

DR. COLLIN F. LYNCH

Department of Computer Science, College of Engineering, North Carolina State University

cflynch@ncsu.edu Phone: (919) 513-0876 <https://research.csc.ncsu.edu/arglab/>

Mail To: North Carolina State University, Department of Computer Science, Campus Box
8206, Raleigh, North Carolina, 27695-8206

PROFESSIONAL EXPERIENCE

Associate Professor, Director Undergraduate AI Concentration & M.S. AI Track *Present*
Department of Computer Science, North Carolina State University

Lead Faculty, Artificial Intelligence Academy *2020 - Present*
Developer and leader of the Introduction to AI course.

Assistant Professor *2016 - 2022*
Department of Computer Science, North Carolina State University

Research Assistant Professor *2015 - 2016*
Department of Computer Science, North Carolina State University

Post-Doctoral Researcher *2014 - 2015*
Department of Computer Science, North Carolina State University

OTHER POSITIONS

Policy Chair: International Educational Data Mining Society *2015 - 2020*
Responsible for evaluation of public policy and data-based initiatives, and outreach.

EDUCATION

Ph.D. Intelligent Systems Program, University of Pittsburgh *2014*

M.S. Intelligent Systems Program, University of Pittsburgh *2011*

B.A. School of Cognitive Science, Hampshire College *2000*

HIGHLIGHTED PUBLICATIONS

Díaz, B., Delgado, C., Han, K., **Lynch, C. F.**, “A scaffolding model for designing and implementing work-integrated learning experiences based on the analysis of the university and company’s arrangements”. In: *Higher Education* (Apr. 2025)

Gitinabard, N., Xu, Y., Heckman, S., Barnes, T., **Lynch, C. F.**, “How Widely Can Prediction Models Be Generalized? Performance Prediction in Blended Courses”. In: *IEEE Transactions on Learning Technologies* 12.2 (2019), pp. 184–197

Tsan, J., **Lynch, C. F.**, Boyer, K., “"Alright, what do we need?": A Study of Young Coders Collaborative Dialogue”. In: *International Journal of Child-Computer Interaction* 17 (2018), pp. 61–71

Lynch, C. F. “Who Prophets from Educational Data Mining? New insights and new challenges”. In: *Theory and Research in Education* 15.3 (2017). Ed. by B. Kotzee, pp. 249–271

Lynch, C. F., Ashley, K. D., Pinkwart, N., Alevén, V., “Concepts, Structures, and Goals: Redefining Ill-Definedness”. In: *International Journal of Artificial Intelligence in Education (IJAIED)* 19.3 (2009): *Special Issue on AIED applications for ill-defined domains*. Ed. by N. Pinkwart, C. F. Lynch, K. D. Ashley, and V. Alevén, pp. 253–266

HONORS

- | | |
|---|------|
| <p>Best Student Paper Award
 “Confusion, Conflict, Consensus: Modeling Dialogue Processes During Collaborative Learning with Hidden Markov Models” Artificial Intelligence in Education - 24th International Conference, (AIED) 2023, Tokyo, Japan, [39]</p> | 2023 |
| <p>Second Best Paper Award
 “A Comparison of Two Pair Programming Configurations for Upper Elementary Students.” The 51st ACM Technical Symposium on Computer Science Education Portland Oregon. [54]</p> | 2020 |
| <p>Best Student paper Award
 “Typing Exercises as Interactive Worked Examples for Deliberate Practice in CS Courses.” ACE 2020, Proceedings of the Twenty-Second Australasian Computing Education Conference, Melbourne, Australia. [52]</p> | 2020 |
| <p>Office of Faculty Development: Thank a Teacher Program
 Recognition as outstanding faculty going the extra mile to shape students through teaching and mentorship.</p> | 2020 |

Andrew Mellon Predoctoral Fellowship, University of Pittsburgh. University of Pittsburgh	<i>2008 - 2009</i>
Best Paper Award: DeLFI Schwachstellenermittlung und Rückmeldungsprinzipien in einem intelligenten Tutorensystem für juristische Argumentation (Error Classification and Feedback Policies in an Intelligent Tutoring System for Legal Argumentation) (DeLFI 2006), e-Learning Fachtagung Informatik, Darmstadt, Germany. [76].	<i>2006</i>
Best Paper Award “The Andes Physics Tutoring System: Five Years of Evaluations.” (AIED 2005) International Conference on AI in Education. [78].	<i>2005</i>
A&S Graduate Program in Intelligent Systems Fellowship University of Pittsburgh	<i>2004</i>

