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 office: HST Building 132, 124 E. Morton Street, Bethlehem, PA 18105, USA
COE office: 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 Graduate 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

Li, S. & Lajoie, S.P. (In press). 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*. Auerbach: CRC Press.

Lajoie, S.P., & **Li, S.** (In press). 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, UK: Edward Elgar Press.

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.

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

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.* 1-17. https://doi.org/10.18608/jla.2022.7571

Wang, T., **Li, S.**, & Lajoie, S.P. (2022). The interplay between cognitive load and self-regulated learning in a technology-rich learning environment. *Journal of Educational Technology & Society*, *26* (2), 50-62.

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.

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

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., Duffy, M. C., Lajoie, S.P., Zheng, J., & Lachapelle, K. (Revisions submitted). Using eye tracking to examine expert-novice differences during simulated surgical training: A case study. *Computers in Human Behavior.* Submitted on Sep 17, 2022

Li, S., Zheng, J., Lajoie, S.P., Pu, D., Li, H., & Wu, H. (Submitted). How does self-regulated learning competency play a role in clinical reasoning?. *Advances in Health Sciences Education.* Submitted on Oct 25, 2022

Lajoie, S.P. & **Li, S**. (Submitted). Considerations for intelligent tutoring systems for medical education. In A.M. Sinatra, A.M., A.C. Graesser, X. Hu, (Eds.). *Design*

Recommendations for Intelligent Tutoring Systems: Volume 11 – Intelligent Tutoring System Applications for Professional Career Education, Orlando, FL: US Army Combat Capabilities Development Command - Soldier Center.

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. *AERA Open*. Submitted on Dec 13/2022

Huang, X., **Li, S.**, Wang, T., Pan, Z., & Lajoie, S.P. (Revisions submitted). 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*. Submitted on Dec/2022

Wang, T., **Li, S.**, Huang, X., & Lajoie, S.P. (Submitted). Task complexity affects temporal characteristics of self-regulated learning behaviors in an intelligent tutoring system. *Educational Technology Research and Development*. Submitted on Oct 20/2022

Wang, T., Ruiz-Segura, **Li, S**., & Lajoie, S. P. (Revisions submitted). How self-regulated learning behaviors influence students' problem-solving efficiency in a technology-rich learning environment. *Computers and Education.*

Wiedbusch, M., Dever, D., **Li, S.**, Amon, M. J., Lajoie, S. P. & Azevedo, R. (Submitted). Measuring multidimensional facets of SRL engagement with multimodal data. In V. Kovanovic, R. Azevedo, D. Gibson & D. Ifenthaler (Eds.). *Unobtrusive Observations of Learning in Digital Environments*. Springer.

Zheng, J., **Li, S.**, Lajoie, S. P. & Wang, T. (Submitted). Using multimodal data to understand emotion dynamics in a computer-simulated learning environment. *Educational Technology Research and Development*. Submitted on Nov 14/2022

Zheng, J., Lajoie, S. P., **Li, S.**, & Wu, H. (Accepted). Temporal change of emotions: Identifying academic emotion trajectories and profiles in problem-solving. *Metacognition and Learning*.

Zheng, J., Lajoie, S. P., Wang, T., & **Li, S.** (submitted). Supporting self-regulated learning in clinical problem-solving with a computer-based learning environment: The effectiveness of scaffolds. *Metacognition and Learning*. Submitted on July 1/2022

Zheng, J., **Li, S.**, & Lajoie, S. P. (Revision submitted). A review of measurements and techniques to study emotion dynamics in learning. In V. Kovanovic, R. Azevedo, D. Gibson & D. Ifenthaler (Eds.). *Unobtrusive Observations of Learning in Digital Environments*. Springer.

