12/17/2025

CURRICULUM VITAE

Weimin Mou

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Biological Sciences Building P217
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Education

Chinese Academy of Sciences, Ph.D., 1999, Psychology
Zhejiang University (former Hangzhou University), China, BS, 1995, Psychology

Professional Experiences

2015-	Professor, University of Alberta
2011- 2015	Associate Professor, University of Alberta
2007-2011	Assistant Professor, University of Alberta
2003-2007	Professor, Institute of Psychology, Chinese Academy of Sciences
2001-2003	Visiting Research Associate, M.I.N.D Lab, Michigan State University
1999-2001	Postdoctoral Research Associate, Department of Psychology, Vanderbilt University
1999	Assistant Professor, Institute of Psychology, Chinese Academy of Sciences

Honors and Awards

2002	Selected into "One-Hundred-Talent Plan" of the Chinese Academy of Sciences

Major Grants

Human navigation in complex spaces using landmarks and self-motion (PI), NSERC, $140,000 CAD, 2022-2027
Human navigation in complex spaces using landmarks and self-motion (supplement) (PI), NSERC Alliance - Alberta Innovates Advance Program, 37,333 CAD, 2023-2024

Inertial cues, landmarks, and geometrical cues in spatial memory and navigation (PI), NSERC, $120,000 CAD, 2015-2020
Human Spatial Memory (PI), NSERC, $135,000 CAD, 2010-2015
Spatial Cognition in Virtual Environments (PI), CFI Infrastructure operation fund, $31,993 CAD, 2009-2014
Spatial Cognition in Virtual Environments (PI), CFI, $127,972 CAD, 2008-2011
Human Spatial Memory and Navigation (PI), NSERC, $77,455 CAD, 2008-2013 (terminated early in 2010 to apply for the NSERC accelerate supplement grant)
Human Spatial Cognition (PI), Faculty of Arts Start-up funding, University of Alberta, $250,000 CAD, 2007-2013
Human Spatial Memory and Reorientation (PI), Chinese Natural Science Foundation Committee, 300,000 RMB, 2008-2010

Human Mental Representation of Spatial Relations (PI), Chinese Natural Science Foundation Committee, 220,000 RMB, 2005-2007
Human Spatial Cognition (PI), "One-Hundred-Talent Plan" Fellowship, Chinese Academy of Sciences, 2,000,000 RMB, 2003-2006

Professional Activities

Editorial

2008- Consulting editor, Journal of Experimental Psychology: Learning, Memory, and Cognition
2023 Guest editor, Journal of Experimental Psychology: Learning, Memory, and Cognition
2025 Guest editor, PNAS

Advisory Panel

2009 National Science Foundation (NSF) panelist

Grant proposal Reviewer

Natural Sciences and Engineering Research Council (NSERC) of Canada
National Natural Science Foundation of China (NSFC)
National Science Foundation (NSF) of USA

Journal Reviewer

Acta Psychologica; Animal Cognition; Applied Cognitive Psychology; Behavioural Brain Research; Behavior Process; Canadian Journal of Experimental Psychology; Cerebral Cortex; Cognition; Cognitive Psychology; Cognitive Processing; Cognitive Research Principles and Implications; Cognitive Science; Ergonomics; Europe Journal of Cognitive Psychology; Experimental Brain Research; Experimental Psychology; Frontiers in Aging Neuroscience; Frontiers in Human Neuroscience; Human Brain Mapping; Journal of Experimental Child Psychology; Journal of Environmental Psychology; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition; Journal of Motor Behavior; Memory; Memory & Cognition; Perception; Perception and Psychophysics; PNAS; Psychonomic Bulletin & Review; Psychological Research; Quarterly Journal of Experimental Psychology; Scientific Report; Spatial Cognition and Computation; Visual Cognition

Administrative activities

Undergraduate Curriculum Committee
Graduate Award Committee
Psychology Open House Committee
Cameron Library Representative
Faculty Evaluation Committee
Department Chair Selection Committee
General Faculty Council
Arts Academic Affair Committee

Professional Affiliations

Psychonomic Society (fellow)

CSBBCS (member)

Research Interests

Human Spatial Cognition

Teaching Experience

Cognitive Psychology
Human Spatial Cognition. Department Honor Roll (2009 winter, fall; 2010 Winter, fall; 2011, Fall; 2012, Winter). Department Honor Roll with distinction (2011, Winter).
Independent Study. Department Honor Roll with distinction (2010-2012).

