

Curriculum Vita

## SHAN LI

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### Education

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- 2017-2022**      **Ph.D., Educational Psychology – Learning Sciences**  
 McGill University, Montreal, Quebec, Canada  
 Advisor: Dr. Susanne P. Lajoie  
 Dissertation: *A Theoretical and Empirical Analysis of Cognitive Engagement in Self-Regulated Learning*
- 2011-2014**      **M.S., Educational Technology**  
 Beijing Normal University, Beijing, China  
 Advisor: Dr. Sheng-Quan Yu
- 2007-2011**      **B.S., Educational Technology**  
 Shandong Normal University, Jinan, China

### Professional Experience

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- 08/22-present      Assistant Professor (tenure track), Lehigh University
- 09/16-07/22      Research Assistant, Advanced Technology for Learning in Authentic Settings (ATLAS) lab, McGill University
- 09/20-12/20      Lecturer, Department of Educational and Counselling Psychology, McGill University

### Publications

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#### Book Chapters

- Lajoie, S.P. & Li, S. (2023). Considerations for intelligent tutoring systems for medical education. In Sinatra, A.M., Graesser, A.C., Hu, X., Townsend, L.N. and Rus, V. (Eds.). *Design Recommendations for Intelligent Tutoring Systems: Volume 11 – Intelligent Tutoring System Applications for Professional Career Education* (pp. 99-107), Orlando, FL: US Army Combat Capabilities Development Command - Soldier Center.

- Wiedbusch, M., Dever, D., Li, S., Amon, M. J., Lajoie, S. P. & Azevedo, R. (2023). Measuring multidimensional facets of SRL engagement with multimodal data. In: Kovanovic, V., Azevedo, R., Gibson, D.C., Ifenthaler, D. (eds). *Unobtrusive Observations of Learning in Digital Environments. Advances in Analytics for Learning and Teaching*. Springer, Cham. [https://doi.org/10.1007/978-3-031-30992-2\\_10](https://doi.org/10.1007/978-3-031-30992-2_10)
- Zheng, J., Li, S., & Lajoie, S. P. (2023). A review of measurements and techniques to study emotion dynamics in learning. In: Kovanovic, V., Azevedo, R., Gibson, D.C., Ifenthaler, D. (eds). *Unobtrusive Observations of Learning in Digital Environments. Advances in Analytics for Learning and Teaching*. Springer, Cham. [https://doi.org/10.1007/978-3-031-30992-2\\_2](https://doi.org/10.1007/978-3-031-30992-2_2)
- Lajoie, S.P., & Li, S. (2023). Theory-driven design of AIED systems for enhanced interaction and problem solving. In B. du Boulay, A. Mitrovic, & K. Yacef (Eds.), *Handbook of Artificial Intelligence in Education*. Cheltenham (pp. 229-249), UK: Edward Elgar Press. <https://doi.org/10.4337/9781800375413.00020>
- Huang, X., Li, S., Lajoie, S.P. (2023). The relative importance of cognitive and behavioral engagement to task performance in self-regulated learning with an intelligent tutoring system. In: Frasson, C., Mylonas, P., Troussas, C. (eds) *Augmented Intelligence and Intelligent Tutoring Systems*. ITS 2023. Lecture Notes in Computer Science, vol 13891, pp. 430-441. Springer, Cham. [https://doi.org/10.1007/978-3-031-32883-1\\_39](https://doi.org/10.1007/978-3-031-32883-1_39)
- Li, S. & Lajoie, S.P. (2022). Promoting STEM education through the use of learning analytics: A paradigm shift. In F. Ouyang, P. Jiao, B. McLaren, & A. Alavi (Eds.), *Artificial Intelligence in STEM Education: The paradigmatic shifts in research, education, and technology* (pp. 211-224). Auerbach: CRC Press. <https://doi.org/10.1201/9781003181187-18>
- Li, S., Zheng, J., Poitras, E. & Lajoie, S. P. (2018). The allocation of time matters to students' performance in clinical reasoning. In R. Nkambou et al.(eds.): *Intelligent Tutoring System. Lecture Notes in Computer Science*, Vol.10858, pp. 110-119. Springer, Cham. [https://doi.org/10.1007/978-3-319-91464-0\\_11](https://doi.org/10.1007/978-3-319-91464-0_11)
- Poitras, E. G., Doleck, T., Huang, L., Li, S., Lajoie, S. P. (2018). nBrowser: An Intelligent Web Browser for Studying Self-Regulated Learning in Teachers' Use of Technology. In R. Zheng (Ed.), *Strategies for Deep Learning with Digital Technology: Theories and Practices in Education* (pp. 171-196). NOVA Science Publishers.

### Peer-Reviewed Journal Articles

- Zheng, J., Liu, S., Li, S., & Xie, C. (2026). Exploring the integration of generative design in STEM classrooms: Student perceptions and learning experiences. *International Journal of Technology and Design Education*. 1-18. <https://doi.org/10.1007/s10798-026-10065-y>
- Wang, T., Li, S., Li, S., Zhang, J., & Gao, J. (2026). Students' use patterns of generative artificial intelligence during problem-solving in an intelligent learning system:

- Achievement goal orientation matters. *British Journal of Educational Technology*. 1-26. <https://doi.org/10.1111/bjet.70059>
- Li, S., & Zheng, J.** (2026). Motivational apprenticeship: An apprenticeship framework for developing students' motivational competencies. *Educational Psychology Review*. 38, 1-29. <https://doi.org/10.1007/s10648-025-10114-3>
- Wan, H., Que, R., Cheng, L., **Li, S.**, Wang, Q., & Liu, J. (2026). Exploring an activity-enhanced scaffolding for knowledge structure representing: Could the knowledge-activity connection promote students' online learning experience in AI curriculum?. *Frontiers in Psychology*. 16, 1-11. <https://doi.org/10.3389/fpsyg.2025.1725612>
- Li, S.** (2025). Pedagogical AI agents: The future development of the Healthy Choice platform for adaptive nutrition education. *Pedagogy in Health Promotion*. 1-7. <https://doi.org/10.1177/23733799251398794>
- Li, S., & Ding, G.** (2025). The impact of learner characteristics and AI utilization on learning experiences in a smart nutrition education platform. *Future in Educational Research*. 1-11. <https://doi.org/10.1002/fer3.70033>
- Li, S.** (2025). Understanding personal health thresholds: A conceptual framework for health education. *Health Education*. 1-15. <https://doi.org/10.1108/HE-03-2025-0034>
- Wang, T., Zheng, J., **Li, S.**, Zhang, Y., Hu, X., & Lajoie, S.P. (2026). Exploring students' cognitive load in a computer-simulated learning environment through multimodal data. *Educational Technology & Society*. 29(2). 118-135. [https://doi.org/10.30191/ETS.202604\\_29\(2\).RP07](https://doi.org/10.30191/ETS.202604_29(2).RP07)
- Li, S.** (2025). Beyond health knowledge and behavioral skills: Reimagining health education as autonomy development. *Health Education Journal*. 1-12. <https://doi.org/10.1177/00178969251358065>
- Ding, G., Liu, Z., **Li, S.**, Cao, J., & Ye, Z. (2025). Impact of mindset types and social community compositions on opinion dynamics: A large language model-based multi-agent simulation study. *Computers in Human Behavior*. 108730. <https://doi.org/10.1016/j.chb.2025.108730>
- Li, S.**, Wang, T., Zheng, J., & Lajoie, S. P. (2025). A complex dynamical system approach to student engagement. *Learning and Instruction*. 98, 1-18. <https://doi.org/10.1016/j.learninstruc.2025.102120>
- Li, S.**, Yi, K., Cao, J., Li, T., He, Y., & Ding, G. (2025). A novel approach to measuring creative analogical fluency in Chinese using advanced language models. *Thinking Skills and Creativity*. 57, 101826. <https://doi.org/10.1016/j.tsc.2025.101826>
- Li, S.**, Huang, X., Wang, T., Zheng, J., & Lajoie, S.P. (2025). Using text mining and machine learning to predict reasoning activities from think-aloud transcripts in computer assisted learning. *Journal of Computing in Higher Education*. 37, 477-496. <https://doi.org/10.1007/s12528-024-09404-6>

