

# Curriculum Vitae

## Mengxing Liu

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## Research Interests

My research is mainly focused on the neural network of language using, from word level to sentence and discourse level. Within these linguistic levels, I have a particular interest in the functional and neuroanatomical underpinnings of online meaning composition in natural context, like communication, reading a story. One key feature of understanding language in daily life is the construction of complex meaning from more elementary semantic building blocks. These higher-level processes have their mechanistic basis in neural interactions that enable binding and coherence of signals that are sensitive to different types of information.

I try to use ERP and fMRI methods to address these issues of integration and unification processing. I have recently begun working on a project as a member focused on the neural mechanism of multiple level semantic integration in story comprehension. One exciting new direction in this work is the development of new techniques provide the opportunity to investigate multiple-level semantic integration in a more natural

I am also interested in methodology of neuroimaging. There is an increasing interest in studying the human brain function with dynamic, continuous stimuli that are designed to be closer to normal everyday life than in conventional, strictly controlled research paradigms. For this reason, I am quite interested in new data-driven methodologies, such as Inter-subject correlation (ISC) and Multi-Voxel Pattern Analysis (MVPA). Usually I do EEG data processing with EEGLAB based on Matlab, and fMRI data processing with AFNI. For some special statistics, I may write specific programs using Matlab or Python to meet the demands, and I do enjoy this kind of work.

## Education

2014-Present. M.S. Cognitive Neuroscience of Language  
School of Psychology  
Shaanxi Normal University  
Supervisor: Prof. Jianfeng Yang  
(Expected Graduation: Summer 2017)

2008-2012 B.S. Basic Psychology  
Department of Psychology  
Liaoning Normal University

## Research Experiences

2015.01-Present. Project: Adapting Inter-Subject Correlation to investigate the dynamic of the neural network for Chinese character reading.  
Granted by: Humanities and Social Sciences Foundation of the Ministry of Education (14YJC190019)  
PI: Xiaojuan Wang

I am responsible for most of the material organizing about the neural network of reading. And I also designed an fMRI experiment to investigate the neural basis of semantic integration in natural language using. I also cover the data analysis works.

- 2015.01-Pres.      Project: Adapting dynamic causal model to investigate the cooperation between ventral and dorsal route of reading neural network.  
Granted by: Natural Science Foundation of China (31400966)  
PI: Xiaojuan Wang
- In this project, I have undertaken the paper search and organizing job in one meta-analysis research. I also conducted one behavior experiment to investigate the impact of orthographic and phonological clues in Chinese character reading. And I also cover the fMRI and some EEG data analysis works
- 2014-2015          Project: The dynamic neural network and its development of Chinese character processing.  
Granted by: Natural Science Foundation of China (31171077)  
PI: Jianfeng Yang
- I have been helping collecting behavior and EEG data of Chinese character reading and speech perceptual. I also analyzed the fMRI data of story reading and listening cross languages and wrote the paper.
- 2011-2012          Project: Development and Cultivation of Chinese Children and Adolescents' Personality.  
Granted by: Philosophy and Social Science Foundation of China (11AZD089).  
PI: Lizhu Yang
- In this project, most of my works were material organizing about mental time travel and the data collection.

## Specific Skills

Methods	fMRI, EEG, Reaction Time
Data Analysis Tools	AFNI, Freesurfer, FSL, SUMA, SPM, EEGLAB, ISCToolbox, PyMVP
Programming	Matlab, Python, Shell Script, R, E-basic
Statistical Packages	Matlab, R, Numpy, SPSS, Excel
Stimulus Presentation	E-prime, DMDX
Audiovisual Software	Illustrator, Photoshop, Inkscape, Praat
Operating Systems	Linux, OS X, Windows

## Honors & Awards

- 2015.11              National Scholarship for Postgraduate  
Shaanxi Normal University
- 2015.09              Scholarship for Postgraduate  
Shaanxi Normal University

2014.09	Scholarship for Postgraduate Shaanxi Normal University
2012.12	Honor of Excellent Volunteer Chinese Western Project
2012.12	Award for Excellent Volunteer Chinese Western Project
2012.05	Honor of Excellent Intern Liaoning Normal University
2011.09	Honor of Excellent Journalist Liaoning Normal University
2010.09	Honor of Excellent Student Cadres Liaoning Normal University
2010.09	Honor of Star in Student Association Liaoning Normal University

## Work Experiences

2014-Pres	<p>Monitor of Class Basic Psychology (2014) Shaanxi Normal University</p> <p>I have been taking the responsibility of the entire class since the beginning of our postgraduate program. This job demands me to try to create a win-win solution during conflicts, and build cordial relationship among my classmates. And I am taking efforts to actively participate in group projects. It helps me to know my classmates well and sometimes take decisions on behalf of them.</p>
2012-2013	<p>Volunteer aid for West of China Communist Youth League Committee of Jiuzhaigou County</p> <p>It is in a small county surrounded by mountains. My work here was helping the local committee to do some law popularization and employment guidance works for local youth. I was also responsible to organizing local volunteer planting and visiting geracomium.</p>
2009-2011	<p>Journalist in Campus newspaper Liaoning Normal University</p> <p>Most of my job was covering campus news, and interview the outstanding faculty in the university. I received an honor of Excellent Journalist from the Campus newspaper.</p>
2008-2010	<p>Secretary of the Technique Department in Student Society Liaoning Normal University</p> <p>Most of my job was leading the department help to entertain electronic equipment and document meetings and activities.</p>

## Publication

**Mengxing Liu**, Xiaojuan Wang, Jianfeng Yang. (accepted) A New Method of Data Analysis for fMRI Studies in Naturalistic Situation: Inter-Subject Correlation and Its Application, Psychological Science, 2016. (In Chinese)

Rong Zhao, Xiaojuan Wang, **Mengxing Liu**, Rong Fan. (under review) Rethinking language-specific brain regions in visual word reading: A meta-analysis of Chinese fMRI studies.

**Mengxing Liu**, Xiaojuan Wang, Hua Shu, Jianfeng Yang, Jason D. Zevin, (In prep) Neural Basis of Story Comprehension Cross Chinese and English.

## Posters and Oral Presentations

**Mengxing Liu**, Xiaojuan Wang, Jianfeng Yang, Hua Shu, Jason D.Zevin. The neural difference between Chinese and English in reading and listening stories. Eighth Annual Neurobiology of Language Conference in London. 2016.

Jianfeng Yang, Rong Zhao, Rong Fan, **Mengxing Liu**, Xiaojuan Wang. A Meta-analysis of Neural Systems for Chinese Characters Processing Driven by Stimulus Properties versus Task Demands. Seventh Annual neurobiology of Language Conference in Chicago. 2015.

**Mengxing Liu**, Xiaojuan Wang, Jianfeng Yang, Hua Shu. Selective and invariant neural responses to Chinese and English Narratives. Oral Presentation at The 18th National Academic Congress of Psychology, TianJin, China. 2015.

## Professional Memberships

2016	Society for the Neurobiology of Language
2014-Pres.	Chinese Psychological Society
2014-Pres.	Shaanxi Province Psychological Society