Students Supervised

Graduate
Hyebin Yu (2025-, University of Alberta)
Zijian Zhang (2023-, University of Alberta)
Yue Chen (2020- , University of Alberta)

Yafei Qi (2018-2024 , University of Alberta)
Immediate Placement: Postdoc fellow Vanderbilt University
Xuehui Lei (2015-2020, University of Alberta)
Immediate Placement: Postdoc fellow York University
Yu Du (2013-2018, University of Alberta, Co-Supervised)
Immediate Placement: Postdoc fellow University of Arizona
Lin Wang (2012-2018, University of Alberta)
Immediate Placement: Postdoc fellow Johns Hopkins University
Lei Zhang (2012-2017, University of Alberta)
Ruojing Zhou (2011-2016, University of Alberta)
Immediate Placement: Postdoc fellow University Magdeburg
Xiaoou Li, Ph.D. (2004-2009, Chinese Academy of Sciences).
Immediate Placement: Postdoc fellow University of Notre Dame
Now: WorldViz LLC
Hui Zhang, Ph.D. (2004-2009, Chinese Academy of Sciences).
Immediate Placement: Postdoc fellow University of California at Davis
Now: Ruhr-Universität Bochum, Germany
Chengli Xiao, Ph.D. (2003-2008, Chinese Academy of Sciences).
Immediate Placement: Assistant Professor Nanjing University China
Now: Associate Professor Nanjing University China
Xianyun Liu, Ph.D. (2005-2008, Chinese Academy of Sciences).
Immediate Placement: Postdoc fellow Vanderbilt University
Now: Associate Professor Tianjin Normal University China
Mintao Zhao, Ph.D. (2003-2007, Chinese Academy of Sciences).
Immediate Placement: Postdoc fellow Hong Kong University
Now: Lecturer, University of East Anglia, UK
Lin Wang, Master, (2012, Chinese Academy of Sciences).
Kainan Wen, Master, (2012, Chinese Academy of Sciences).

Shuqing Liu, Master, (2008, Chinese Academy of Sciences).
Yanli Fan, Master, (2008, Chinese Academy of Sciences).
Ying Wang, Master, (2008, Chinese Academy of Sciences).

Graduate (Supervisory Committee)

Anna Romero (2023-2024)
Julia Feminalla (2023-2024)
Helen Ma (2021-2023)
Benson Ng (2017)
Michael Parnes (2010-2012, University of Alberta)
Jean-Francois Nankoo (2010-current, University of Alberta)
Michelle Chan (2010-current, University of Alberta)
Yang Liu (2009-current, University of Alberta)
Ryan van Kroonenburg (2009-2010, University of Alberta)

Undergraduate (Honor/Directed Study)

Caleb Kwan (Fall 2025-)
Keqing Shi (Fall 2025-)
Phoenix Van (Fall 2024-)
Daniel Wang (Fall 2024-)
Ava Brown (Fall 2024-)

Cleo Mo (Winter 2025-Fall 2025)
Jordan Gahir (Fall 2025)
Ayesha Khan (Fall 2025)

Tiffany Au (Fall 2024-Winter 2025)
Jessica Gahir (Fall 2024-Winter 2025)
Shuier Wei (Winter 2024-Winter 2025)
Yueyi Qiu (Fall 2023-Winter 2025)
Jasmin Chan (Fall 2023-Winter 2025)
Advait Gulawani (Winter 2023-Winter 2025)

Harleen Kooner (Fall 2023- Winter 2024)
Chris Wang (Fall 2023- Winter 2024)
Zhichun Qi (Fall 2022-Winter 2024)
Andrea Ybanez (Winter 2023)
Neil Rensburg (Fall 2022-winter 2023)
Mia Hawkins (Winter 2022-winter 2023)
Mehtab Rai (Fall 2022)
Moneek Sandhu (Fall 2022)