- Huang, X., Zheng, J., **Li, S.**, Zhu, G., Du, H., Zhong, T., Hou, C., & Lajoie, S.P. (2024). Investigating the effect of emotional tone on learners' reading engagement and peer acknowledgment in social annotation. *Australasian Journal of Educational Technology*. 40(6), 92-107. <https://doi.org/10.14742/ajet.9122>
- Pan, Z., **Li, S.**, Zheng, J., & Biegley L.T. (2024). Impacts of different gamified problem-solving integration approaches on elementary math: An engagement and metacognitive knowledge perspective. *Journal of Research on Technology in Education*. <https://doi.org/10.1080/15391523.2024.2437740>
- Ding, G., Li, M., **Li, S.**, & Wu, H. (2024). Exploring the impact of feedback timing on student performance in online testing. *Asia Pacific Education Review*. 1-13. <https://doi.org/10.1007/s12564-024-10024-z>
- Huang, Q., **Li, S.**, & Du, Y. (2024). Toward a comprehensive understanding of massive open online course adoption among college students. *Future in Educational Research*. 1–20. <https://doi.org/10.1002/fer3.64>
- Wang, T., Ruiz-Segura, **Li, S.**, & Lajoie, S. P. (2024). The relationship between students' self-regulated learning behaviors and problem-solving efficiency in technology-rich learning environments. *Journal of Computer Assisted Learning*, 1-15. <https://doi.org/10.1111/jcal.13043>
- Wu, H., **Li, S.**, Gao, Y., Weng, J., & Ding, G. (2024). Natural language processing in educational research: The evolution of research topics. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12764-2>
- Zheng, J., Pan, Z., **Li, S.**, & Xie, C. (2024). Modeling temporal self-regulatory processes in STEM learning of engineering design. *Journal of Educational Technology & Society*. 27 (4), 20-33. [https://doi.org/10.30191/ETS.202410\\_27\(4\).RP02](https://doi.org/10.30191/ETS.202410_27(4).RP02)
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- Zheng, J., **Li, S.**, Wang, T., & Lajoie, S.P. (2024). Unveiling emotion dynamics in problem-solving: A comprehensive analysis with an intelligent tutoring system using facial expressions and electrodermal activities. *International Journal of Educational Technology in Higher Education*. 21:33, 1-20. <https://doi.org/10.1186/s41239-024-00462-5>
- Li, S.**, Huang, X., Lin, L., & Chen, F. (2024). Exploring influential factors in peer upvoting within social annotation. *British Journal of Educational Technology*, 00, 1–14. <https://doi.org/10.1111/bjet.13455>
- Ding, G., He, Y., Yi, K., & **Li, S.** (2024). Using the divergent association task to measure divergent thinking in Chinese elementary school students. *Thinking Skills and Creativity*, 52, 101503. <https://doi.org/10.1016/j.tsc.2024.101503>

- Wan, H., Zhang, X., Yang, X., & Li, S. (2024). Which approach is effective: Comparing problematization-oriented and structuring-oriented scaffolding in instructional videos for programming education. *Education and Information Technologies*.1-17.  
<https://doi.org/10.1007/s10639-024-12550-0>
- Li, S., Huang, X., Zhu, G., Du, H., Zhong, T., Hou, C., & Zheng, J. (2024). Exploring behavioral patterns and their relationships with social annotation outcomes. *Journal of Computer Assisted Learning*. 1-11. <https://doi.org/10.1111/jcal.12958>
- Chen, F., Li, S., Lin, L., & Huang, X. (2024). Identifying temporal trajectories of student engagement in social annotation during online collaborative reading. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12494-5>
- Li, S. (2024). Immersive technologies in health professions education: A bibliometric analysis. *Computers and Education: X Reality*, 4, 100051.  
<https://doi.org/10.1016/j.cexr.2024.100051>
- Li, S., Liu, Z., Qiu, M., Huang, J., Zheng, J., & Ding, G. (2024). Examining the effects of communication features of educational robots on students' cognitive load, attitudes, and learning performance. *Journal of Educational Computing Research*.  
<https://doi.org/10.1177/07356331231226422>
- Lin, L., Li, S., Huang, X., & Chen, F. (2024). Longitudinal changes of student engagement in social annotation. *Distance Education*. <https://doi.org/10.1080/01587919.2024.2303488>
- Li, S., Zheng, J., Lajoie, S.P., Li, H., Pu, D., & Wu, H. (2023). The relationship between self-regulated learning competency and clinical reasoning tendency in medical students. *Medical Science Educator*, 33, 1335-1345. <https://doi.org/10.1007/s40670-023-01909-6>
- Wang, T., Li, S., Tan, C., Zhang, J., & Lajoie, S.P. (2023). Cognitive load patterns affect temporal dynamics of self-regulated learning behaviors, metacognitive judgments, and learning achievements. *Computers and Education*.  
<https://doi.org/10.1016/j.compedu.2023.104924>
- Zheng, J., Lajoie, S. P., Wang, T., & Li, S. (2023). Supporting self-regulated learning in clinical problem-solving with a computer-based learning environment: The effectiveness of scaffolds. *Metacognition and Learning*. <https://doi.org/10.1007/s11409-023-09352-z>
- Ding, G., Shi, X., & Li, S. (2023). Integrating programming errors into knowledge graphs for automated assignment of programming tasks. *Education and Information Technologies*.  
<https://doi.org/10.1007/s10639-023-12026-7>
- Huang, X., Li, S., Wang, T., Pan, Z., & Lajoie, S.P. (2023). Exploring the co-occurrence of students' learning behaviors and reasoning processes in an intelligent tutoring system: An epistemic network analysis. *Journal of Computer Assisted Learning*, 1-13.  
<https://doi.org/10.1111/jcal.12827>
- Wang, T., Li, S., Huang, X., & Lajoie, S.P. (2023). Task complexity affects temporal characteristics of self-regulated learning behaviors in an intelligent tutoring system.

*Educational Technology Research and Development*. <https://doi.org/10.1007/s11423-023-10222-3>

- Li, S.**, Duffy, M. C., Lajoie, S.P., Zheng, J., & Lachapelle, K. (2023). Using eye tracking to examine expert-novice differences during simulated surgical training: A case study. *Computers in Human Behavior*, 144, 107720. <https://doi.org/10.1016/j.chb.2023.107720>
- Zheng, J., Lajoie, S. P. & **Li, S.** (2023). Emotions in self-regulated learning: A critical literature review and meta-analysis. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2023.1137010>
- Wang, T., **Li, S.**, & Lajoie, S.P. (2023). The interplay between cognitive load and self-regulated learning in a technology-rich learning environment. *Journal of Educational Technology & Society*, 26 (2), 50-62.
- Zheng, J., Lajoie, S. P., **Li, S.**, & Wu, H. (2022). Temporal change of emotions: Identifying academic emotion trajectories and profiles in problem-solving. *Metacognition and Learning*. <https://doi.org/10.1007/s11409-022-09330-x>
- Wang, T., **Li, S.**, Huang, X., Pan, Z., & Lajoie, S. P. (2022). Examining students' cognitive load in the context of self-regulated learning with an intelligent tutoring system. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-022-11357-1>
- Li, S.**, Huang, X., Wang, T., Pan, Z., & Lajoie, S. P. (2022). Examining the interplay between self-regulated learning activities and types of knowledge within a computer-simulated environment. *Journal of Learning Analytics*. 9(3), 152-168. <https://doi.org/10.18608/jla.2022.7571>
- Li, S.**, Zheng, J., Huang, X., & Xie, C. (2022). Self-regulated learning as a complex dynamical system: Examining students' STEM learning in a simulation environment. *Learning and Individual Differences*, 95, 102144. <https://doi.org/10.1016/j.lindif.2022.102144>
- Li, S.**, Zheng, J., & Lajoie, S. P. (2022). Temporal structures and sequential patterns of self-regulated learning behaviors in problem solving with an intelligent tutoring system. *Journal of Educational Technology & Society*, 25 (4), 1-14. <https://www.jstor.org/stable/48695977>
- Li, S.**, Zheng, J., & Chiang, F. (2022). Examining the effects of digital devices on students' learning performance and motivation in an enhanced one-to-one environment: A longitudinal perspective. *Technology, Pedagogy and Education*, 31 (1), 1-13. <https://doi.org/10.1080/1475939X.2021.1942185>
- Li, S.**, & Lajoie, S. P. (2022). Cognitive engagement in self-regulated learning: An integrative model. *European Journal of Psychology of Education*, 37, 833-852. <https://doi.org/10.1007/s10212-021-00565-x>
- Zheng, J., **Li, S.**, & Lajoie, S. P. (2022). Diagnosing virtual patients in a technology-rich learning environment: A sequential mining of students' efficiency and behavioral