RECENT TEACHING

CSC 720: Artificial Intelligence II An advanced course on AI including cutting edge research on advanced neural models, alternative data representation, current applications, and policy concerns.	<i>Spring 2026</i>
E 298: Fundamentals of Applied AI for Engineering An introductory course on AI concepts, applications, and problem-solving techniques for engineering students across disciplines.	<i>Fall 2025</i>
AIA: Introduction to Artificial Intelligence Ongoing professional development course on AI applications for students of the AI Academy.	<i>Summer 2025</i>
CSC 520: Artificial Intelligence I A course on the foundational concepts, models, algorithms, and techniques of artificial intelligence for graduate students in Computer Science.	<i>Fall 2024</i>
CSC 591/791: Controllable AI An advanced graduate course in Computer Science on Explainable AI, AI management and verification, policy, and foundational techniques for AI management.	<i>Spring 2024</i>
CSC 591/791: Educational Data Mining An interdisciplinary course in Data Mining for applications in education including student modeling, adaptive and personalized learning, evaluation of content and curricula, and intelligent tutoring systems.	<i>Spring 2023</i>

PUBLICATIONS

Journal Articles (21 total, 15 as faculty)

- [1] Díaz, B., Delgado, C., Bacher, J., **Lynch, C. F.**, Han, K., “Analyzing the functioning of a graduate engineering class with multiple collaborating groups using Slack: An embedded mixed methods case study”. In: *International Journal of STEM Education* 12.49 (Oct. 2025).
- [2] Díaz, B., Delgado, C., Han, K., **Lynch, C. F.**, “A scaffolding model for designing and implementing work-integrated learning experiences based on the analysis of the university and company’s arrangements”. In: *Higher Education* (Apr. 2025).
- [3] Díaz, B., **Lynch, C. F.**, Delgado, C., Han, K., “Analysis of two pedagogical approaches to foster discipline integrations in an educational data mining class using communities of practice”. In: *International Journal of STEM Education* 12.1 (2025).
- [4] Diaz, B., Delgado, C., Han, K., **Lynch, C.**, “Using communities of practice to investigate work-integrated learning in engineering education: a grounded theory approach”. In: *Higher Education* 88 (2024), 2419–2443.
- [5] Earle-Randell, T. V., Wiggins, J. B., Ma, Y., Celepkolu, M., Bounajim, D., Gao, Z., Ruiz, J. M., Boyer, K. E., Israel, M., **Lynch, C. F.**, Wiebe, E., “The impact of near-peer virtual agents on computer science attitudes and collaborative dialogue”. In: *International Journal of Child-Computer Interaction* 40 (2024), p. 100646.
- [6] Gitinabard, N., Gao, Z., Heckman, S., Barnes, T., **Lynch, C. F.**, “Analysis of Student Pair Teamwork Using GitHub Activities”. In: *Journal of Educational Data Mining* 15.1 (2023), pp. 32–62.
- [7] Vandenberg, J., **Lynch, C. F.**, Boyer, K. E., Wiebe, E., ““I remember how to do it”: exploring upper elementary students’ collaborative regulation while pair programming using epistemic network analysis”. In: *Computer Science Education* 33.3 (2023), pp. 429–457.
- [8] Gao, Z., Erickson, B., Xu, Y., **Lynch, C. F.**, Heckman, S., Barnes, T., “You asked, now what? Modeling Students’ Help-Seeking and Coding actions from Request to Resolution.” In: *Journal of Educational Data Mining* 14.3 (2022), pp. 109–131.
- [9] Vandenberg, J., Rachmatullah, A., **Lynch, C.**, Boyer, K. E., Wiebe, E., “Interaction effects of race and gender in elementary CS attitudes: A validation and cross-sectional study”. In: *International Journal of Child-Computer Interaction* (2021), pp. 1–11.
- [10] Vandenberg, J., Zakaria, Z., Tsan, J., Iwanski, A., **Lynch, C. F.**, Boyer, K. E., Wiebe, E., “Prompting collaborative and exploratory discourse: An epistemic network analysis study”. In: *International Journal of Computer-Supported Collaborative Learning* (2021).
- [11] Zakaria, Z., Vandenberg, J., Tsan, J., Boulden, D. C., **Lynch, C. F.**, Boyer, K. E., Wiebe, E. N., “Two-Computer Pair Programming: Exploring a Feedback Intervention to improve Collaborative Talk in Elementary Students.” In: *Computer Science Education* (2021), pp. 1–28.