Yiqun (Jerry) Wu (Winter 2022-Fall 2022)
Gurleen Gill (Winter 2022)
Ali Ramji (Winter 2022)
Kenaan Karim Ramji (Winter 2020)
Tianyu Zhu (Winter 2020)
Mark Wang (Winter 2020)
Simran Gulati (Winter 2020)
Mohamed Osman-Abdallah (Fall 2019-Winter 2020)
Qingyao Xue (Fall 2019)
Yijun Wang (Fall 2019-Winter 2020)
Mujtaba Siddique (Fall 2019-Winter 2020)
Linlin Tan (Fall 2019)
Aradhna Chawla (Winter 2019-Winter 2020)
Jarlo Alganion (Fall 2018-Fall 2019)
Subekshya Adhikari (Fall 2018-Winter 2020)
Ojas Srivastava (Fall 2017- Winter 2019)
Rachel Mustaklem (Winter 2019)
Lara Pereira (Winter 2019-Summer 2019)
Kai Huang (Spring 2018)
Lydia Jiang (Fall 2017-Winter 2018)
Dhriti Mehta (Fall 2017-Winter 2018)
Zehua Xia (Fall 2017-Winter 2018)
Aila Jamali (Winter 2017, Winter 2018)
Eugini Tolentino (Winter 2017-Fall 2017)
Nim Binning (Fall 2016 –Fall 2017)
Aleesh Hafeez (Fall 2016 -Winter 2017)
Bowen Wu (Fall 2016)
Labiqa Nazar (Winter 2016)
Bairong Song (Winter 2016 – Fall 2016)
Silvernise Goh (Winter 2016)
Janina Valencia (Winter 2016)
Alexandra Vrapciu (Fall 2015- Fall 2016)
Yoori Son (Winter 2015)
Wenyue Lu (Winter, Summer 2015)
Xinyu Yi (Winter 2015)
Tiancheng Ma (Fall 2014-2015, Honor program, University of Alberta)
Benson Ng (Fall 2014-2015, University of Alberta)
Inna Dymouriak (Fall 2013, University of Alberta)
So Yon Kwon (Winter 2013-Fall 2013, University of Alberta)
Vi Pham (Winter 2012, University of Alberta)
Keith Baldoz (Fall, 2011-Winter 2012, University of Alberta)
Brent Chambers (Fall, 2011-Winter 2012; Fall, 2014- University of Alberta)
Geoff Golda (Winter 2011, University of Alberta)
Lauren Poon (Fall 2010- Winter 2012, University of Alberta)
Sarah Tan (Winter 2010-Winter 2013, University of Alberta)
Sean Wallace (Winter 2010, Fall 2010, University of Alberta)

Zofia Tundak (Winter 2010, University of Alberta)
Melissa Teyema (Winter 2010, University of Alberta)
Nicole Sieusahai(Winter 2010, Fall 2010, Winter 2011, University of Alberta)
Taylor Murphy (Winter 2009 – Winter 2012, University of Alberta)
Erin Lim (Fall 2009; Winter 2010, University of Alberta)
Kristen Hemrick (Fall 2009; Winter 2010, University of Alberta)
Shanika Wijayanayaka(Winter 2009, Fall 2009, University of Alberta)
Cindy Liu (Winter 2009, University of Alberta)
Janice Tang (Winter 2009, University of Alberta)
Matthias Berkes (Winter 2009, University of Alberta)

Publications

Journal Articles (Student authors are underlined)

1. Qi, Z. & **Mou, W.** (2025). Cognitive maps integrating locations but missing orientations in across-boundary environments. *Journal of Experimental Psychology:General.* Advance online publication. https://doi.org/10.1037/xge0001793.

2. **Mou, W.** (2025). Representing place locations and orientations in cognitive maps. *Nature Reviews Psychology, 4, 347-360.* https://doi.org/10.1038/s44159-025-00442-0.

3. Chen, Y. & **Mou, W.** (2025). Disrupted orientation after path integration by absence of anticipated prevalent spatial views. *Journal of Experimental Psychology: Learning, Memory, and Cognition.* 51, 1412-1429. https://doi.org/10.1037/xlm0001439

4. Qi, Y. & **Mou, W.** (2024). Relative cue precision and prior knowledge contribute to the preference of proximal and distal landmarks in human orientation. *Cognition*, *247*, 105772. https://doi.org/10.1016/j.cognition.2024.105772

5. Chen, Y. & **Mou, W.** (2024). Path integration, rather than being suppressed, is used to update spatial views in familiar environments with constantly available landmarks. *Cognition, 242,* 105662. https://doi.org/10.1016/j.cognition.2023.105662

6. Newman, P. M., Qi, Y., **Mou, W.,** & McNamara, T. P. (2023). Statistically optimal cue integration during human spatial navigation. *Psychonomic Bulletin & Review, 30*, 1621–1642. https://doi.org/10.3758/s13423-023-02254-w

7. Lei, X. & **Mou, W.** (2023). Visual re-anchoring in misaligned local spaces impairs global path integration. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *49*(5), 728–742. 10.1037/xlm0001229

8. Qi, Y. & **Mou, W.** (2023). Sources of systematic errors in human path integration. *Journal of Experimental Psychology: Human Perception and Performance*, *49(2)*, 197–225. https://doi.org/10.1037/xhp0001076

9. Lei, X., **Mou, W.,** & McNamara, T. P. (2023). The influence of environmental geometry and spatial symmetry on spatial updating during locomotion. *Journal of Experimental*

Psychology: Learning, Memory, and Cognition, 49(5), 714–727.

10. Du, Y., & **Mou, W.** (2022)**.** When humans can fly: Imprecise vertical localization in human locomotion. *Behavioural Brain Research*, 426, 113835. https://doi.org/10.1016/j.bbr.2022.113835

11. Lei, X., & **Mou, W.** (2022). Developing global spatial memories by one-shot across-boundary navigation. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 48***,** 798–812.

12. Lei, X., & **Mou, W.** (2021). Updating self-location by self-motion and visual cues in familiar multiscale spaces. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 47*,1439-1452.