- patterns. *Education and Information Technologies*. 27, 4259-4275.  
<https://doi.org/10.1007/s10639-021-10772-0>
- Li, S., Lajoie, S.P., Zheng, J., Wu, H., & Cheng, H.** (2021). Automated detection of cognitive engagement to inform the art of staying engaged in problem-solving. *Computers and Education*. 163, 104114. <https://doi.org/10.1016/j.compedu.2020.104114>
- Li, S., Zheng, J., & Lajoie, S. P.** (2021). The frequency of emotions and emotion variability in self-regulated learning: What matters to task performance? *Frontline Learning Research*. 9 (4), 76-91. <https://doi.org/10.14786/flr.v9i4.901>
- Li, S., Zheng, J., Lajoie, S. P. & Wiseman, J.** (2021). Examining the relationship between emotion variability, self-regulated learning, and task performance in an intelligent tutoring system. *Educational Technology Research and Development*. 69 (2), 673-692. <https://doi.org/10.1007/s11423-021-09980-9>
- Lajoie, S.P., **Li, S.**, & Zheng, J. (2021). The functional roles of metacognitive judgement and emotion in predicting clinical reasoning performance with a computer simulated environment. *Interactive Learning Environments*. 1-12.  
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- Li, S.** (2021). Measuring cognitive engagement: An overview of measurement instruments and techniques. *International Journal of Psychology and Educational Studies*, 8 (3), 63-76. <https://doi.org/10.52380/ijpes.2021.8.3.239>
- Zheng, J., Huang, L., **Li, S.**, Lajoie, S., Chen Y., Hmelo-Silver, C. (2021). Self-regulation and emotion matter: A case study of instructor interactions with a learning analytics dashboard. *Computers and Education*. 161, 104061.  
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- Huang, L., **Li, S.**, Poitras, E. G., & Lajoie, S. P. (2021). Latent profiles of self-regulated learning and their impacts on teachers' technology integration. *British Journal of Educational Technology*. 52 (2), 695-713. <https://doi.org/10.1111/bjet.13050>
- Li, S., Du, H., Xing, W., Zheng, J., Chen, G., & Xie, C.** (2020). Examining temporal dynamics of self-regulated learning behaviors in STEM learning: A network approach. *Computers and Education*. 158, 103987.  
<https://doi.org/10.1016/j.compedu.2020.103987>
- Li, S., Chen, G., Xing, W., Zheng, J., & Xie, C.** (2020). Longitudinal clustering of students' self-regulated learning behaviors in engineering design. *Computers and Education*, 153, 103899. <https://doi.org/10.1016/j.compedu.2020.103899>
- Li, S., Zheng, J., & Lajoie, S. P.** (2020). The relationship between cognitive engagement and students' performance in a simulation-based training environment: An information-processing perspective. *Interactive Learning Environments*. 1-14.  
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- Zheng, J., Xing, W., Huang, X., Li, S., Chen, G., & Xie, C. (2020). The role of self-regulated learning on science and design knowledge gains in engineering projects. *Interactive Learning Environments*, 1-13. <https://doi.org/10.1080/10494820.2020.1761837>
- Zheng, J., & Li, S. (2020). What drives students' intention to use tablet computers: An extended technology acceptance model. *International Journal of Educational Research*, 102, 101612. <https://doi.org/10.1016/j.ijer.2020.101612>
- Wu, H., Pei, L., Li, S., & Jiang, C. (2020). Medical career expectation of academically talented high school students: A nationwide cross-sectional study in China. *BMC Medical Education*, 20, 1-8. <https://doi.org/10.1186/s12909-020-02083-8>
- Li, S., Zheng, J. & Lajoie, S. P. (2020). Efficient clinical reasoning: Knowing when to start and when to stop. *Education in The Health Professions*. 3 (1), 1-7. [https://doi.org/10.4103/EHP.EHP\\_1\\_20](https://doi.org/10.4103/EHP.EHP_1_20)
- Wu, H., Li, S.\*, Zheng, J., & Guo, J. (2020). Medical students' motivation and academic performance: The mediating roles of self-efficacy and learning engagement. *Medical Education Online*, 25 (1), 1-9. <https://doi.org/10.1080/10872981.2020.1742964>
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- Poitras, E. G., Li, S., Udy, L., Huang, L., Lajoie, S. P. (2019). Preservice teacher disengagement with computer-based learning environments. *Research on Education and Media*, 42-49. <https://doi.org/10.2478/rem-2019-0007>
- Li, S. & Zheng, J. (2018). A latent profile analysis of students' motivation of engaging in one-to-one computing environment for English learning. *EAI Endorsed Transactions on e-Learning*, 5 (17), 1-9. <http://dx.doi.org/10.4108/eai.25-9-2018.155574>
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- Zheng, J., Li, S., & Zheng, Y. (2017). Students' technology acceptance, motivation and self-efficacy towards the eSchoolbag: An exploratory study. *International Journal for Infonomics*, 10 (3), 1350-1358.
- Poitras, E., Doleck, T., Huang, L., Li, S., & Lajoie, S. (2017). Advancing teacher technology education using open-ended learning environments as research and training platforms. *Australasian Journal of Educational Technology*, 33 (3), 32-45. <https://doi.org/10.14742/ajet.3498>
- Li, S. & Huang, E. (2012). The present situation of the school-based curriculum in a senior high school: A case study. *Basic Education Research*, 12, 20–22.

### **Conference Proceedings – Refereed**

- Zheng, J., & Li, S. (2025). How achievement goals are associated with metacognition in computer-simulated engineering design. In *2025 IEEE International Conference on Advanced Learning Technologies (ICALT)* (pp. 343-345). IEEE. <https://doi.org/10.1109/ICALT64023.2025.00105>
- Arrington, C., Baumer, E., Jackson, K., Jia, H., Jung, J., Li, S., & Stoltz, D. (2025). Engaging communities in developing technologies to support community flourishing: A workshop report. In Yang, Z., von Briesen, E. (Eds). *Proceedings of the 2024 International Conference of The Computational Social Science Society of the Americas* (pp.139-152). Springer, Cham, Switzerland. [https://doi.org/10.1007/978-3-031-89692-7\\_9](https://doi.org/10.1007/978-3-031-89692-7_9)
- Huang, X., Li, S., Wang, T., & Lajoie, S.P. (2025). The effects of emotion regulation and students' perceived challenges on emotion synchrony in collaborative learning. In Rajala, A., Cortez, A., Hofmann, R., Jornet, A., Lotz-Sisitka, H., & Markauskaite, L. (Eds.), *Proceedings of the 19th International Conference of the Learning Sciences - ICLS 2025* (pp. 21-28). International Society of the Learning Sciences.
- Li, S., Ding, G., & Zheng, J. (2024). Examining college students' psychological dynamics in ChatGPT assisted programming. In Lindgren, R., Asino, T. I., Kyza, E. A., Looi, C. K., Keifert, D. T., & Suárez, E. (Eds.), *Proceedings of the 18th International Conference of the Learning Sciences - ICLS 2024* (pp. 963-966). International Society of the Learning Sciences. <https://doi.org/10.22318/icls2024.805941>

