Curriculum Vita

SHAN LI

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Assistant Professor
Department of Community & Population Health, College of Health (COH)
Department of Education & Human Services, College of Education (COE)
Lehigh University

COH: HST Building 132, 124 E. Morton Street, Bethlehem, PA 18105, USA
COE: A105 Iacocca Hall, 111 Research Drive, Bethlehem, PA, 18015, USA

Education

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

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

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., lfenthaler, 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

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., lfenthaler, 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

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

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

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

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*. 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.

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.

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

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.

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.

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.

Zheng, J., **Li, S.**, & Lajoie, S. P. (2021). Diagnosing virtual patients in a technology-rich learning environment: A sequential mining of students' efficiency and behavioral patterns. *Education and Information Technologies*. 1-17.

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.

Li, S. (2021). Measuring cognitive engagement: An overview of measurement instruments and techniques. *International Journal of Psychology and Educational Studies*, *8* (3), 63-76.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Zheng, J., **Li, S.**, Lajoie, S. P. (2020). The role of achievement goals and self-regulated learning behaviors in clinical reasoning. *Technology, Knowledge and Learning*. *25* (3), 541-556.

Xing, W., Pei, B., **Li, S.,** Chen, G., & Xie, C. (2019). Using learning analytics to support students' engineering design: The angle of prediction. *Interactive Learning Environments*, 1-18.

Wu, H., Zheng, J., **Li, S.**, & Guo, J. (2019). Does academic interest play a more important role in medicine than in other disciplines? A nationwide cross-sectional study in China. *BMC Medical Education*, 19, 1-8.

Lajoie, S. P., Zheng, J., **Li, S.**, Jarrell, A. & Gube, M. (2019). Examining the interplay of affect and self regulation in the context of clinical reasoning. *Learning and Instruction,* 101219.

Li, S., Zheng, J., & Zheng, Y. (2019). Towards a new approach to managing teacher online learning: Learning communities as activity systems. *The Social Science Journal*, 1-13.

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*, 1-8.

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.

Li, S. & Zheng, J. (2018). The relationship between self-efficacy and self-regulated learning in one-to-one computing environment: the mediated role of task values. *The Asia-Pacific Education Researcher, 27* (6), 455-463.

Lajoie, S. P., Zheng, J., & **Li, S.** (2018). Examining the role of self-regulation and emotion in clinical reasoning: implications for developing expertise. *Medical Teacher*, *40* (8), 842-844.

Li, S. & Zheng, J. (2017). The effect of academic motivation on students' English learning achievement in the eSchoolbag-based learning environment. *Smart Learning Environment*, *4* (3), 1-14.

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.

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

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 *Proceedings of the 3rd Annual Meeting of the International Society of the Learning Sciences (ISLS)*. Montreal, Canada.

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 *Proceedings of the 3rd Annual Meeting of the International Society of the Learning Sciences (ISLS)*. Montreal, Canada.

Zheng, J., **Li, S.**, Huang, X., Wang, T., & Lajoie, S. P. (2023). Do thinking styles change with task complexity in problem-solving?. In *Proceedings of the 3rd Annual Meeting of the International Society of the Learning Sciences (ISLS)*. Montreal, Canada.

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 10th 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. (Submitted). Immersive technologies in health professions education: A bibliometric analysis. *Computers and Education: X Reality*.

Huang, X., Zheng, J., **Li, S**., Zhu, G., Du, H., Zhong, T., Hou, C., & Lajoie, S.P. (Submitted). Investigating the effect of emotional tone on learners' reading engagement and peer acknowledgment in social annotation. *International Journal of Educational Technology in Higher Education*.

Li, S., Huang, X., Zhu, G., Du, H., Zhong, T., Hou, C., & Zheng, J. (Submitted). Exploring behavioral patterns and their impact on social annotation outcomes. *Journal of Computer Assisted Learning*.

Song, Y., Li, C., Xing, W., **Li, S.**, Lee, H. H., Tan, Y., Shaffer, D. W., Ma, Y. (Under review). Using fair AI to uncover the behavioral patterns of self-regulated learning in a virtual learning environment. *Journal of Educational Computing Research*.

Li, S., Huang, X., Wang, T., Zheng, J., & Lajoie, S.P. (Submitted). Using text mining and machine learning to predict reasoning activities from think-aloud transcripts in computer assisted learning. *Journal of Computing in Higher Education.*

Li, S., Liu, Z., Qiu, M., Huang, J., Zheng, J., & Ding, G. (Submitted). Examining the effects of communication features of educational robots on students' cognitive load, attitudes, and learning performance. *Journal of Educational Computing Research*.

Chen, F., **Li, S**., Lin, L., & Huang, X. (Revisions submitted). Identifying temporal trajectories of student engagement in social annotation during online collaborative reading. *Education and Information Technologies*.