13. Qi, Y., **Mou, W.**, & Lei, X. (2021). Cue combination of path integration and piloting in goal-directed navigation. *Quarterly Journal of Experimental Psychology*, *74*, 1981–2001. https://doi.org/10.1177/17470218211015796

14. Du, Y., **Mou, W.**, & Lei, X. (2021). Updating headings in 3D navigation. *Quarterly Journal of Experimental Psychology, 74*, 889-909. https://doi.org/10.1177/1747021820978973

15. Lu, R., Yu, C., Li, Z., **Mou, W.**, & Li, Z. (2020). Set size effects in spatial updating are independent of the online/offline updating strategy. *Journal of Experimental Psychology: Human Perception and Performance*, *46*(9), 901–911.

16. Zhang, L., **Mou, W.**, Lei, X., & Du, Y. (2020). Cue combination used to update the navigator's self-localization, not the home location. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *46*(12), 2314–2339.

17. Wang, L. & **Mou, W.** (2020). Effect of room size on geometry and features cue preference during reorientation: modulating encoding strength or cue weighting. *Quarterly Journal of Experimental Psychology, 73*, 225-238.

18. Du, Y., **Mou, W. &** Zhang, L. (2020). Unidirectional influence of vision on locomotion in multi-modal spatial representations of a large-scale space. *Psychological Research, 84,* 1284-1303.

19. Lei, X., **Mou, W., &** Zhang, L. (2020). Developing global and local spatial representations through across-boundary navigation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 46, 1-23.

20. Zhou, R., & **Mou, W.** (2019). The effects of cue placement on the relative dominance of boundaries and landmark arrays in goal localization. *Quarterly Journal of Experimental Psychology*, 72, 2614-2631

21. Zhou, R., & **Mou, W.** (2019). Boundary shapes guide selection of reference objects in goal localization. *Attention, Perception, & Psychophysics*, 81, 2482–2498.

22. Zhang, L. & **Mou, W.** (2019). Selective resetting position and heading estimations while driving in a large-scale immersive virtual environment. *Experimental Brain Research, 237,* 335-350.

23. Wang, L., **Mou, W.**, & Dixon, P. (2018). Cue interaction between buildings and street configurations during reorientation in familiar and unfamiliar outdoor environments. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 44,* 631-644.

24. Zhou, R., & **Mou, W.** (2018). The limits of boundaries: unpacking localization and cognitive mapping relative to a boundary. *Psychological Research, 82,* 617-633.

25. Du, Y., McMillan, N., Madan, C. R., Spetch, M. L., & **Mou, W.** (2017). Weighted integration of landmarks in spatial search: The role of learning experience. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 43,* 1857-1871.

26. Zhang, L. & **Mou, W.** (2017). Piloting systems reset path integration systems during position estimation. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 43,* 472-491.

27. Du, Y., Spetch, M. L., & **Mou, W.** (2016). Look up: Human adults use vertical height cues in reorientation. *Memory & Cognition, 44,* 1277-1287.

28. Zhou, R. & **Mou, W.** (2016). Superior cognitive mapping through single-landmark-related learning than through boundary-related learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 42,* 1316-1323.

29. **Mou, W. &** Wang, L. (2015). Piloting and path integration within and across boundary. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 41*, 220-234.

30. **Mou, W.** & Zhang, L. (2014). Dissociating position and heading estimations: rotated visual orientation cues perceived after walking reset headings but not positions. *Cognition, 133(3),* 553-571.

31. **Mou, W.,** Nankoo J., Zhou, R., & Spetch, M. L. (2014). Use of geometric properties for reorientation to remote cities: object arrays and extended surfaces. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 40*, 476-491.

32. Zhang, H., **Mou, W**., McNamara, T. P., Wang, L. (2014). Connecting spatial memories of two nested spaces. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 40*, 191-202.

33. Wang, L., **Mou, W.**, & Sun, X. (2014). Development of Landmark Knowledge at Decision Points. *Spatial Cognition and Computation, 14*, 1-17.

34. **Mou, W.,** McNamara, T.P., & Zhang, L. (2013). Global frames of reference organize configural knowledge of paths. *Cognition, 129,* 180–193.

35. **Mou, W.,** & Spetch, M. L. (2013). Object location memory: integration and competition

between multiple context objects but not between observers' body and context objects. *Cognition, 126,* 181-197.

36. **Mou, W.** & Zhou, R. (2013). Defining a boundary in goal localization: infinite number of reference points or extended surfaces. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 39*, 1115-1127.

37. Lubyk, D. M., Spetch, M. L., Zhou, R., Pisklak, J. & **Mou, W.** (2013). Reorientation in diamond-shaped environments: Encoding of features and angles in enclosures versus arrays by adult humans and pigeons (Columbia livia). *Animal Cognition, 16*, 565-581.