- Zheng, J., Liu, S., Zhu, G., **Li, S.**, Jiang, R., & Xie, C. (2024). Integrating socio-scientific reasoning into STEM project-based learning. In Lindgren, R., Asino, T. I., Kyza, E. A., Looi, C. K., Keifert, D. T., & Suárez, E. (Eds.), *Proceedings of the 18th International Conference of the Learning Sciences - ICLS 2024* (pp. 1187-1190). International Society of the Learning Sciences. <https://doi.org/10.22318/icls2024.914047>
- Zhu, G., Zhong, T., Du, H., Zheng, J., Huang, X., **Li, S.**, & Hou, C. (2024). Are your top social annotation friends also your offline group members?. In Clarke-Midura, J., Kollar, I., Gu, X., & D'Angelo, C. (Eds.), *Proceedings of the 17th International Conference on Computer-Supported Collaborative Learning - CSCCL 2024* (pp. 381-382). International Society of the Learning Sciences. <https://doi.org/10.22318/csccl2024.258566>
- Song, Y., Li, C., Xing, W., **Li, S.**, & Lee, H. H. (2024). A fair clustering approach to self-regulated learning behaviors in a virtual learning environment. In *The 14th Learning Analytics and Knowledge Conference (LAK '24)*, Association for Computing Machinery, New York, NY, USA, 771-778. <https://doi.org/10.1145/3636555.3636863>
- Hou, C., Zhu, G., Zheng, J., Zhang, L., Huang, X., Zhong, T., **Li, S.**, Du, H., & Ker, C. L. (2024). Prompt-based and fine-tuned GPT models for context-dependent and -independent deductive coding in social annotation. In *The 14th Learning Analytics and Knowledge Conference (LAK '24)*, Association for Computing Machinery, New York, NY, USA, 518–528. <https://doi.org/10.1145/3636555.3636910>
- Li, S.**, Zheng, J., Huang, X., Wang, T., & Lajoie, S. P. (2023). Detection of goal setting and planning in self-regulated learning using machine learning and think-aloud protocols. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 982-985). International Society of the Learning Sciences. <https://doi.org/10.22318/icls2023.101292>
- Zheng, J., Jiang, R., **Li, S.**, Zhu, J., & Xie, C. (2023). The effects of AI feedback on students' epistemic emotion and performance in engineering design: An exploratory study. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences – ICLS 2023* (pp. 1885-1886). International Society of the Learning Sciences. <https://doi.org/10.22318/icls2023.151549>
- Zheng, J., **Li, S.**, Huang, X., Wang, T., & Lajoie, S. P. (2023). Do thinking styles change with task complexity in problem-solving?. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences – ICLS 2023* (pp. 1887-1888). International Society of the Learning Sciences. <https://doi.org/10.22318/icls2023.644897>
- Wu, H.B., Zheng, J., & **Li, S.** (2019). Does academic interest have more effects on medical students? A nationwide cross-sectional study in China. In *Proceedings of the 10<sup>th</sup> Asian Medical Education Association (AMEA) Symposium*. Kuala Lumpur, Malaysia.

- Lajoie, S. P., Zheng, J., Li, S., Jarrell, A., & Gube, M. (2017). Examining the temporal nature of affect and self-regulation in the context of clinical reasoning. In *Proceedings of the 17th Biennial conference of the European Association for Research on Learning and Instruction (EARLI)*. Tampere, Finland.
- Zheng, J., Li, S., & Zheng, Y. (2017). The influence of academic performance on students' perceptions of the e-Schoolbag. In *Proceedings of the Canada International Conference on Education (CICE)* (pp. 310–313).
- Li, S., & Zheng, J. (2015). Knowledge Recommender: an application based on the Social Knowledge Network for knowledge recommendation. In *Proceedings of the 15th IEEE International Conference on Advanced Learning Technologies (ICALT)* (pp. 403–404).
- Li, S., Zheng, Y., & Chiang, F.-K. (2015). How to assess and stimulate teachers from China's poor districts in their online professional development. In *Proceedings of the 23rd International Conference on Computers in Education (ICCE)* (pp. 691–696).

### Working Papers

- Li, S., Ganss, E., Gomez, C., Lazarchak, A., Moriarty, C., & McIntire, R. (Under review). Stability of health behaviors and their relationships among vocational high school students. *Health Education & Behavior*.
- Li, S. (Accepted). Preparing health education specialists for a digital future: Observations on the updated HESPA III competency framework. *Pedagogy in Health Promotion*.
- Li, S. (Submitted). A metacognitive theory of health behavior change. *Health Psychology Review*.
- Li, S., & Zheng, J. (Submitted). Why motivation interventions fail: Toward motivational apprenticeship. *Theory and Research in Education*.
- Li, S. (Under review). The emerging mental health burden of generative AI: A public mental health viewpoint. *Journal of Public Mental Health*.
- Li, S. (Under review). Pedagogical AI agents for global health education: Opportunities and challenges. *Pedagogy in Health Promotion*.
- Li, S. (Under review). A critical analysis of psychological mechanisms that compete with health goals. *Journal of Health Psychology*.
- Li, S., Ganss, E., Gomez, C., Lazarchak, A., Moriarty, C., & McIntire, R. (Under review). Mental health determinants among vocational-technical students: The critical roles of sleep and gender. *Health Promotion Practice*.
- Wang, H., & Li, S. (Under review). Teachers' genuine and faked daily displays of happiness and enthusiasm and their associations with daily perceived student engagement: A dynamic network perspective. *Contemporary Educational Psychology*.

- Zhong, T., Zhu, G., Du, H., Huang, X., Zheng, J., Li, S., & Hou, C. (Under review). Exploring online subcommunities and their engagement in a social annotation network. *Journal of Computing in Higher Education*.
- Zheng, J., Zhu, J., Li, S., Jiang, R., & Xie, C. (Revisions resubmitted). Beyond technical skill: How engineering design and technology self-efficacy influences student acceptance of AI-generated feedback. *European Journal of Education*.
- Li, S., & Zheng, J. (Under review). A scoping review of large language model-based pedagogical agents. *Educational Research Review*.
- Li, S., & Ding, G. (Under review). A theory-driven and AI-enhanced simulation platform for cultivating nutrition literacy. *Health Education & Behavior*.
- Ding, G., Feng, X., Li, S., & He, Y. (Under review). Structural properties and social gravity in human collective cognitive networks. *Cognitive Systems Research*.
- Liu, X., Wang, T., Liu, Z., Li, S., & Ding, G. (Submitted). Leveraging artificial intelligence to foster teacher training: The design and evaluation of a teacher-student conflict intelligent training system. *British Journal of Educational Technology*.
- Ding, G., Zhang, W., & Li, S. (Revisions resubmitted). Evaluating different ChatGPT scaffolding approaches in programming education: Analysis of student behaviors, attitudes, and performance. *British Journal of Educational Technology*.
- Ding, G., Ou, Y., & Li, S. (Revisions resubmitted). ChatGPT-generated feedback versus teacher feedback in pre-service teachers' instructional design development: A quasi-experimental study. *Teaching and Teacher Education*.
- Ding, G., Ju, S., Liu, Y., Pian, Y., & Li, S. (Under review). Enhancing student performance assessment through group-based ability intervals: A novel cognitive diagnosis approach. *Assessment in Education: Principles, Policy & Practice*.
- Song, Y., Li, C., Xing, W., Li, S., Lee, H. H., Tan, Y., Shaffer, D. W., Ma, Y. (Revisions resubmitted). Using fair AI to uncover the behavioral patterns of self-regulated learning in a virtual learning environment. *Educational Technology & Society*.
- Zheng, J., Liu, S., Li, S., & Xie, C. (Revisions resubmitted). Unraveling the connections: Prior knowledge, confidence, and their effects on STEM performance and self-regulated learning patterns. *Journal of Research in Science Teaching*.

### Honors and Awards

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| <b>2025</b>      | <b>TICL Outstanding Early Career Research Award</b><br><i>American Educational Research Association (AERA) – Technology, Instruction, Cognition &amp; Learning (TICL) SIG</i> |
| <b>2023-2024</b> | <b>Senior CITL Faculty Fellowship/Course Development Grant</b><br><i>Center for Innovation in Teaching and Learning, Lehigh University</i><br><i>Amount: \$1,000</i>          |