Ding, G., Li, M., & **Li, S**. (Submitted). When to provide feedback in online testing? The effect of immediate and delayed feedback on student academic performance. *Asia Pacific Education Review*.

Lin, L., **Li, S**., Huang, X., & Chen, F. (Revisions submitted). Longitudinal changes of student engagement in social annotation. *Distance Education*.

Li, S., Huang, X., Lin, L., & Chen, F. (Revisions submitted). Peer interaction in social annotation: How to get upvotes?. *British Journal of Educational Technology*.

Huang, Q., **Li, S**., & Du, Y. (Submitted). Toward a comprehensive understanding of MOOC adoption among college students. *Journal of Computers in Education*.

Huang, X., **Li, S.**, Wang, T., & Lajoie, S.P. (Submitted). Exploring the relationships between learners' social and cognitive presence patterns and peer feedback in digital social reading. *Learning, Culture, and Social Interaction*.

Huang, X., **Li, S.**, Wang, T., & Lajoie, S.P. (Submitted). The effects of emotion regulation and students' perceived challenges on emotion synchrony in collaborative learning. *European Journal of Psychology of Education*.

Wang, T., Ruiz-Segura, **Li, S**., & Lajoie, S. P. (Submitted). Frequencies and dynamic characteristics of self-regulated learning behaviors influence students' problem-solving efficiency in technology-rich learning environments. *Journal of Computer Assisted Learning.*

Wang, T., Zheng, J., **Li, S.**, Zhang, Y., & Lajoie, S.P. (Submitted). Using multimodal data to assess students' cognitive load and task performance: Evidence from eletrodermal activities and heart rate variability. *Computers and Education*.

Zheng, J., Pan, Z., **Li, S.**, & Xie, C. (Submitted). Modeling temporal self-regulatory processes in STEM learning of engineering design. *Journal of Educational Technology & Society*.

Zheng, J., **Li, S.**, Lajoie, S. P. & Wang, T. (Submitted). Exploring emotion dynamics in problem-solving with an intelligent tutoring system through facial expressions and electrodermal activities. *International Journal of Educational Technology in Higher Education*.

Zheng, J., Zhu, J., **Li, S.**, Jiang, R., & Xie, C. (Submitted). Acceptance of artificial intelligence in engineering design: Refining and integrating self-efficacy in the technology acceptance model. *Education and Information Technologies*.

Li, S., Zheng, J., Lajoie, S. P., & Wu, H. (Waiting to be submitted). Self-regulated learning competency and behavioral similarity in clinical reasoning: An exploratory study.

Honors and Awards

2023-2024 **Senior CITL Faculty Fellowship/Course Development Grant**
Center for Innovation in Teaching and Learning, Lehigh University
Amount: $1,000

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

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

Research Funding

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: 2022-2023
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

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: 2022-2023
Agency: Faculty Research Grant (FRG) – Lehigh University
Title: Designing a computer simulated environment to promote nutrition health literacy
Amount: $6,000

Editorial Review Board Membership for Scholarly Publications

Editorial Board Member

Journal of Computer Assisted Learning	Nov 2022 - present

Ad Hoc Journal Reviewer

Education and Information Technology	Mar 2023 - present
Metacogntion and Learning	Dec 2022 - present
Journal of Educational Technology & Society	Dec 2022 - present
Frontiers in Psychology	Dec 2022 - present
Educational Research Review	Oct 2022 - present
Educational Measurement: Issues and Practice	Oct 2022 - present
Knowledge Management & E-Learning	Sep 2022 - present
British Journal of Educational Technology	Jul 2022 - present
Journal of Computer Assisted Learning	Apr 2022 - present
BMC Medical Education	Mar 2022 - present
Interactive Learning Environments	Mar 2022 - present
Journal of Science Education and Technology	Feb 2022 - present
Computers and Education	Jun 2021 - present
Learning and Individual Differences	Mar 2021 - present
International Journal of Artificial Intelligence in Education	Jun 2020 - present
Medical Education Online	Jun 2020 -present
Medical Education	May 2020 - present
Technology, Knowledge, and Learning (TKNL)	Feb 2019 - present
Journal of Technology and Teacher Education (JTATE)	Jan 2019 - present
The Asia-Pacific Education Researcher (TAPE)	Sep 2018 - present

Conference Presentation

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

Hou, C., Zhu, G., Zheng, J., Zhang, L., Huang, X., Zhong, T., **Li, S.**, Du., H., & Ker, C. L. (2024, April). *Prompt-based and fine-tuned GPT models for context-dependent and -independent deductive coding in social annotation*. Paper submitted to the 2024 Learning Analytics and Knowledge Conference (LAK24), Kyoto, Japan

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.* Paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