Honors and Awards

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

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

Research Experience

Research Assistant at McGill University

Project 1: The design and evaluation of an intelligent tutoring system to support learning and training in clinical reasoning through the lens of expertise development and self-regulated learning.
PI: Dr. Susanne Lajoie (McGill University).
Sep 2016- Jul 2022

Project 2: Evaluation of an intelligent web browser to foster pre-service teachers' self-regulated learning processes and technological pedagogical content knowledge.
PI: Dr. Eric Poitras (University of Utah)
Co-PI: Dr. Susanne Lajoie (McGill University)
Sep 2016- Dec 2020

Project 3: Using eye-tracking to assess technical skills performance of surgical residents
PI: Dr. Kevin Lachapelle (McGill University)
Co-PI: Susanne Lajoie (McGill University).
Sep 2016- May 2022

Project 4: Theory driven designs to support international medical communities of practice: Fostering emotion regulation and cultural diversity using a problem-based learning approach.
PI: Dr. Susanne Lajoie (McGill University)
Co-PI: Cindy Hmelo-Silver (Indiana University).
Sep 2016- May 2022

Research Assistant Duties include framing research questions, assisting with multimodal multichannel data collection, analyzing data with educational data mining techniques, and writing high-impact papers.

Research Assistant at Beijing Normal University

Project 5: A resource organization model for ubiquitous learning: from learning object to learning cell.
PI: Dr. Shengquan Yu (Beijing Normal University).
Sep 2011- Jul 2014

Project 6: The construction of social knowledge network on mobile learning platforms.
PI: Joint Laboratory for Mobile Learning, Ministry of Education – China Mobile
Mar 2013-Jul 2014

Research Assistant Duties include designing interactive learning environment, developing an online learning platform, providing training to teachers nationwide, and scholarly writing.

Project 7: Responsive design and development of a mobile learning platform to automatically adjust and adapt to different terminal devices
PI: Yao Tang and Shan Li (Beijing Normal University)
Sep 2012- Mar 2013

Duties include applying the grant from the university, investigating the state of responsive web design, designing for a responsive web, and managing the research project.

Editorial Review Board Membership for Scholarly Publications

Editorical Board Member

Journal of Computer Assisted Learning	Nov 2022 - present

Ad Hoc Journal Reviewer

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

Li, S., Zheng, J., Lajoie, S. P., & Wu, H. (2023, June). *Self-regulated learning competency and behavioral similarity in clinical reasoning: An exploratory study*. Paper submitted to the 2023 International Conference of the Learning Sciences, Montreal, Canada

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 submitted to 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*. Paper submitted to 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?*. Paper submitted to the 2023 International Conference of the Learning Sciences, Montreal, Canada

Wiedbusch, M., Dever, D., Amon, M. J., Azevedo, R., **Li, S.**, & Lajoie, S. P. (2023, June). *A theoretical framework for designing engagement-sensitive multimedia environments with multimodal data.* Paper submitted to the 2023 International Conference of the Learning Sciences, Montreal, Canada

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 to be 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 to be 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 to be 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 to be 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. (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

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 Exam

Committee Member:
Scott Burden (01/2023), College of Education,

Doctoral Qualifying Projects

Committee Member:
Chris Harvey (10/2022-present), College of Education, Project in progress.

Service

Service to College

10/22-01/23	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

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) 2022-2023

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

Professional Skills

Multimodal data collection

Facial emotion detection (OpenFace, FaceReader), Eye-tracking (SMI eye-tracker), Electrodermal activity (BIOPAC), Log file, Self-report, and Think-aloud.

Advanced quantitative analysis skills and learning analytics

Survival analysis, SEM (Structural Equation Modeling), State transition analysis, Network analysis, Time series analysis, Lag sequential analysis, Recurrence quantification analysis, and Epistemic network analysis

Educational data mining

Predictive modeling (e.g., decision trees, rule-based classifiers, neural networks, support vector machine), Segmentation modeling (e.g., k-means, agglomerative clustering), Model evaluation, Triangulation, Parameter optimization, Data visualization, and Text mining