- [12] Vandenberg, J., Tsan, J., Boulden, D., Zakaria, Z., **Lynch, C. F.**, Boyer, K. E., Wiebe, E. N., “Elementary Students’ Understanding of CS Terms”. In: *ACM Trans. Comput. Educ.* 20.3 (2020), pp. 1–19.
- [13] Gitinabard, N., Xu, Y., Heckman, S., Barnes, T., **Lynch, C. F.**, “How Widely Can Prediction Models Be Generalized? Performance Prediction in Blended Courses”. In: *IEEE Transactions on Learning Technologies* 12.2 (2019), pp. 184–197.
- [14] Tsan, J., **Lynch, C. F.**, Boyer, K., ““Alright, what do we need?": A Study of Young Coders Collaborative Dialogue”. In: *International Journal of Child-Computer Interaction* 17 (2018), pp. 61–71.
- [15] **Lynch, C. F.** “Who Prophets from Educational Data Mining? New insights and new challenges”. In: *Theory and Research in Education* 15.3 (2017). Ed. by B. Kotzee, pp. 249–271.
- [16] Herring, D., **Lynch, C. F.**, “Law Student Learning Gains Produced by a Writing Assignment and Instructor Feedback”. In: *Legal Writing: The Journal of the Legal Writing Institute.* 19 (2014). Ed. by B. J. Bowman, pp. 103–125.
- [17] Herring, D., **Lynch, C. F.**, “Teaching Skills of Legal Analysis: Does the Emperor Have any Clothes?” In: *Legal Writing: The Journal of the Legal Writing Institute.* 18 (2012). Ed. by K. B. Gerdy, pp. 85–118.
- [18] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Alevén, V., “Concepts, Structures, and Goals: Redefining Ill-Definedness”. In: *International Journal of Artificial Intelligence in Education (IJAIED)* 19.3 (2009): *Special Issue on AIED applications for ill-defined domains.* Ed. by N. Pinkwart, C. F. Lynch, K. D. Ashley, and V. Alevén, pp. 253–266.
- [19] Pinkwart, N., Alevén, V., Ashley, K. D., **Lynch, C. F.**, “Adaptive Rückmeldungen im Intelligenten Tutorensystem LARGO (Adaptive Feedback in the LARGO Intelligent Tutoring System)”. In: *E-Learning & Education* 5 (2009).
- [20] Pinkwart, N., Ashley, K. D., **Lynch, C. F.**, Alevén, V., “Evaluating an Intelligent Tutoring System for Making Legal Arguments with Hypotheticals”. In: *International Journal of Artificial Intelligence in Education (IJAIED)* 19.4 (2009): *Special Issue on AIED applications for ill-defined domains.* Ed. by N. Pinkwart, C. F. Lynch, K. D. Ashley, and V. Alevén, pp. 401–424.
- [21] VanLehn, K., **Lynch, C. F.**, Schulze, K. G., Shapiro, J. A., Shelby, R., Taylor, L., Treacy, D., Weinstein, A., Wintersgill, M., “The Andes Physics Tutoring System: Lessons Learned”. In: *International Journal of Artificial Intelligence in Education (IJAIED)* 15.3 (2005), pp. 147–204.

Book Chapters (5 total, 3 as faculty)

- [22] Vandenberg, J., Tsan, J., Zakaria, Z., **Lynch, C.**, Boyer, K. E., Wiebe, E., “The Foundations of Collaborative Programming by Elementary-Aged Children”. In: *Perspectives on Digitally-Mediated Team Learning.* Ed. by L. O. Campbell, R. Hartshorne, and R. F. DeMara. Cham: Springer International Publishing, 2021, pp. 53 –72.

- [23] Gitinabard, N., **Lynch, C. F.**, Long, R., Meyer, C., Woodman, L., “Social Media Frameworks and Improved Learning Engagement in GIFT”. in: *Design Recommendations for Intelligent Tutoring Systems: Volume 7 - Self-Improving Systems*. Ed. by A. Sinatra, A. Graesser, X. Hu, K. Brawner, and V. Rus. Vol. 7. US Army CCDC, 2019. Chap. 17, pp. 153–160.
- [24] Baker, R. “Educational Data Mining: A MOOC Experience”. In: *Handbook of Data Mining and Learning Analytics*. Ed. by S. ElAtia, D. Ipperciel, and O. R. Zaïane. Hoboken, NJ: Wiley, 2016, pp. 55–66.
- [25] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Aleven, V., “Ill-Defined Domains and Adaptive Tutoring Technologies”. In: *Adaptive Technologies for Training and Education*. Ed. by P. J. Durlach and A. M. Lesgold. Cambridge, UK: Cambridge University Press., 2012.
- [26] Ashley, K. D., **Lynch, C. F.**, “Are Argument Diagrams of Hypothetical Reasoning Diagnostic?” In: *Instructional Explanations in the Disciplines*. Ed. by M. K. Stein and L. Kucan. New York: Springer, 2010, pp. 171–188.