2023/06- 2024/05	<b>The Ralph E. Powe Junior Faculty Enhancement Award</b> <i>Oak Ridge Associated Universities (ORAU)</i> <i>Amount: \$1,0000</i>
2022/04	<b>Graduate Research Enhancement and Travel (GREAT) Award</b> <i>Department of Educational and Counselling Psychology, McGill University</i>
2021-2022	<b>Dr. Gauri Shankar Guha Award in International Development Education</b> <i>Faculty of Education, McGill University</i>
2021/09	<b>Outstanding Doctoral Research Award</b> <i>China Scholarship Council</i>
2021/04	<b>Graduate Research Enhancement and Travel (GREAT) Award</b> <i>Department of Educational and Counselling Psychology, McGill University</i>
2019-2020	<b>Herschel and Christine Victor Fellowship in Education</b> <i>Faculty of Education, McGill University</i>
2019/02	<b>Graduate Student Travel Award in Education</b> <i>Faculty of Education, McGill University</i>
2018/12	<b>Graduate Research Enhancement and Travel (GREAT) Award</b> <i>Department of Educational and Counselling Psychology, McGill University</i>
2018-2019	<b>Differential Fee Waivers Award to Doctoral International Students</b> <i>McGill University</i>
2018/04	<b>Graduate Research Enhancement and Travel (GREAT) Award</b> <i>Department of Educational and Counselling Psychology, McGill University</i>
2018/01	<b>LEADS Student Travel Award</b> <i>LEADS research partnership, McGill University</i>
2017-2018	<b>Graduate Excellence Fellowship</b> <i>McGill University</i>
2015	<b>National MOOC Design Competition Rewards of China</b> <i>C20 MOOC Alliance of China</i>
2013	<b>Academic Excellence Scholarship</b> <i>Beijing Normal University</i>
2011-2014	<b>Graduate Excellence Fellowship</b> <i>Beijing Normal University</i>
2011	<b>Outstanding Graduate Scholarship</b> <i>Shandong Normal University</i>

**2008-2011 Academic Excellence Fellowship**  
*Shandong Normal University*

### **Research Funding**

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Collaborating Principal Investigator: 09/2025-08/2028

Agency: National Science Foundation (NSF), RITEL program

Title: Collaborative Research: Multimodal Immersive Training to Develop Expertise in Spatial-Temporal Reasoning for Fire Investigations

Collaborate proposal with University of Maryland, University of Tennessee

Lead PI: Shuna Ni, University of Maryland

Lehigh University's Amount: \$189,881

Total Award Amount: \$900,000

Co-Principal Investigator: 2023-2024

Agency: National Science Foundation (NSF)

Title: Conference: CRISES: Engaging Communities in Developing Technologies to Support Community Flourishing

Principal Investigator: Catherine M Arrington, Co-PIs: Kathryn Jackson, Haiyan Jia, Dustin S Stoltz, Eric Baumer (other senior personnel)

Amount: \$65,589

Principal Investigator: 2022-2024

Agency: Faculty Research Grant (FRG) – Lehigh University

Title: Designing a computer simulated environment to promote nutrition health literacy

Amount: \$6,000

Recipient of Postdoctoral Research Fellowship: 2022-2024 (Funded but did not accept)

Agency: Fonds de recherche du Québec - Société et culture (FRQSC)

Title: Toward the acquisition of expert practice and performance in STEM learning: A cognitive and emotional apprenticeship approach

Amount: \$90,000

Recipient of Doctoral Research Fellowship: 2018-2022

Agency: Fonds de recherche du Québec - Société et culture (FRQSC)

Title: Enhancing performance through self-regulated learning: How can we help students succeed in STEM (science, technology, engineering, mathematics) education?

Amount: \$84,000

### **Current and Pending Support**

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Collaborating Principal Investigator: 09/2025-08/2028

Agency: National Science Foundation (NSF), RITEL program

Title: Collaborative Research: Multimodal Immersive Training to Develop Expertise in Spatial-Temporal Reasoning for Fire Investigations

Collaborate proposal with University of Maryland, University of Tennessee

Lead PI: Shuna Ni, University of Maryland

Lehigh University's Amount: \$189,881

Total Award Amount: \$900,000

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### Editorial Review Board Membership for Scholarly Publications

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#### Editorial Board Member

Journal of Computer Assisted Learning Nov 2022 - present

#### Ad Hoc Journal Reviewer

Education and Information Technology 03/2023 - present

Metacognition and Learning 12/2022 - present

Journal of Educational Technology & Society 12/2022 - present

Frontiers in Psychology 12/2022 - 12/2022

Educational Research Review 10/2022 - present

Educational Measurement: Issues and Practice 10/2022 - 10/2022

Knowledge Management & E-Learning 09/2022 - 09/2022

British Journal of Educational Technology 07/2022 - present

Journal of Computer Assisted Learning 04/2022 - present

BMC Medical Education 03/2022 - 04/2022

Interactive Learning Environments 03/2022 - 04/2022

Journal of Science Education and Technology 02/2022 - 02/2022

Computers and Education 06/2021 - present

Learning and Individual Differences 03/2021 - 03/2021

International Journal of Artificial Intelligence in Education 06/2020 - 08/2022

Medical Education Online 07/2020 - 07/2020

Medical Education 05/2020 - 05/2020

Technology, Knowledge, and Learning (TKNL) 02/2019 - 12/2019

Journal of Technology and Teacher Education (JTATE) 01/2019 - 02/2019

The Asia-Pacific Education Researcher (TAPE) 09/2018 - 04/2021

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### Conference Presentation

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Huang, X., Borchers, C., Gao, J., & Li, S. (2026, June). *Modeling learner-AI interaction in self-regulated learning: Behavioral and semantic analyses*. Paper submitted to 27th International Conference on Artificial Intelligence in Education, Seoul, South Korea.

Du, H., Cheong, J., Zhu, G., Huang, X., Li, S., Zheng, J., Tan, J., Zhong, T., Hou, C., & Liu, T. (2026, June). *What draws upvotes? Examining relationships among interpersonal*

*skills, social annotation behaviors, and annotation topics in online settings.* Paper submitted to the ISLS 2026 Annual meeting, Irvine, California.

Gao, J., Li, S., Zhang, J., **Li, S.**, & Wang, T. (2026, April). *Investigating self-regulated learning sequences within a generative AI-based intelligent tutoring system.* Paper to be presented at the 16<sup>th</sup> International Learning Analytics & Knowledge Conference, Bergen, Norway.

**Li, S.**, Zheng, J., & Ding, G. (2026, April). *The impact of learner characteristics and AI utilization on learning experiences in a smart nutrition education platform.* Paper to be presented at the 2026 American Educational Research Association Annual Conference, Los Angeles, USA.

Zheng, J., Liu, S., **Li, S.**, & Xie, C. (2026, April). *Prior knowledge, confidence, and their effects on STEM performance and self-regulated learning patterns.* Poster to be presented at the 2026 American Educational Research Association Annual Conference, Los Angeles, USA. (Best poster award by Studying and Self-Regulated Learning SIG).

Du, H., Cheong, J., Zhu, G., Huang, X., Zheng, J., Zhong, T., Hou, C., & **Li, S.** (2026, April). *What draws the upvotes? Examining relationships among performance, interpersonal skills, and learning behaviors in online social annotation environments.* Poster to be presented at the 2026 American Educational Research Association Annual Conference, Los Angeles, USA.

Zheng, J., & **Li, S.** (2025, July). *How achievement goals are associated with metacognition in computer-simulated engineering design.* Paper presented at the 25th IEEE International Conference on Advanced Learning Technologies (ICALT), Taiwan.

Huang, X., **Li, S.**, Wang, T., & Lajoie, S.P. (2025, June). *The effects of emotion regulation and students' perceived challenges on emotion synchrony in collaborative learning.* Paper presented at the 19<sup>th</sup> International Conference of the Learning Sciences (ICLS), Helsinki, Finland.

**Li, S.**, Zheng, J., & Lajoie, S. P. (2025, April). *Analyzing multimodal data about student engagement: The added value of a complex dynamic systems approach.* Paper presented at the 2025 American Educational Research Association Annual Conference, Denver, USA.

Zheng, J., Liu, S., **Li, S.**, & Xie, C. (2025, April). *Exploring the integration of generative design in STEM classrooms: Student perceptions and learning experience.* Poster presented at the 2025 American Educational Research Association Annual Conference, Denver, USA.

Wang, H., & **Li, S.** (2025, April). *Exploring the interplay between teachers' daily emotional labor and daily perceived student engagement through network analysis.* Paper presented at the 2025 American Educational Research Association Annual Conference, Denver, USA.

