## Likan ZHAN

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## **Academic appointment**

- 2018.12 ~ Now, Associate professor,
  School of Communication Science,
  Beijing Language and Culture University, Beijing, China
- 2014.10 ~ 2018.11, Assistant professor,
  MEG Laboratory for Brain Sciences,
  Institute for Speech Pathology and the Brain Science,
  Beijing Language and Culture University, Beijing, China

### **Education**

- 2010.10 ~ 2014.09, Ph.D. Cognitive Science, Macquarie University, Sydney, Australia
- 2007.09 ~ 2010.07, M.E. Cognitive Psychology,
  Beijing Language and Culture University, Beijing, China
- 2000.09 ~ 2004.07, B.A. Teaching Chinese as a Second Language,
  Beijing Language and Culture University, Beijing, China

# Teaching experience

- 2019 ~ Now. Experimental Psychology,
  Undergraduates, 4 hours per week, 68 hours in total
- 2019 ~ Now. Introduction to Neurolinguistics,
  Undergraduates, 2 hours per week, 34 hours in total

- 2017 ~ Now. Statistics for the Behavioral Sciences,
  Undergraduates and post-graduates, 2 hours per week, 34 hours in total
- 2016 ~ Now. R for Modeling and Visualizing Data,
  Post-graduates and PhD candicates, 4 hours per week, 68 hours in total
- 2015 ~ Now. Introduction to Cognitive Neuroscience,
  Post-graduates and PhD candicates, 2 hours per week, 34 hours in total
- 2015 ~ Now. Foundations of Scientific Research,
  Under-graduates, 3 hours per week, 54 hours in total
- 2015 Fall. General Psychology,
  Under-graduates, 3 hours per week, 54 hours in total

### **Professional skills**

- 1. Experiment techniques
- Test stimuli: Be familiar with PGF package in LaTeX, ImageMagick and its implementation in R magick, OmniGraffle (Proprietary), and Pixelmator (Proprietary) for image creating and editting; praat, R packages tuneR and seewave, and Adobe Audition (Proprietary) for audio editting and processing; blender and Autodesk Maya (Proprietary) for video and 3d modeling; ffmpeg for audio and video format converting;
- Experiments building: Be familiar with Psychopy under Python, Psychtoolbox under Matlab, E-prime (Proprietary), Presentation (Proprietary), and Experiment Builder (Proprietary);
- Eye-tracker: Advanced experience in using Eyelink II/1000 plus (Proprietary) for conducting experiments, Experiment Builder (Proprietary) for experiment building, and Data Viewer (Proprietary) for data prepossing;
- E/MEG: In charge of establishing the first Child MEG lab in China; familiar with Yokogawa MEG system for equipment maintenance and MEG data acquisition, as well as BESA (Proprietary), fieldtrip (Open source under Matlab), and SPM12 (Open source under Matlab) for data processing.

### 2. Data processing

- R: Besides base R, be familiar with data.table, dplyr, and tidyr for data preprossing; graphics, lattice, and ggplot2 for data visualization; car, lme4, and gam for computational modeling; Create the R package acqr for teaching statistics and illustrating data visualization;
- Julia: Recently start to use julia for computational modeling, especially the Mixed-Models package, because of the speed limitations of R.

### 3. Other

- Markup languages: Be familiar with LaTeX, markdown, R markdown (R package), and Jupyter for document preparing; knitr (R package) for dynamically integrating R code into a document; Pandoc for markup format conversion;
- Personal website: Use hugo under go language and the R package blogdown to build my personal website https://likan.info.

## Grants, projects, and awards

#### 1. Grants

- Zhan, L., Zhou, P., Zhang, L., & Crain, S. (2019 2023). The Acquisition and Online Processing of Irrealis in Mandarin Chinese. *The National Social Science Fund of China*. [Grant No. 19BYY087]. (¥200,000). Role: Principle Investigator.
- Zhan, L., Qu, Y., Xu, J., Xiao, Y., & Li, N. (2019 2020). The eye movements pattern and neural oscitation markers of predictive processing in language comprehension. The Fundamental Research Funds for the Central Universities. [Grant No. 19YJ080002]. (¥70,000). Role: Principle Investigator.
- Zhan, L., Shi, F., Gao, L., & Zhang, L. (2019 2020). The online prrocessing and acquisition of lexical tone in Mandarin Chinese. *The Fundamental Research Funds for the Central Universities*. [Grant No. 18YBT15]. (¥70,000). Role: Principle Investigator.
- Shi, D., et al. (2019 2023). Studies of Chinese in Generative Grammar and Development of Chinese Grammar in the New Era. *The Major Project of the National Social Science Found of China*. [Grant No. 18ZDA291]. (¥800,000). Role: Co-Investigator.

