

Di Zhu

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EDUCATION

- 2014 – Now ■ **Ph.D. Candidate** Cartography and Geographic Information Science.
Institute of Remote Sensing and Geographical Information Systems, Peking University.
- 2017 – Now ■ **Research Assistant**
School of Earth and Space Sciences, Peking University.
- 2010 – 2014 ■ **B.S.** Geographic Information Systems.
School of Earth and Space Sciences, Peking University.
- 2011 – 2014 ■ **B.S.** Economics.
National School of Development, Peking University.

ACADEMIC EXPERIENCES

Peer-reviewed Journal Papers

- 1 Zhu, D., Huang, Z., Shi, L., Wu, L., & Liu, Y. (2018). Inferring spatial interaction patterns from sequential snapshots of spatial distributions. *International Journal of Geographical Information Science*, 4(32), 783–805. SCI/SSCI. 🌐
<https://doi.org/10.1080/13658816.2017.1413192>
- 2 Yao, X., Zhu, D., Gao, Y., Wu, L., Zhang, P., & Liu, Y. (2018). A stepwise spatio-temporal flow clustering method for discovering mobility trends. *IEEE Access*, 1–1. SCI. 🌐
<https://doi.org/10.1109/ACCESS.2018.2864662>
- 3 Zhu, D., Wang, N., Wu, L., & Liu, Y. (2017). Street as a big geo-data assembly and analysis unit in urban studies: a case study using beijing taxi data. *Applied Geography*, 86, 152–164. SSCI. 🌐 <https://doi.org/10.1016/j.apgeog.2017.07.001>
- 4 Zhu, D. & Liu, Y. (2017). An incremental map-matching method based on road network topology. *GEOMATICS AND INFORMATION SCIENCE OF WUHAN UNIVERS*, 42(1), 77–83. EI. 🌐 <http://ch.whu.edu.cn/CN/10.13203/j.whugis20150016>
- 5 Liu, Y., Zhan, Z., Zhu, D., Chai, Y., Ma, X., & Wu, L. (2018). Incorporating multi-source big geo-data to sense spatial heterogeneity patterns in urban space. *GEOMATICS AND INFORMATION SCIENCE OF WUHAN UNIVERS*, 43(3), 327–335. EI. 🌐
<https://doi.org/10.13203/j.whugis20170383>
- 6 Zhu, D., Cheng, X., Zhang, F., Gao, Y., & Liu, Y. (2018). Spatial interpolation based on conditional generative adversarial neural networks (under review). *International Journal of Geographical Information Science*. SCI/SSCI.
- 7 Zhang, S., Zhu, D., Yao, X., Cheng, X., & Liu, Y. (2018). The scale effect on spatial interactions: an empirical study using taxi o-d data of beijing and shanghai (under review). *IEEE Access*. SCI, (Co-first and corresponding author).

- 8 Wu, L., Cheng, X., Kang, C., Zhu, D., Huang, Z., & Liu, Y. (2018). A framework for mixed use decomposition based on temporal activity signatures extracted from big geo-data (under review). *International Journal of Digital Earth*. SSCI.
- 9 Zhu, D., Zhang, F., Ye, C., Wang, S., & Liu, Y. (2019). Linking place semantics with spatial configurations through graph-based knowledge reasoning (in progress).
- 10 Zhu, D. & Liu, Y. (2019). Modelling irregular spatial patterns using graph convolutional neural networks (in progress).
- 11 Zhu, D. (2019). Geographical reconstruction by adversarial learning of spatial dependence (in progress).

Conferences

- 1 Zhu, D. & Liu, Y. (2018). Modelling spatial patterns using graph convolutional networks (Short Paper). In *10th international conference on geographic information science (oral presentation)*. Dagstuhl, Germany. doi:10.4230/LIPIcs.GISCIENCE.2018.73
- 2 Zhu, D., Shi, L., Wang, Y., Cheng, X., & Liu, Y. (2017). Infer spatial interaction patterns from spatial distributions. In *The 25th international conference on geoinformatics (oral presentation)*.
- 3 Zhu, D., Wang, N., & Liu, Y. (2016). Street perspective: a novel spatial unit in urban social sensing. In *17th international symposium on spatial data handling (oral presentation)*.
- 4 Zhu, D. & Liu, Y. (2016). The distance effect in spatial interaction and spatial similarity: a big data view of tobler's first law. In *The 33rd international geographical congress (oral presentation)*.

PROJECTS

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|-----------------|--|
| 2017.01-2021.12 | <p>■ National Science Fund for Distinguished Young Scholars (no. 41625003)
Geo-spatial models and analytical methods (SI).</p> |
| 2017.07-2021.07 | <p>■ The National Key Research and Development Program of China (no. 2017YFB0503600)
Big geo-data mining and spatio-temporal pattern discovery (SI).</p> |
| 2015.01-2016.12 | <p>■ National Natural Science Foundation of China (no. 41428102)
Spatial optimizing of urban facilities to mitigate traffic congestion: a case study of Beijing (SI).</p> |
| 2013.01-2016.12 | <p>■ National Natural Science Foundation of China (no. 41271386)
Investigating human mobility pattern based on massive spatio-temporal data (SI).</p> |

AWARDS

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|------|---|
| 2011 | ■ 54 Scholarship , Peking University |
| 2012 | ■ Founder Scholarship , Peking University |
| 2014 | ■ Longruan Scholarship , Beijing LongRuan Technologies Inc. |
| 2015 | ■ Individual Scholarship for Outstanding Scientific Research , Peking University |
| 2016 | ■ Special Academic Scholarship , Peking University |
| 2017 | <p>■ Tang Lixin Scholarship, Peking University</p> <p>■ Research Assistant Scholarship, Peking University</p> |

AWARDS (continued)

- 2018 ■ Presidential Scholarship, Peking University
 ■ State Scholarship Fund of China, China Scholarship Council

RESEARCH INTERESTS

Social Sensing, Deep Learning, Spatial Analysis, Geographic Knowledge Retrieval, Human Mobility

SKILLS

- Languages ■ Mandarin Chinese; Strong reading, writing, listening and speaking competencies for English.
- Programming ■ Python, SQL, ~~La~~TeX, Pytorch, ASP.NET, Java, C/C#/Cpp, HTML, CSS, JavaScript, Processing.
- Misc. ■ Graphic design, Photography, Modern drama creation.

REFERENCES

Yu Liu
Professor
Peking University
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Lun Wu
Professor
Peking University
✉ wulun@pku.edu.cn