

## Gaoyan Zhang

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## **Research Interests**

Brain network modeling and analysis; brain information decoding; brain signal processing

## **Academic Publication**

- Hongyan Wang#, **Gaoyan Zhang**#, Baolin Liu, 2016. Influence on cross-modal semantic priming effect from auditory spatial attention: evidence from N400 effect. *Experimental Brain Research*, in press (#: Co-first author; SCI: 5-year IF=2.057).
- Gaoyan Zhang, Li Yao, Xiaojie Zhao, 2016. Neural Effect of Real Time fMRI Based Working Memory Neurofeedback Training on the Cortico-Subcortico-Cerebellar Circuit. *Journal of medical imaging and health informatics*, in press (SCI: 5-year IF=0.877).
- **Gaoyan Zhang**, Yue Cheng, Baolin Liu, 2016. Abnormalities of voxel-based whole-brain functional connectivity patterns predict the progression of hepatic encephalopathy. *Brain Imaging and Behavior*, in press (SCI: 5-year IF = 4.595).
- **Gaoyan Zhang**, Li Yao, Jiahui Shen, Yihong Yang, Xiaojie Zhao, 2015. Reorganization of functional brain networks mediates the improvement of cognitive performance following real-time neurofeedback training of working memory. *Human Brain Mapping*, 36(5):1705-1715. (SCI: 5-year IF = 6.956).
- Jiahui Shen#, **Gaoyan Zhang**#, Li Yao, Xiaojie Zhao, 2015. Real-time fMRI training-induced changes in regional connectivity mediating verbal working memory behavioral performance, *Neuroscience*, 289(2015):144-152. (#: Co-first author; SCI: 5-year IF = 3.458).
- Qiushi Zhang, Gaoyan Zhang, Li Yao, Xiaojie Zhao, 2015. Impact of real-time fMRI working memory feedback training on the interactions between three core brain networks, <u>Frontiers in behavioral neuroscience</u>, 9 (2015):1-9. (SCI: 5-year IF=3.3).
- Gaoyan Zhang, Li Yao, Hang Zhang, Zhiying Long, Xiaojie Zhao, 2013. Improved working memory performance through self-regulation of dorsal lateral prefrontal cortex activation using real-time fMRI. *Plos One*. 8(8): e73735 ((SCI: 5-year IF=4.015)).
- **Gaoyan Zhang**, Hang Zhang, Xiaoli Li, Xiaojie Zhao, Li Yao, Zhiying Long, 2013. Functional alteration of the DMN by learned regulation of the PCC using real-time fMRI. *IEEE Transactions on Neural System & Rehabilitation Engineering*. 4(21):595-606 (SCI: 5-year IF = 3.265).
- Yuke Si, Jianwu Dang, Gaoyan Zhang\*. Investigation of the Spatiotemporal Dynamics of the Brain during Perceiving Words, <u>International Symposium on Chinese Spoken Language Processing (ISCSLP)</u> Oct 17-20, 2016, Tianjin, P. R. China (EI).
- Bin Zhao, Jianwu Dang, Gaoyan Zhang\*. EEG Evidence for a Three-Phase Recurrent Process during Spoken Word Processing, <u>International Symposium on Chinese Spoken Language Processing (ISCSLP)</u> Oct 17-20, 2016, Tianjin, P. R. China (EI).
- Bin Zhao, Jianwu Dang, **Gaoyan Zhang\***, "Investigation of Noun-Verb Dissociation Based on EEG Source Reconstruction", <u>Asia-Pacific-Signal-and-Information-Processing-Association Annual Summit and Conference</u> (APSIPA ASC). DEC 13-16, 2016, JEJU, Korea (EI).
- · Guancheng Li, Jianwu Dang, Gaoyan Zhang, Zhilei Liu, Hongcui Wang. Investigation of relation between

- speech perception and production based on EEG source reconstruction. <u>Asia-Pacific-Signal-and-Information-Processing-Association Annual Summit and Conference (APSIPA ASC)</u>. DEC 16-19, 2015, Hong Kong, P.R. China (EI).
- Hongyan Wang, Gaoyan Zhang, Junhai Xu, Jianwu Dang. Semantic priming effect triggered by sound from different directions: evidence from N400 effect. <u>Proceedings of the 2015 Second International Conference on Computer, Intelligent and Education Technology (CICET 2015)</u>, April 11-12, 2015, Guilin, P.R. China.
- Jiahui Shen, Gaoyan Zhang, Chaozhe Zhu, Li Yao, Xiaojie Zhao, 2015. Interaction of multiple networks modulated by the working memory training based on real-time fMRI, <u>Proceedings of SPIE Medical Imaging</u>, 94171L (EI).
- **Gaoyan Zhang**, Li Yao, Zhiying Long, 2012. Alteration of functional connectivity during real-time fMRI regulation of PCC, *Proceedings of SPIE Medical Imaging*, 83170C (EI).
- **Gaoyan Zhang**, Jiacai Zhang, Li Yao, Xiaojie Zhao, 2010. Extension of dVCA model and its application in estimating fMRI components, *Proceedings of SPIE Medical Imaging*, 76261R (EI).

## **Project Experience**

2016.01-2018.12 NSFC—— Study on the cognitive processing mechanism for auditory information based on real time fMRI decoding and brain network modeling *PI* 

• Based on the real time fMRI technique and brain functional network modeling algorithm to study the cognitive processing mechanism for auditory information.