- Li, S., Wu, H., & Ding, G. (2025, April). *Predicting student programming performance based on LLM feature enhancement and heterogeneous graph neural networks*. Paper presented at the 2025 American Educational Research Association Annual Conference, Denver, USA.
- Li, S., Zheng, J., & Lajoie, S. P. (2024, August). *Multimodal data about student engagement: The added value of a complex dynamic systems approach*. Poster presented at the American Psychological Association (APA) 2024 conference, Seattle, WA, USA.
- Li, S., Ding, G., & Zheng, J. (2024, June). *Examining college students' psychological dynamics in ChatGPT assisted programming*. Paper presented at the International Society of the Learning Sciences Annual Meeting 2024, Buffalo, NY, USA.
- Zhu, G., Zhong, T., Du, H., Zheng, J., Huang, X., Li, S., & Hou, C. (2024, June). *Homophily in hybrid learning: Are your top social annotation friends also your offline group members?* Poster presented at the International Society of the Learning Sciences Annual Meeting 2024, Buffalo, NY, USA.
- Zheng, J., Liu, S., Zhu, G., Li, S., Jiang, R., & Xie, C. (2024, June). *Integrating social-scientific reasoning into STEM project-based learning*. Paper presented at the International Society of the Learning Sciences Annual Meeting 2024, Buffalo, NY, USA.
- Li, S., Huang, X., Zhu, G., Du, H., Zhong, T., Chen, Y., & Zheng, J. (2024, April). *Behavioral patterns in social annotation and their effects on learning performance*. Poster presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA
- Zheng, J., Zhu, J., Li, S., Jiang, R., & Xie, C. (2024, April). *Exploring student acceptance of artificial intelligence in engineering design*. Paper presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA
- Zheng, J., Pan, Z., Li, S., & Xie, C. (2024, April). *Modeling temporal self-regulatory processing in STEM learning of engineering design*. Paper presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA
- Song, Y., Li, C., Xing, W., Lee, H., Li, S., & Ma, Y. (2024, April). *Fairness-aware behavioral clustering for self-regulated learning in virtual learning environments*. Poster presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA
- Wang, T., Zheng, J., Li, S., Zhang, Y., & Lajoie, S. P. (2024, April). *Using multimodal data to assess students' cognitive load and task performance in technology-rich environments*. Poster presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA
- Huang, X., Zheng, J., Li, S., & Lajoie, S. P. (2024, April). *Investigating the effect of emotional tone on learners' engagement and peer acknowledgement in social*

*annotation*. Paper presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA

Zhong, T., Zhu, G., Du, H., Huang, X., Zheng, J., **Li, S.**, & Hou, C. (2024, April).

*Overlapping between offline and online group membership in a social annotation network*. Paper presented at the 2024 American Educational Research Association Annual Conference, Philadelphia, USA

Hou, C., Zhu, G., Zheng, J., Zhang, L., Huang, X., Zhong, T., **Li, S.**, Du, H., & Ker, C. L.

(2024, March). *Prompt-based and fine-tuned GPT models for context-dependent and -independent deductive coding in social annotation*. Paper presented at the 2024 Learning Analytics and Knowledge Conference (LAK24), Kyoto, Japan.

Song, Y., Li, C., Xing, W., **Li, S.**, & Lee, H. H. (2024, March). *A fair clustering approach to self-regulated learning behaviors in a virtual learning environment*. Paper presented at the 2024 Learning Analytics and Knowledge Conference (LAK24), Kyoto, Japan

**Li, S.**, Zheng, J., Lajoie, S. P., & Wu, H. (2023, April). *The role of self-regulated learning competency in clinical reasoning with a computer-simulated environment*. Poster presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA

Huang, X., **Li, S.**, & Lajoie, S. P., & Wu, H. (2023, June). *The relative importance of cognitive and behavioral engagement to task performance in self-regulated learning with an intelligent tutoring system*. Paper presented at the 19<sup>th</sup> International Conference on Intelligent Tutoring Systems, Corfu, Greece.

**Li, S.**, Zheng, J., Huang, X., Wang, T., & Lajoie, S. P. (2023, June). *Detection of goal setting and planning in self-regulated learning using machine learning and think-aloud protocols*. Paper presented at the International Society of the Learning Sciences Annual Meeting 2023, Montreal, Canada

Zheng, J., Jiang, R., **Li, S.**, Zhu, J., & Xie, C. (2023, June). *The effects of AI feedback on students' epistemic emotion and performance in engineering design: An exploratory study*. Poster presented at the International Society of the Learning Sciences Annual Meeting 2023, Montreal, Canada

Zheng, J., **Li, S.**, Huang, X., Wang, T., & Lajoie, S. P. (2023, June). *Do thinking styles change with task complexity in problem-solving?*. Poster presented at the International Society of the Learning Sciences Annual Meeting 2023, Montreal, Canada

Huang, X., Li, S., Wang, T., & Lajoie, S. P. (2023, August). *Learners' presence patterns and their relationship with peer feedback in digital social reading*. Paper presented at the 20<sup>th</sup> Biennial European Association for Research on Learning and Instruction (EARLI) Conference. Thessaloniki, Greece.

Lajoie, S. P., Wang, T., Ruiz-Segura, A., **Li, S.**, & Zheng, J. (2023, April). *Exploring the role of cognitive load and self-regulated learning in the context of diagnostic*

*reasoning*. Invited symposium paper presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA

**Li, S., Zheng, J., Lajoie, S. P., & Wu, H.** (2023, April). *The role of self-regulated learning competency in clinical reasoning with a computer-simulated environment*. Poster presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA

Huang, X., Wang, T., **Li, S.**, Ruiz-Segura, A., Tan, C., & Lajoie, S.P. (2023, April). *Emotion synchrony in collaborative learning: The effects of emotion regulation and students' perceived challenges*. Paper presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA

Wang, T., Ruiz-Segura, A., Li, S., Huang, X., Tan, C., & Lajoie, S. P. (2023, April). *Temporal characteristics of self-regulated learning behaviors influence students' problem-solving efficiency in a technology-rich learning environment*. Paper presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA

Zheng, J., Lajoie, S.P., Wang, T., & Li, S. (2023, April). *Examining the effectiveness of computer-based scaffolds in clinical problem-solving*. Paper presented at the 2023 American Educational Research Association Annual Conference, Chicago, USA.

**Li, S., Zheng, J. & Lajoie, S. P.** (2022, April). *The temporal structures and sequential patterns of self-regulated learning behaviors in clinical reasoning*. [Poster session]. Annual Meeting of the American Educational Research Association Conference, San Diego, California, US. (Best poster award by Studying and Self-Regulated Learning SIG).

Zheng, J., **Li, S.**, & Lajoie, S. P. (2022, April). *Using recurrence quantification analysis to understand emotion dynamics in self-regulated learning*. Paper presented at the 2022 American Educational Research Association Annual Conference. San Diego, California, USA.

Zheng, J., **Li, S.**, Lajoie, S. P., & Wu, H. (2022, April). *Identifying academic emotion trajectories in problem-solving*. Paper presented at the 2022 American Educational Research Association Annual Conference. San Diego, California, USA.

Huang, X., **Li, S.**, Wang, T., Pan, Z., & Lajoie, S. P. (2022, April). *Using epistemic network to explore the co-occurrence of self-regulated learning strategies and medical reasoning processes*. Paper presented at the 2022 American Educational Research Association Annual Conference. San Diego, California, USA.

Wang, T., **Li, S.**, Ruiz-Segura, A., Tan, C., Huang, X., & Lajoie, S. P. (2022, April). *How task complexity affects medical students' self-regulated learning: a process analysis*. Paper presented at the 2022 American Educational Research Association Annual Conference. San Diego, California, USA.