Li, S., Zheng, J., & Lajoie, S. P. (2024, April). *Analyzing multimodal data about student engagement: The added value of a comply dynamic systems approach.* Symposium paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

Zheng, J., Zhu, J., Li, S., Jiang, R., & Xie, C. (2024, April). *Exploring student acceptance of artificial intelligence in engineering design*. Paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

Zheng, J., Pan, Z., Li, S., & Xie, C. (2024, April). *Modeling temporal self-regulatory processing in STEM learning of engineering design*. Paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

Song, Y., Li, C., Xing, W., **Li, S.**, & Ma, Y. (2024, April). *Fairness-aware behavioral clustering for self-regulated learning in virtual learning environments*. Paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

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.* Paper submitted to the 2024 American Educational Research Association Annual Conference, Philadelphia, US

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, US

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 19th 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 2023 International Conference of the Learning Sciences, 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 2023 International Conference of the Learning Sciences, 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 2023 International Conference of the Learning Sciences, 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*

20th 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, US

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, US

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, US

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, US

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, US.

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

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, US.

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, US.

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, US.

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, US. 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 modelling 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 14th 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 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

Course Taught

Assistant Professor at Lehigh University

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)

Gradudate Student Advising

Academic advising to students pursuing Master of Science (M.S.) in instructional technology in College of Education:
3 students (Fall 2022-Spring 2023)

Doctoral Comprehensive Exam

Chair:
Lisa Kiel (Fall 2023), College of Education

Committee Member:
Kara Uhrich (Dr. Brook Sawyer, Chair; Fall 2023), College of Education
Scott Burden (Dr. Brook Sawyer, Chair; Spring 2023), College of Education

Doctoral Qualifying Projects

Committee Member:
Jason Slipp (Dr. Alec M. Bodzin, Chair; Spring 2023), College of Education
Chris Harvey (Dr. Brook Sawyer, Chair; Fall 2022), College of Education

Service

Service to College

9/23-	The Biostat and Health Data Science Undergraduate Program Committee, College of Health
7/23-7/26	Representative of the College of Health to the Library and Technology Services Faculty Committee
9/22-9/24	Representative of the College of Education to the College of Health
9/22-9/24	Representative of the College of Health to the College of Education
10/22-03/23	Member, Search Committee: Faculty position in behavioral health, College of Health
01/23-	Member, College Strategic Planning Working Group 1 (Research), College of Health

Professional Service

Evaluation Member for the AI Governance Research Grant Call, funded by AI Singapore (AISG) Research Programme, National Research Foundation (NRF) of Singapore

- Review two grant proposals during July-August 2023

Senior Program Committee Member, the 24th international conference on Artificial Intelligence in Education (AIED) held in Tokyo, Japan in July 2023

- Review submissions for the AIED 2023 conference

Program Committee Member, the 3rd Annual Meeting of the International Society of the Learning Sciences (ISLS) held in Montreal, Canada in June 2023

- Review submissions for the ISLS 2023 conference

Senior Program Committee Member, the 23rd international conference on Artificial Intelligence in Education (AIED) held in Durham, UK in July 2022

- Review submissions for the AIED 2022 conference and lead discussion

Chair, the 2021 American Educational Research Association (AERA) Conference

- Chair the Roundtable Session titled, "Examining and Increasing Student Engagement" at the 2021 AERA Virtual Annual Meeting.

Reviewer, the 2020 American Educational Research Association (AERA) Conference

- SIG- Advanced Technologies for Learning, and Division C - Section 2a: Cognitive and Motivational Processes, Division C - Section 3b: Technology-Based Environments for the 2020 Annual Meeting of the American Educational Research Association (AERA) held in San Francisco, April 17 - 21.

Reviewer, the 2019 American Educational Research Association (AERA) Conference

- Serve as a reviewer to review submissions for SIG- Computer and Internet Applications in Education, and Division C - Section 3b: Technology-Based Environments for the 2019 Annual Meeting of the American Educational Research Association (AERA) held in Toronto, April 5-9.

Reviewer, the 7th GCCIL Conference

- Serve as a reviewer for proposals submitted for the 7th Global Chinese Conference on Inquiry Learning: Innovations and Applications (GCCIL) in Shenzhen, China on July 12-13, 2016.

Conference Volunteer, the 2nd International STEM in Education Conference | 11/2012

- Work with session hosts to support the delivery of a presentation by providing logistical support
- Work with the registration manager to coordinate registration desk activities
- Assist with various event duties as required

Professional Affiliations

American Psychology Association (APA) 2022-2023

International Society of Learning Sciences (ISLS) 2022-2024

American Educational Research Association (AERA) April 2017

- Division C Member – Learning and Instruction

European Association for Research on Learning and Instruction (EARLI) April 2019

- Division 8, Motivation and Emotion