38. Zhang, H., Friedman, A., **Mou, W**., & Waller, D. (2012). View combination in recognition of 3-D virtual reality layouts. *PsyCH, 1,* 82–89.

39. Li, X., **Mou, W**., & McNamara, T. P. (2012). Retrieving enduring spatial representations after disorientation. *Cognition, 124,* 143-155.

40. Liu, X., **Mou, W.**, & McNamara, T. P. (2012). Selection of spatial reference directions prior to seeing objects. *Spatial Cognition and Computation, 12*, 53-69.

41. Li, X., Carlson, L. A., **Mou, W.,** Williams, M. R., & Miller, J. E. (2011). Describing spatial locations from perception and memory: The influence of intrinsic axes on reference object selection. *Journal of Memory and Language, 65*, 222-236.

42. Zhang, H., **Mou, W**., & McNamara, T. P. (2011). Spatial updating according to a fixed reference direction of a briefly viewed layout. *Cognition, 119,* 419-429.

43. Xiao, C., McNamara, T. P., Qing, X., & **Mou, W.** (2010). Neural mechanisms of recognizing scene configurations from multiple viewpoints. *Brain Research, 1363,* 107-116.

44. Xiao, C., **Mou, W.**, & McNamara, T. P. (2009). Use of self-to-object and object-to-object spatial relations in locomotion. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 35,* 1137-1147.

45. Li, X., **Mou, W**., & McNamara, T. P. (2009). Intrinsic frames of reference and egocentric viewpoints in recognizing spatial structure of a shape. *Psychonomic Bulletin & Review*, *16,* 518-523.

46. **Mou, W.**, Zhang, H., & McNamara, T. P. (2009). Novel-view scene recognition relies on identifying spatial reference directions. *Cognition, 111,* 175-186.

47. **Mou, W.**, Liu, X., & McNamara, T. P. (2009). Layout geometry in encoding and retrieval of spatial memory. *Journal of Experimental Psychology: Human Perception and Performance*, *35,* 83-93.

48. **Mou, W.**, Xiao, C., & McNamara, T. P. (2008). Reference directions and reference objects in spatial memory of a briefly-viewed layout. *Cognition*, *108,* 136-154.

49. **Mou, W.**, Li, X., & McNamara, T. P. (2008). Body and environment stabilized processing spatial knowledge during locomotion. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 34,* 415-421.

50. **Mou, W.**, Fan, Y., McNamara, T. P., & Owen, C. (2008). Intrinsic frames of reference and egocentric viewpoints in scene recognition. *Cognition, 106,* 750-769.

51. **Mou, W.**, Zhao, M., & McNamara, T. P. (2007). Layout geometry in the selection of intrinsic frames of reference from multiple viewpoints. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 33,* 145-154.

52. Zhao, M., Zhou, G., **Mou, W.**, Hayward, W., & Owen, C. (2007). Spatial updating during locomotion does not change viewpoint dependent visual object processing. *Visual Cognition, 15,* 402-419.

53. **Mou, W**., McNamara, T. P., Rump, B., & Xiao, C. (2006). Roles of egocentric and allocentric spatial representations in locomotion and reorientation. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 32,* 1274-1290.

54. **Mou, W.**, Biocca, F., Owen, C.B., Tang, A., Xiao, F., & Lim, L. (2004). Frames of reference in mobile Augmented Reality displays. *Journal of Experimental Psychology: Applied,* 10, 238-244.

55. **Mou, W.**, Zhang, K., & McNamara, T.P. (2004). Frames of reference in spatial memory acquired from language. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 30,* 171-180.

56. **Mou, W.**, McNamara, T.P., Valiquette C. M., & Rump, B. (2004). Egocentric and allocentric updating of spatial memories. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 30*, 142-157.

57. **Mou, W.**, & McNamara, T. P. (2002). Intrinsic frames of reference in spatial memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 28,* 162-170.

58. **Mou, W.**, & Zhang, K. (2001). A compatible chord code for inputting elements of Chinese Characters. *Applied Ergonomics, 32,* 293-297.

Working Papers (Student authors are underlined)

59. Zhang, Z. & **Mou, W.** (2025). Generalizing perception-action coupling depends on context: spatial updating is non-obligatory in virtual but not mixed reality. Submitted.

60. Chen, Y. & **Mou, W.** (2025). Remembered but invisible landmarks enhance path integration. Submitted.

61. Chen, Y., Chan J., Gulawani A., & **Mou, W.** (2025). Landmarks reset self-localization but not goal-localization: evidence for interactive error propagation in navigation. In preparation.