- Si, F., et al. (2018 2023). Language acquisition and language cognition under the perspective of syntactic cartography. *The Fundamental Research Funds for the Central Universities*. [Grant No. 18ZDJ06]. (¥300,000). Role: Co-Investigator.
- Zhan, L. (2015 2016). Experimental explorations of possible world semantics. The Fundamental Research Funds for the Central Universities. [Grant No. 15YBB29]. (¥20,000). Role: Principle Investigator.
- **Zhan, L.** (2015 2016). Introduction to psychology and the scientific research. *The Funds Supporting the Growth of the New Teachers*. [Grant No. FD201530]. (¥7,000). Role: Principle Investigator.
- Zhan, L., Shi, F., Gao, L., & Zhang, L. (2015 2016). The Processing and acquisition of tone in Mandarin Chinese. *The Fundamental Research Funds for the Central Universities*. [Grant No. 15YJ050003]. (¥70,000). Role: Principle Investigator.
- Zhan, L. (2010 2014). The interpretation of conditionals in natural language. *Cognitive Science Postgraduate Research Grant of Macquarie University*. (\$10,570). Role: Principle Investigator.
- Zhan, L. (20103). The hypothetical property of conditionals in natural language. Macquarie University Postgraduate Research Fund. (\$4,684). Role: Principle Investigator.

#### 2. Projects

- Zhang, L., et al. (2018 Now). The psychological and brain development of atypical developing adolensences. *The Program of WuTong Inovations Platforms*. Role: Co-Investigator.
- Chen, M., et al. (2019 Now). The study of Chinese as a second language acquisition and second language teaching (The JunCai Group). *The Program of Establishing First-Class Disciplines in BLCU*. Role: Co-Investigator.

### 3. Awards

- 2013.11. The Paula Menyuk Travel Award for the 38th Boston University Conference on Language Development. (\$300).
- 2013.04. The Travel Award for the 26th Annual CUNY Sentence Processing Conference. (\$350).

## **Professional activities**

- 1. Organization of international meetings
- Academic Advisory Committee, The 24th annual conference of the International Association of Chinese Linguistics (IACL-24), Beijing Language and Culture University, Beijing, China.
- 2. Ad-hoc reviews
- Scientific Reports. (2018 2019);
- Journal of visualized experiments. (2018 2019);
- Language Teaching and Linguistic Studies. (In Chinese, 2016);
- SAGE Open. (2016).
- 3. Clinical licenses
- Licensed Examiner of Wechsler Preschool and Primary Scale of Intelligence 4th Edition (WPPSI-VI) Chinese Version.
- Licensed Examiner of Adaptive Behavior Assessment System 2nd Edition (ABAS-II)
  Chinese Version.

### **Publications**

- 1. Book
- **Zhan, L.** (2015). The Interpretation of Conditionals in Natural Language. Saarbrucken, Germany: Lap Lambert Academic Publishing.
- 2. Periodicals
- Zhou, P., **Zhan, L.**, & Ma, H. (2019). Understanding Others' Minds: Social Inference in Preschool Children with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*. doi:10.1007/s10803-019-04167-x
- Zhou, P., **Zhan, L.**, & Ma, H. (2018). Predictive language processing in preschool children with Autism Spectrum Disorder: An eye-tracking study. *Journal of Psycholin-guistic Research*. doi:10.1007/s10936-018-9612-5

- Zhan, L. (2018). Using eye movements recorded in the visual world paradigm to explore the online processing of spoken language. *Journal of Visualized Experiments*, 140, e58086. doi: 10.3791/58086
- Zhou, P., Ma, W., **Zhan, L.**, & Ma, H (2018). Using the visual world paradigm to study sentence comprehension in Mandarin-speaking children with autism. *Journal of Visualized Experiments*, 140, e58452. doi: 10.3791/58452
- Zhan, L., Zhou, P., & Crain, S. (2018). Using the visual-world paradigm to explore the meaning of conditionals in natural language. *Language, Cognition and Neuroscience*, 33(8), 1049-1062. doi: 10.1080/23273798.2018.1448935
- Zhan, L. (2018). Scalar and ignorance inferences are both computed immediately upon encountering the sentential connective: The online processing of sentences with disjunction using the visual world paradigm. Frontiers in Psychology, 9. doi: 10.3389/fpsyg.2018.00061
- Moscati, V., **Zhan, L.**, & Zhou, P. (2017). Children's on-line processing of epistemic modals. *Journal of Child Language*, 44(5), 1025-1040. doi: 10.1017/S0305000916000313
- **Zhan, L.**, Crain, S., & Zhou, P. (2015). The online processing of only if- and even if-conditional statements: Implications for mental models. *Journal of Cognitive Psychology*, 26(7), 367-379. doi: 10.1080/20445911.2015.1016527
- Zhou, P., Crain, S., & **Zhan, L.** (2014). Grammatical aspect and event recognition in children's online sentence comprehension. *Cognition*, 133(1), 262-276. doi: 10.1016/j.cognition.2014.06.018
- Zhou, P., Crain, S., & **Zhan, L.** (2012). Sometimes children are as good as adults: The pragmatic use of prosody in children's on-line sentence processing. *Journal of Memory and Language*, 67(1), 149-164. doi: 10.1016/j.jml.2012.03.005
- Zhou, P., Su, Y., Crain, S., Gao, L., & **Zhan, L.** (2012). Children's use of phonological information in ambiguity resolution: a view from Mandarin Chinese. *Journal of Child Language*, 39(04), 687-730. doi: 10.1017/S0305000911000249