- Lajoie, S. P., Li, S., Zheng, J. & Ruiz-Segura, A. (2021, August). *Uses and applications of AI to investigate emotions and self-regulated learning in medicine*. Paper presented at the 19th Biennial conference of the European Association for Research on Learning and Instruction (EARLI). Gothenburg, Sweden.
- Li, S., Lajoie, S. P., Zheng, J., Wu, H. B., & Cheng, H. Q. (2021, April). *Automated detection of cognitive engagement to inform the art of staying engaged in problem-solving*. Paper presented at the 2021 American Educational Research Association Annual Conference. Orlando, Florida, USA.
- Zheng, J., Li, S., & Lajoie, S. P. (2020, April). *Emotion or emotion variability: What matters to students' performance in clinical reasoning*. [Poster session]. Annual Meeting of the American Educational Research Association Conference, San Francisco, CA. (Best poster award by Studying and Self-Regulated Learning SIG). <http://tinyurl.com/r36sjob> (Conference Canceled).
- Li, S., Zheng, J. & Lajoie, S. P. (2020, April). *Efficient clinical reasoning: Knowing when to start and when to stop*. [Paper Session]. Annual Meeting of the American Educational Research Association Annual Conference. San Francisco, USA. <http://tinyurl.com/yx6zu98e> (Conference Canceled).
- Huang, L., Li, S., Poitras, E. G., Lajoie, S. P. (2020, April). *The role of self-regulated learning activities in preservice teachers' TPACK development*. [Poster session] Annual Meeting of the American Educational Research Association. San Francisco, CA. <http://tinyurl.com/rkvjn9l> (Conference Canceled)
- Xing, W., Pei, B., Li, S., & Xie, C. (2020, April). *Student performance prediction in engineering design*. [Poster session] Annual Meeting of the American Educational Research Association. San Francisco, CA. <http://tinyurl.com/sfr82rb> (Conference Canceled)
- Lajoie, S. P., Li, S., Zheng, J., Li, T., Ruiz Segura, A., & Nynych, K. (2020, April). *Examining the influence of cognitive load in clinical reasoning and its relationship to self regulated learning*. [Symposium]. Annual Meeting of the American Educational Research Association, San Francisco, CA. <http://tinyurl.com/vwdouh3> (Conference Canceled).
- Lajoie, S. P., Li, S., Zheng, J., Li, T., Ruiz Segura, A., & Nynych, K. (2020, April). *The relative importance of self-regulated learning, emotions, and cognitive load in clinical reasoning*. [Symposium]. Annual Meeting of the American Educational Research Association, San Francisco, CA. <http://tinyurl.com/r7qwwm4> (Conference Canceled).
- Li, S., Zheng, J., & Lajoie, S. P. (2019, August). *The role of cognitive engagement on clinical reasoning performance*. Paper presented at the 18th Biennial conference of the European Association for Research on Learning and Instruction (EARLI). Aachen, Germany.
- Zheng, J., Li, S., Jarrell, A., & Lajoie, S. P. (2019, August). *Efficiency matters: Revealing clinical reasoning patterns using sequential mining techniques*. Paper presented at the

18th Biennial conference of the European Association for Research on Learning and Instruction (EARLI). Aachen, Germany.

- Li, S.,** Huang, L., Poitras, E., & Lajoie, S.P. (2019, April). *Examining the relationship between pre-service teachers' performance and cognitive engagement in designing lesson plans*. Paper presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Beck, S., **Li, S.,** & Zheng, J. (2019, April). *Mediating effects of epistemological beliefs and value of collaboration on inquiry-based teaching and science achievement*. Paper presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Zheng, J., **Li, S.,** Lajoie, S.P. & Wiseman, J. (2019, April). *Profiling control and value appraisals to predict medical emotions*. Poster presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Poitras, E., Udy, L., Huang, L., **Li, S.,** & Lajoie, S.P. (2019, April). *Semi-supervised machine learning for domain modeling in network-based tutoring systems: Implications for fostering self-regulated learning*. Paper presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Li, S.,** Zheng, J., Lajoie, S.P. & Wiseman, J. (2019, April). *Students' performance and emotion entropy in the context of clinical reasoning*. Paper presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Lajoie, S.P., **Li, S.,** & Zheng, J. (2019, April). *The functional roles of cognition and emotion in predicting clinical reasoning performance*. Paper presented at the American Educational Research Association Annual Conference. Toronto, Canada.
- Li, S.,** Zheng, J., Poitras, E. & Lajoie, S. P. (2018, Jun). *The allocation of time matters to students' performance in clinical reasoning*. Paper presented at the 14<sup>th</sup> International Conference on Intelligent Tutoring Systems (A 30-Year Legacy of ITS Conferences), Montreal, Canada.
- Huang, L., **Li, S.,** Zheng, J. (2018, Jun). *A mediation model of teachers' age, TPACK and acceptance of online teacher professional development*. Poster presented at 29th International Congress of Applied Psychology, Montreal, Canada.
- Zheng, J., Jarrell, A., Lajoie, S.P. & **Li, S.** (2018, Jun). *What electrodermal activity features can tell us in an authentic learning context?* Poster presented at 29th International Congress of Applied Psychology, Montreal, Canada.
- Zheng, J., **Li, S.,** & Zheng, Y. (2018, May). *The role of technology in teaching and learning Chinese as a second language*. Paper presented at the First International Conference on Pattern Recognition and Artificial Intelligence. Montreal, Canada.

- Li, S., Duffy, M., Lajoie, S. P., & Lachapelle, K. (2018, April). *Eye tracking as a measure of expertise in surgical simulation*. Paper presented at the American Educational Research Association Annual Conference, New York City, NY.
- Zheng, J., Li, S., & Lajoie, S.P. (2018, April). *The effects of achievement goals and self-regulated learning behaviors on clinical reasoning in computer-based learning environments*. Paper presented at the American Educational Research Association Annual Conference. New York City, NY.
- Poitras, E., Doleck, T., Huang, L., Li, S. , & Lajoie, S. (2018, April). *Assessing the disengaged behaviors of student teachers with network-based tutors*. Symposium presented at the American Educational Research Association Annual Conference. New York City, NY.
- Poitras, E., Doleck, T., Huang, L., Li, S. , & Lajoie, S. (2018, April). *Modeling student teachers' self-regulated learning profiles with network-based tutors*. Paper presented at the American Educational Research Association Annual Conference. New York City, NY.
- Poitras, E., Huang, L., Li, S. , Doleck, T., & Lajoie, S. (2018, April). *Student teachers' information-seeking and acquisition behaviors in designing less plans with network-based tutors*. Paper presented at the American Educational Research Association Annual Conference. New York City, NY.
- Lajoie, S. P., Zheng, J., Li, S., Jarrell, A., Gube, M. (2017). *Examining the interplay of affect and self-regulation in the context of clinical reasoning*. Symposium presented at the 17th Biennial conference of the European Association for Research on Learning and Instruction (EARLI). Tampere, Finland.
- Li, S., Duffy, M., Lajoie, S. P., & Lachapelle, K. (2017, May). *Using eye tracking to model learners' attention distribution in a surgical simulation*. Poster presented at the 6th Learning Environments Across Disciplines (LEADS) Annual Conference, Montreal, QC
- Huang, L., Li, S., Poitras, E. G., Lajoie, S. P., Doleck, T., & Stovall, K. (2017). *Using the adaptive intelligent web browser to facilitate preservice teachers' technological pedagogical content knowledge (TPACK)*. Paper presented at the 6th Learning Environments Across Disciplines (LEADS) Annual Conference, Montreal, QC.
- Li, S., Zheng, J, & Huang, L.Y. (2017, March). *Examining teachers' engagement in teaching reflection*. Poster presented at the 16th McGill Education Graduate Student Society Conference, Montreal, QC
- Huang, L., Zheng, J., Li, S. (2017, March). *Predicting student teachers' TPACK development through their beliefs and attitudes*. Paper presented at the 16th McGill Education Graduate Student Society Conference, Montreal, QC
- Zheng, J., Li, S., Huang, L. (2017, March). *Exploring the influence of academic achievement on the self-regulated learning tendency of students towards using tablet computers*.

Paper presented at the 16th McGill Education Graduate Student Society Conference, Montreal, QC

- Li, S.,** Zheng, Y., Huang, L. (2017, March). *Predicting students' willingness in e-Schoolbag based learning*. Poster presented at the 2017 Graduate Symposium of Concordia University, Montreal, QC
- Huang, L., **Li, S.,** Zheng, J. (2017, March). *The Role of deliberate practice in expert performance of technology integration*. Poster presented at the 2017 Graduate Symposium of Concordia University, Montreal, QC
- Zheng, J., Huang, L., **Li, S.** (2017, March). *Self-regulated learning with video-tutor: Improving efficiency and performance of language learning*. Paper presented at the 2017 Graduate Symposium of Concordia University, Montreal, QC
- Zheng, J., **Li, S.,** & Zheng, Y. (2017, June). *The influence of academic performance on students' perceptions of the e-Schoolbag*. Paper presented at the Canada International Conference on Education (CICE-2017). Toronto, Canada.
- Li, S.,** & Zheng, J. (2016, July). *Gender differences among students' attitude toward STEM engineering learning: A case study, analysis, and relevant strategies*. Paper Presented at the 7th Global Chinese Conference on Inquiry Learning: Innovations and Applications (GCCIL2016), Shenzhen, China.
- Li, S.,** & Zheng, J. (2015, July). *Knowledge Recommender: an application based on the Social Knowledge Network for knowledge recommendation*. Paper presented at the 15th IEEE International Conference on Advanced Learning Technologies (ICALT), Taiwan.
- Li, S.,** Zheng, J., & Chiang, F.-K. (2015, December). *How to assess and stimulate teachers from China's poor districts in their online professional development*. Paper presented at the 23rd International Conference on Computers in Education (ICCE). Hangzhou, China.
- Li, S.** (2016, November). *The design of CA-expert: an intelligent tutor system based on cognitive apprenticeship*. Paper Presented at the annual conference of Learning Sciences, McGill University, Montreal, Quebec.