Book Chapters

62. **Mou, W**., & Qi, Y. (2025). Human spatial navigation: benchmark behavioral findings. *In:Grafman, J.H. (Ed.), Encyclopedia of the Human Brain, Second Edition, vol. 2, pp.76–94.* USA: Elsevier. https://doi.org/https://doi.org/10.1016/B978-0-12-820480-1.00005-X

63. Tang, A., Owen, C., Biocca, F., **Mou, W.** (2004). Performance Evaluation of Augmented Reality for Directed Assembly, in Virtual and Augmented Reality Applications in Manufacturing, Nee, A., Ong, S., Editors. Springer Publications, Heidelberg, Germany. 301-322.

Presentations/Proceedings

1. Chen, Y., **Mou, W.** (2024, June). Disrupted orientation after path integration by absence of anticipated prevalent spatial views. Poster presented at the Canadian Society for Brain, Behaviour and Cognitive Science 34th Annual Conference, June 25-27, Edmonton, AB, Canada.
2. Zhang, Z., **Mou, W.** (2024, June). Simultaneous body- and environment-stabilized processes of object locations in mixed reality environments. Poster presented at the Canadian Society for Brain, Behaviour and Cognitive Science 34th Annual Conference, June 25-27, Edmonton, AB, Canada.
3. **Mou. W.** (2024, June). While path integration updates spatial representations during walking, inconsistent piloting cues disrupt them afterward. Invited talk at the 5th Interdisciplinary Navigation Symposium (iNAV), June 17-21, Merano, Italy.
4. Chen, Y., **Mou, W.** (2024, June). Disrupted orientation after path integration by absence of anticipated prevalent spatial views. Poster presented at the 5th Interdisciplinary Navigation Symposium (iNAV), June 17-21, Merano, Italy.
5. Zhang, Z., **Mou, W.** (2024, June). Simultaneous body- and environment-stabilized processes of object locations in mixed reality environments. Poster presented at the 5th Interdisciplinary Navigation Symposium (iNAV), June 17-21, Merano, Italy.
6. Qi, Y., **Mou, W.** (2023, November). The roles of proximal and distal landmarks in estimating human orientations. Poster presented at the Psychonomic Society's 64th Annual Meeting, Nov 16-19, San Francisco, USA.
7. Chen, Y., **Mou, W.** (2023, November). Path integration, rather than being suppressed, used to update spatial views in familiar environments with constantly available landmarks. Poster presented at the Psychonomic Society's 64th Annual Meeting, San Francisco, USA.
8. Qi, Y., **Mou, W.** (2022, November). Sources of systematic errors in human path integration. Poster presented at the Psychonomic Society's 63th Annual Meeting, Boston, USA.
9. Qi, Y., **Mou, W.** (2022, June). Sources of systematic errors in human path integration.

Poster presented at the 4th Interdisciplinary Navigation Symposium (iNAV), June 14-16, online.

10. Lei, X., **Mou, W.** (2021, November). Structural similarity of local spaces in a multiscale environment overshadows global spatial representations. Poster presented at the Psychonomic Society's 62nd Annual Meeting, New Orleans, USA.

11. Lei, X., **Mou, W.** (2019, November). Global spatial updating from across-boundary navigation. Poster presented at the Psychonomic Society's 60th Annual Meeting, Montreal, Canada.

12. Qi, Y., Lei, X., & **Mou, W.** (2019, November). Cue combination of path integration and piloting in goal directed navigation. Poster presented at the Psychonomic Society's 60th Annual Meeting, Montreal, Canada.

13. **Mou, W.** (2019). Updating humans' headings in 3D and across-boundary spaces based on path integration, Talk presented at the Canadian Society for Brain, Behaviour and Cognitive Science 29th Annual Conference, June 7-9, Waterloo, Ontario, Canada.

14. Lei, X., **Mou, W.,** Adhikari, S., Alganion, J., Chawla, A., & Pereira, L. (2019). Spatial updating within and across boundaries. Poster presented at the 38th Banff Annual Seminar in Cognitive Science, May 3-4, Banff, Canada.

15. Qi, Y., Lei, X., **Mou, W.**, & Srivastava, O. (2019). Cue combination of path integration and piloting in goal directed navigation. Poster presented at the 38th Banff Annual Seminar in Cognitive Science, May 3-4, Banff, Canada.

16. **Mou, W.** (2018). Updating Headings and Positions in Human Navigation Using Landmarks and Path Integration, Talk presented at the Psychonomic Society's 59th Annual Conference, Nov. 15-18, New Orleans, Louisiana, USA.

17. **Mou, W.** (2018). Updating humans' headings and positions using landmarks and path integration, Talk presented at the Canadian Society for Brain, Behaviour and Cognitive Science 28th Annual Conference, July 4-7, St. John's, NL, Canada.

18. Du, Y., **Mou, W.**, & Lei, X. (2018).Up is up and north is north: Humans' 3D heading representation. Poster presented at the Interdisciplinary Navigation Symposium (iNAV), June 25-29, Tremblant, QC, Canada.