- 3. Book chapters and conference proceedings
- **Zhan, L.** (2018). Magnetoencephalography (MEG) as a Technique for Imaging Brain Function and Dysfunction. In *Top 10 Contributions on Psychology* (Chapter 4, pp. 1-38). Telangana, India: Avid Science
- Zhan, L., Crain, S., & Zhou, P. (2013). The anticipatory e ects of focus operators: A visual- world paradigm eye-tracking study of "only if" and "even if" conditionals. In N. Goto, K. Otaki, A. Sato, & K. Takita (Eds.), *Proceedings of GLOW in Asia IX* 2012. Mie University, Japan.
- 4. Peer reviewed conference presentations
- Zhan, L., & Zhou, P. (2019, June). Children differ from adults in interpreting disjunctions: Evidence from an eye-tracking study. Poster session presented at Psycholinguistics in Iceland Parsing and Prediction, University of Iceland, Reykjavík, Iceland.
- Zhan, L. (2017, September). Scalar implicature and ignorance inference are both locally computed: Evidence from the online processing of disjunctions using the visual world paradigm. Paper presented at the Second High-level Forum on Cognitive Linguistics, University of International Business and Economics, Beijing, China.
- Zhan, L., Crain, S., & Zhou, P. (2013, November). Going beyond the information that is perceived: The hypothetical property of if-conditionals in Mandarin Chinese. Paper session presented at the Second International Conference on Psycholinguistics in China, Fuzhou, China.
- Moscati, V., **Zhan, L.**, & Zhou, P. (2013, November). *Reasoning on possibilities: An eye tracking study on modal knowledge*. Poster session presented at the 38th Annual Boston University Conference on Language Development, Boston University, MA.
- Zhou, P., Crain, S., & **Zhan, L.** (2013, November). Anticipatory eye movements in children's processing of grammatical aspect. Poster session presented at the 38th Annual Boston University Conference on Language Development, Boston University, MA.
- **Zhan, L.**, Crain, S., & Zhou, P. (2013, March). *The hypothetical property of "if"-statements:* A visual- world paradigm eye-tracking study. Poster session presented at CUNY2013: The 26th annual CUNY Sentence Processing Conference, Columbia, SC.

- Zhan, L., Crain, S., & Zhou, P. (2012, July). *The interpretation of conditionals*. Paper presented at the 7th International Conference on Thinking (ICT2012), Birkbeck/UCL, London, UK.
- Zhou, P., Crain, S., & **Zhan, L.** (2012, March). *Children's pragmatic use of prosody in sentence processing.* Poster session presented at the 35th Generative Linguistics in the Old World (GLOW) Workshop: Production and Perception of Prosodically-Encoded Information Structure, University of Potsdam, Potsdam, Germany.
- Zhan, L., Crain, S., & Khlentzos, D. (2011, August). The basic semantics of conditionals in natural language. Paper presented at the Harvard-Australia Workshop on Language, Learning and Logic, Macquarie University, Sydney, Australia.
- Zhou, P., Crain, S., Gao, L., & **Zhan, L.** (2010, September). The role of prosody in children's focus identification. Paper presented at the Generative Approaches to Language Acquisition North America 4 (GALANA-4), Toronto, Canada.
- Zhou, P., Su, Y., Crain, S., Gao, L., & **Zhan, L.** (2010, August). *Children's use of prosodic information in ambiguity resolution*. Paper presented at the 8th Conference of Generative Linguistics in the Old World Asia (GLOW-in-Asia 8), Beijing, China.

#### 5. Invited talks

- **Zhan, L.** (2019, August). *Gardener or Carpenter: Some thoughts on nurturing a child.* Invited Presentation given at Smiland Daycare Center.
- Zhan, L. (2018, December). Sentential Reasoning and Sentential Connectives: Conditional, Disjunction, Negation, and Modality. Inivted presentation given at the Workshop of Theoretical and Experimental Linguistics, Tsinghua University, Beijing, China.
- Zhan, L. (2018, November). Methods of Cognitive Neuroscience: Focus on Language. Inivted presentation given at the Child Cognition Laboratory, Department of Foreign Languages and Literatures, Tsinghua University, Beijing, China.

- Zhan, L. (2018, November). Visual world paradigm: An eye-tracking technique to study the real time processing of spoken Language. Inivted presentation given at the Center for Studies of Chinese as a Second Language, Beijing Language and Culture University, Beijing, China.
- Zhan, L. (2018, October). Experimental Builder: A What-You-See-Is-What-You-Get tool to build experiment scripts. Inivted presentation given at the Center for Studies of Chinese as a Second Language, Beijing Language and Culture University, Beijing, China.