### **Invited Address**

- Li, S. (2023, April). *Artificial Intelligence in Education: A Perspective of Learning Sciences*. School of Smart Education, Jiangsu Normal University, China.
- Li, S. (2022, Feb). *Automated Measurement of Cognitive Engagement with Facial Recognition and Machine Learning Techniques*. Technology-Enabled Education & Self-Regulation Lab, University of Toronto, Canada.
- Li, S. (2018, December). *Advanced Learning Technologies to Promoting Scientific Research in the field of Educational Psychology*. The Third International Elites' Forum of Tianjin Normal University, China

Li, S. (2013, July). *The Design of an Intelligent Mobile Learning Platform based on Relationship Mining in Ubiquitous Learning Environments*. The 11th National Conference on Integrated Education. Hefei, China.

## **Teaching and Research Advising**

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### **Course Taught**

#### **Assistant Professor at Lehigh University**

POPH 318/418 Technologies for Health (Fall 2025)

TLT 472 Online Teaching and Learning (13 students - Spring 2025) - Online course

TLT 450 Introduction to Learning Analytics (8 students - Fall 2024) - Online course

EDUC 403 Educational Research (13 students – Summer 2024) – Online Asynchronous

POPH 396/496 Advanced Technology for Health (7 students - Spring 2024)

CGH 109 Introduction to Health Education (6 students - Fall 2023)

POPH 395/495 Advanced Technology for Health (5 students - Summer 2023) - Online course

TLT 472 Online Teaching and Learning (5 students - Spring 2023) - Online course

TLT 462 Introduction to Learning Analytics (7 students - Fall 2022) - Online course

#### **Lecturer at McGill University**

EDPE 602 Uses of Research Findings in Education (42 students; MEd; Fall 2020) - Online

#### **Teaching Assistant at McGill University**

EDPE 575 Statistics for Practitioners (140 students; graduate level; Winter 2020) - Online

EDPE 684 Applied Multivariate Statistics (16 students; graduate level; Fall 2019)

EDPE 375 Introductory Statistics (317 students; undergraduate level; Winter 2019) – Online

EDPE 666 Foundation of Learning Sciences (9 students; graduate level; Fall 2018)

#### **Lecturer at Beijing Normal University**

Database Systems (70 students; adult learners; Winter 2013)

#### **Teaching Assistant at Beijing Normal University**

Computer Basics (50 students; international students; Fall 2013)

Multimedia Technology and Design (110 students; undergraduate level; Winter 2012)

#### **Guest Speaker**

Eye-tracking in Educational Assessment, EDPE 666 at McGill University (Fall 2018)

### **Student Advising**

Academic advising to students in the College of Health:

6 students (Fall 2024-Spring 2025)

Academic advising to students in the College of Education:

9 students (Fall 2024-Spring 2025)

7 students (Fall 2023-Spring 2024)

3 students (Fall 2022-Spring 2023)

## **Doctoral Qualifying Exam**

Chair:

Lisa Kiel (Fall 2023), College of Education

Committee Member:

Yameng Cui (Dr. Thomas Hammond, Chair; Spring 2025), College of Education

Melissa Smith (Dr. Zilong Pan, Chair; Fall 2024), College of Education

Kaity Chemidlin (Dr. Brook Sawyer, Chair; Fall 2024), College of Education

Kara Uhrich (Dr. Brook Sawyer, Chair; Fall 2023), College of Education

Scott Burden (Dr. Brook Sawyer, Chair; Spring 2023), College of Education

## **Doctoral Qualifying Project**

Committee Member:

Julian Snow (Dr. Alec M. Bodzin, Chair; Spring 2024), College of Education

Jason Slipp (Dr. Alec M. Bodzin, Chair; Spring 2023), College of Education

Chris Harvey (Dr. Brook Sawyer, Chair; Fall 2022), College of Education

## **Doctoral Dissertation**

Committee Member:

Jason Slipp (Dr. Alec M. Bodzin, Chair; Fall 2025), College of Education

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## **Service**

### **Service to University**

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| 10/2025-05/2026  | Member, Search Committee: Presidential Health Chair in Community-Driven Assistive Technologies (CDAT), The Center for CDAT |
| 05/2025-12/2026  | The Steering Committee for Lehigh University's Accreditation to the Middle States Commission on Higher Education (MSCHE)   |
| 10/2024, 11/2025 | Assisted with review of Lehigh University submissions for the ORAU Ralph E. Powe Junior Faculty Enhancement Awards         |

### **Service to College**

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|----------------|---|
| 9/2024-4/2025  | Member, Search Committee: Faculty position in computer sciences, Department of Computer Science and Engineering |
| 9/2023-12/2023 | The Biostat and Health Data Science Undergraduate Program Committee, College of Health                          |

7/2023-7/2026	Representative of the College of Health to the Library and Technology Services Faculty Committee
9/2022-9/2026	Representative of the College of Education to the College of Health
9/2022-9/2026	Representative of the College of Health to the College of Education
10/2022-03/2023	Member, Search Committee: Faculty position in behavioral health, College of Health
01/2023-	Member, College Strategic Planning Working Group 1 (Research), College of Health

### **Professional Service**

2026	Program Committee Member, the 27th International Conference on Artificial Intelligence in Education (AIED) held in Seoul, South Korea, in July 2026
2025	Program Committee Member, the 26th International Conference on Artificial Intelligence in Education (AIED) held in Palermo, Italy, in July 2025
2025	Program Committee Member, the 29th Global Chinese Conference on Computers in Education (GCCCE) held in Wuxi, China in May 2025
12/2024-02/2025	Senior Program Committee Member, the 5th Annual Meeting of the International Society of the Learning Sciences (ISLS) held in Helsinki, Finland in June 2025
05/2024-07/2024	Evaluation Member, the IES 2024 U-GAIN Center (NCER R&D Center on Using Generative Artificial Intelligence to Augment Teaching and Learning in Classrooms) peer reviewer panel.
04/2024	Faculty Mentor, the 2024 American Educational Research Association (AERA) Conference – Studying and Self-Regulated Learning SIG
02/2024	Reviewer, the American Psychological Association (APA) Convention 2024
07/2023-08/2023	Evaluation Member for the AI Governance Research Grant Call, the 2023 AI Singapore (AISG) Research Programme, National Research Foundation (NRF) of Singapore
2023	Senior Program Committee Member, the 24th International Conference on Artificial Intelligence in Education (AIED) held in Tokyo, Japan, in July 2023
2023	Program Committee Member, the 3rd Annual Meeting of the International Society of the Learning Sciences (ISLS) held in Montreal, Canada in June 2023

2022	Senior Program Committee Member, the 23rd International Conference on Artificial Intelligence in Education (AIED) held in Durham, UK, in July 2022
04/2021	Chair the Roundtable Session titled “Examining and Increasing Student Engagement” at the 2021 AERA Virtual Annual Meeting.
2020	Reviewer, the 2020 AERA Conference
2019	Reviewer, the 2019 AERA Conference
2016	Reviewer, the 7th Global Chinese Conference on Inquiry Learning: Innovations and Applications (GCCIL)

### **Professional Affiliations**

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<b>The IEEE Computer Society Technical Committee on Learning Technology (TCLT)</b>	2024-Present
<b>American Psychology Association (APA)</b>	2022-2024
<b>International Society of Learning Sciences (ISLS)</b>	2022-2024
<b>American Educational Research Association (AERA)</b>	2017 - Present
• Division C Member – Learning and Instruction	
<b>European Association for Research on Learning and Instruction (EARLI)</b>	2019-2021
• Division 8, Motivation and Emotion	