19. Lei, X. & **Mou, W.** (2018) Developing global and local cognitive maps through path integration. Poster presented at the Interdisciplinary Navigation Symposium (iNAV), June 25-29, Tremblant, QC, Canada.

20. Wang, L. & **Mou, W.** (2018). Effects of familiarity and room size on the interaction between geometry and features during reorientation. Poster presented at the 37th Banff Annual Seminar in Cognitive Science (BASICS), May 4-5, Banff, AB, Canada.

21. Lei, X. & **Mou, W.** (2018). Local and global sensorimotor interferences in perspective taking based on multiscale mental maps. Poster presented at the 37th Banff Annual

Seminar in Cognitive Science (BASICS), May 4-5, Banff, AB, Canada.

22. Du, Y., **Mou, W.,** & Lei, X. (2018). Up is up and north is north: Humans' 3D heading representation. Poster presented at the 37th Banff Annual Seminar in Cognitive Science (BASICS), May 4-5, Banff, AB, Canada.

23. Lei, X., **Mou, W.,** & Zhang, L. (2017). Developing global and local cognitive maps through path integration. Poster presented at the Psychonomic Society's 58th Annual Conference, Nov. 9-12, Vancouver, BC, Canada.

24. Du, Y., & **Mou, W.** (2017). Imprecise vertical localization in surface-based locomotion but not in flying. Talk presented at the Psychonomic Society's 58th Annual Conference, Nov. 9-12, Vancouver, BC, Canada.

25. Lei, X., Zhang, L., & **Mou, W.** (2016). Switching between global and local orientations. Paper presented at the Psychonomic Society's 57th annual conference, Nov. 17–20, Boston, MA.

26. Du, Y., Zhang, L., & **Mou, W.** (2016). Unidirectional influence of vision on locomotion in multi-modal spatial representations acquired from navigation. Paper presented at the Psychonomic Society's 57th annual conference, Nov. 17–20, Boston, MA.

27. **Mou, W.** (2016). Superior cognitive mapping through single-landmark-related learning than through boundary-related learning. Invited talk at the Interdisciplinary Navigation Symposium (iNAV), June. 26–30, Bad Gastein, Austria.

28. Wang, L., **Mou, W.,** & Dixon, P. (2015). The effect of familiarity on human adults' use of geometry and feature in reorientation. Paper presented at the Psychonomic Society's 56th annual conference, Nov. 19–22, Chicago, IL.

29. **Mou, W.** & Zhang, L. (2015). Piloting systems reset path integration systems during position estimation. Paper presented at the Psychonomic Society′s 56th annual conference, Nov. 19– 22, Chicago, IL.

30. Du, Y., Spetch, M., & **Mou, W.** (2015). The use of vertical height cues in spatial reorientation. Paper presented at the Psychonomic Society's 56th annual conference, November 19-22, Chicago, IL,.

31. Zhou, R., & **Mou, W.** (2015). Hit and Miss in a Boundary: Unpacking Localization and Cognitive Mapping Relative to a Boundary. Psychonomic Society's 56th annual conference, November 19-22, Chicago, USA.

32. Zhou, R. & **Mou, W.** (2014). Connecting scattered dots in a cognitive map: the roles of boundaries and a single landmark in integrating multiple locations. Paper presented at the Psychonomic Society's 55th annual conference, Nov. 20–23, Long Beach, CA.

33. **Mou, W.** & Zhang, L. (2013). Course relies on idiothetic cue whereas heading relies on visual cue in human path integration. Paper presented at the Psychonomic Society's 54rd

annual conference, Nov. 14–17, Toronto.

34. **Mou, W.** & Zhou, R. (2012). Defining a boundary: infinite number of reference points or extended surfaces. Paper presented at the Psychonomic Society's 53rd annual conference, Nov. 15–18, Minneapolis, MN.

35. Wang, L., **Mou, W.**, & Sun, X. (2012). Development of landmark knowledge and navigation strategies in large-scale environments. Paper presented at the Psychonomic Society's 53rd annual conference, Nov. 15–18, Minneapolis, MN.

36. **Mou, W.,** Nankoo J., & Spetch, M. L. (2011). Use of geometric properties for reorientation to remote cities: object arrays and extended surfaces. Paper presented at the Psychonomic Society's 52nd annual conference, Nov. 3–6, Seattle, WA.

37. **Mou, W**., & McNamara, T. P. (2010). Reference directions in spatial memory acquired from path integration. Paper presented at the Psychonomic Society's 51st annual conference, Nov. 18–21, St. Louis, MO.

38. Li, X., **Mou, W.**, & Carlson L. A. (2010) Describing locations from memory: Effects of spatial reference direction on reference object selection, Paper presented at the 10th annual meeting of the Vision Science Society, May 7-12, Naples, FL.

