**, Wang F, Gore JC, Roe AW "Layer-specific BOLD activation in V1 revealed by ultra-high spatial resolution functional magnetic resonance imaging in awake monkeys." Poster delivered at the Society for Neuroscience Annual Meeting. Washington, DC. (2011)
7. **Chen G**, Wang F, Gore JC, Roe AW "Ultra high resolution MRI in vivo histology visualizes cortical layers of visual cortex in awake monkeys. (2011)." Poster delivered at the Frontiers of Biomedical Imaging Science III conference. Nashville, TN. (2011)
8. **Chen G**, Wang F, Dillenburger BC, Chen LM, Gore JC, Avison MJ, Roe AW "Extensive

Gang Chen

P. O. Box 3221, Hangzhou, China. 310029

Phone: +86-571-86726530, Email: Dr_GangChen@ZJU.edu.cn

- training and multi-shot sequences improve the image quality of functional MRI from awake no-human primates at a 4.7 Tesla high-field vertical scanner.” Poster delivered at the Society for Neuroscience Annual Meeting. San Diego, CA. (2010)
9. **Chen G**, Lu HD, Roe AW “Energy model with population extension explains the achievement of binocular correspondence.” Poster delivered at the Society for Neuroscience Annual Meeting. Chicago, IL. (2009)
 10. Lu HD, **Chen G**, Roe AW “What’s motion doing in V4?” Poster delivered at the Society for Neuroscience Annual Meeting. Chicago, IL. (2009)
 11. **Chen G**, Lu HD, Roe AW “Why maps for horizontal disparity exist in V2 not in V1.” Poster delivered at the Society for Neuroscience Annual Meeting. Washington, DC. (2008)
 12. Lu HD, **Chen G**, Roe AW “The positive component of the intrinsic optical signal is not domain-specific.” Poster delivered at the Society for Neuroscience Annual Meeting. Washington, DC. (2008)
 13. Tanigawa H, Lu HD, **Chen G**, Roe AW “Functional subdivisions in macaque V4 revealed by optical imaging in the behaving Macaque monkey.” Talk delivered at the Vision Sciences Society Annual Meeting. Sarasota, FL. (2008)
 14. **Chen G**, Lu HD, Tanigawa H, Roe AW “Stereo matching problem is resolved at population level in the early stage of extrastriate visual cortex.” Poster delivered at the Vision Sciences Society Annual Meeting. Sarasota, FL. (2008)
 15. Tanigawa H, Lu HD, **Chen G**, Roe AW “Functional organization of foveal V4 revealed by optical imaging in the behaving Macaque monkey.” Talk delivered at the Society for Neuroscience Annual Meeting. San Diego, CA. (2007)
 16. Lu HD, **Chen G.**, Roe AW “A map for motion streaks in V1 and V2.” Talk delivered at the Society for Neuroscience Annual Meeting. San Diego, CA. (2007)
 17. Roe AW, Tanigawa H, Lu HD, **Chen G** “Functional organization of foveal V4 revealed by optical imaging in the behaving Macaque monkey.” Talk delivered at Vision Down Under. Cairns, Australia. (2007)
 18. **Chen G**, Lu HD, Roe AW “Functional architecture of macaque cortical area V2 for depth surfaces revealed by optical imaging.” Talk delivered at the Society for Neuroscience Annual Meeting. Atlanta, GA. (2006)
 19. Roe AW, **Chen G**, Lu HD “A rapid topographic mapping and eye convergence method by optical imaging of small spots in anesthetized Macaque visual cortex.” Talk delivered at the Society for Neuroscience Annual Meeting. Atlanta, GA. (2006)
 20. Lu HD, **Chen G**, Kaskan P, Roe AW “Comparison of color and luminance contrast response in V2 thin stripes.” Poster delivered at the Vision Sciences Society Annual Meeting. Sarasota, FL. (2006)
 21. **Chen G**, Li CY “Spatial-temporal structure of the integration fields of cat’s striate cortical neurons.” Poster delivered the Fourth Biennial meeting of the Chinese Society for Neuroscience. Hongkong, China. (2001)

Gang Chen

P. O. Box 3221, Hangzhou, China. 310029
Phone: +86-571-86726530, Email: Dr_GangChen@ZJU.edu.cn

Funding / Support

1. Fundamental Research Funds for the Central Universities (2015QN81007), 2015-2016.
Role: PI
2. Zhejiang Provincial Natural Science Foundation of China (LR15C090001) 2015-2018.
Role: PI
3. National Natural Science Foundation of China. 31471052, 2015-2018. Role: PI
4. 1R01 NS078680-01A1, NIH/NINDS. 2012-2017. Role: Staff Scientist
5. 1R21 MH095009-01A1, NIH/NIBIB. 2012-2014. Role: Collaborator
6. 5R01 NS044375-09, NIH/NINDS. 2002-2013. Role: Co-Investigator
7. 5R01 EB000461-11, NIH/NIBIB. 2008-2013. Role: Instructor