39. Zhang, H., **Mou, W**., & McNamara, T. P. (2009). Spatial reference directions of two nested layouts. Paper presented at the Psychonomic Society's 50th annual conference, Nov. 19–22, Boston, MA.

40. Li, X., **Mou, W**., & McNamara, T. P. (2008). Reorientation by recovering the spatial reference direction. Paper presented at the Psychonomic Society's 49th annual conference, Nov. 13-16, Chicago, IL.

41. Zhang, H., **Mou, W**., & McNamara, T. P. (2008). Spatial updating intrinsic reference direction of a briefly viewed layout. Paper presented at the Psychonomic Society's 49th annual conference, Nov. 13-16, Chicago, IL.

42. **Mou, W**., Li, X., & McNamara, T. P. (2008). Intrinsic Orientation and Learning Viewpoint in Shape Recognition. Paper presented at the 8th annual meeting of the Vision Science Society, May 9 – May 14, Naples, FL.

43. Liu, X., **Mou, W.**, & McNamara, T. P. (2007). Intrinsic reference direction in sequentially learning a layout. Paper presented at the Psychonomic Society's 48th annual conference, Nov. 15-18, Long Beach, CA.

44. **Mou, W.**, Li, X., & McNamara, T. P. (2006). Body and environment stabilized processing spatial knowledge during locomotion. Paper presented at the Psychonomic Society's 47th annual conference, Nov. 16-19, Houston, TX.

45. **Mou, W.**, Zhang, H., & McNamara, T. P. (2006). Change detection of an object's locations relies on the information of learning viewpoint, Paper presented at the

Psychonomic Society's 47th annual conference, Nov. 16-19, Houston, TX.

46. **Mou, W.,** Hayward, W. G., Zhao, M., Zhou, G., & Owen, C. B. (2006). Spatial updating during locomotion does not eliminate viewpoint-dependent visual object processing. Paper presented at the 6th annual meeting of the Vision Science Society, May 5 – May 10, Sarasota, FL.

47. **Mou, W.**, Zhao, M., & McNamara, T. P. (2005). Layout geometry and viewing perspectives in the selection of intrinsic frames of reference. Paper presented at the Psychonomic Society's 46th annual conference, Nov. 9-13, Toronto, Canada

48. **Mou, W.**, Xiao, C., & McNamara, T. P. (2005). Spatial memory of briefly-viewed desktop scene. Paper presented at the Psychonomic Society's 46th annual conference, Nov. 9-13, Toronto, Canada.

49. Owen, C., Biocca, F., Tang, A., Xiao, F., **Mou, W.**, Lim, L. (2005). Information frames in Augmented Reality mobile user interfaces. *Proceedings of HCI International 2005*, July 22-27, 2005, Las Vegas, USA.

50. Biocca, F., Xiao, F., **Mou, W.**, Owen, C., Tang, A. (2005). Mobile infospaces: personal and egocentric space as psychological frames for information organization in Augmented Reality environments. *Proceedings of HCI International 2005*, July 22-27, 2005, Las Vegas, USA.

51. **Mou, W.**, & McNamara, T. P. (2004). Navigation depends on enduring allocentric representations. Psychonomic Society’s 45th annual conference, Minneapolis, MN.

52. **Mou, W.**, Biocca, F., Owen, C., Tang, A., and Xiao, F. (2004). Spatial memory and spatial updating in augmented reality (Abstract). *International Journal of Psychology*, Vol.39, Issue 5-6. ISBN 0020-7594.

53. Biocca, F., Rolland, J., Owen, C., Stockman, G., **Mou, W**., Harms, C., Tang, A., Plantagenest, G., Reddy, C., Hua, H. (2003). Approaches to the design and measurement of social and information awareness in Augmented Reality systems. *Proceedings of HCI International 2003,* June 22-27, 2003, Crete, Greece.

54. Tang, A., Owen, C., Biocca, F., **Mou, W.** (2003). Comparative effectiveness of augmented reality in object assembly. *Proceedings of ACM CHI '2003*, pp. 73 - 80, April 5 - 10, 2003, Fort Lauderdale, FL.

55. Tang, A., Owen, C., Biocca, F., **Mou, W.** (2002). Experimental Evaluation of Augmented Reality in Object Assembly Task. *Proceedings of ISMAR '2002, IEEE and ACM International Symposium on Mixed and Augmented Reality,* September 31 - October 1, 2002, Darmstadt, Germany.

56. **Mou, W.**, & McNamara T.P. (2002). Egocentric and allocentric updating of spatial memory. Paper presented at the Psychonomic Society's 43rd annual conference, Nov. 21-24, Kansas City, Mo.

57. **Mou, W.**, Zhang, K., & Yang, S. (1999). Direction effect and relative location effect in searching imagined environments. Paper presented at the international Conference COSIT'99, August, Hamburg, Germany.