Edited Volumes (6 total, 1 as faculty)

- [27] M. C. Desmarais, C. F. Lynch, A. Merceron, and R. Nkambou, eds. *Proceedings of the 12th International Conference on Educational Data Mining (EDM 2019) Montréal, Canada*. International Educational Data Mining Society, 2019.
- [28] **Lynch, C. F.**, Ashley, K. D., Mitrovic, T., Dimitrova, V., Pinkwart, N., Aleven, V., *Proceedings of the 4th Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2010)*. Ed. by C. F. Lynch, K. D. Ashley, T. Mitrovic, V. Dimitrova, N. Pinkwart, and V. Aleven. Pittsburgh, PA, USA, 2010.
- [29] Pinkwart, N., **Lynch, C. F.**, Ashley, K. D., Aleven, V., *International Journal of Artificial Intelligence in Education (IJAIED)*. ed. by N. Pinkwart, C. F. Lynch, K. D. Ashley, and V. Aleven. Vol. 19. 3-4. IOS Press, 2009.
- [30] Aleven, V., Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., *Assessment and Feedback in Ill-Defined Domains: Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2008)*. Ed. by V. Aleven, K. D. Ashley, C. F. Lynch, and N. Pinkwart. Montréal, Canada., 2008.
- [31] Aleven, V., Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., *Proceedings of the Workshop on AIED Applications for Ill-Defined Domains (IllDef 2007)*. Ed. by V. Aleven, K. D. Ashley, C. F. Lynch, and N. Pinkwart. Marina Del Rey, California, U.S.A., 2007.
- [32] Aleven, V., Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2006)*. Ed. by V. Aleven, K. D. Ashley, C. F. Lynch, and N. Pinkwart. National Central University, Jhongli, Taiwan, 2006.

Full Conference Publications (48 total, 34 as faculty)

- [33] Babalola, D., Buddarapu, N., Mitros, P., Deane, P., **Lynch, C.**, “Stability and Contextual Sensitivity of Keystroke Process Features in Longitudinal Student Writing Portfolios”. In: *Proceedings of the International Conference on Educational Data Mining 2026*. 2026.
- [34] Hridi, A., Hoq, M., Gao, Z., **Lynch, C.**, Sahay, R., Hosseinalipour, S., Akram, B., “Privacy-Preserving Distributed Link Predictions Among Peers in Online Classrooms Using Federated Learning”. In: *Proceedings of the 18th International Conference on Educational Data Mining*. Ed. by C. Mills, G. Alexandron, D. Taibi, G. L. Bosco, and L. Paquette. Palermo, Italy: International Educational Data Mining Society, 2025, pp. 276–288. (Acceptance Rate: 27.6%).
- [35] Hoq, M., Shi, Y., Leinonen, J., Babalola, D., **Lynch, C. F.**, Price, T. W., Akram, B., “Detecting ChatGPT-Generated Code Submissions in a CS1 Course Using Machine Learning Models”. In: *Proceedings of the 55th ACM Technical Symposium on Computer Science Education, SIGCSE 2024, Volume 1, Portland, OR, USA, March 20-23, 2024*. Ed. by B. Stephenson, J. A. Stone, L. Battestilli, S. A. Rebelsky, and L. Shoop. ACM, 2024, pp. 526–532. (Acceptance Rate: 32%).
- [36] Oliveira, G., Gao, Z., Heckman, S., **Lynch, C.**, “Exploring Novice Programmers’ Testing Behavior: A First Step to Define Coding Struggle”. In: *Proceedings of the 55th ACM Technical Symposium on Computer Science Education V. 1. SIGCSE 2024*. Portland, OR, USA: Association for Computing Machinery, 2024, 1251–1257. (Acceptance Rate: 32%).
- [37] Zhang, S., Earle-Randell, T. V., Shen, Q., Botelho, A. F., Israel, M., Boyer, K. E., **Lynch, C. F.**, Wiebe, E. N., “Predicting and Analyzing Students’ Higher-Order Questions in Collaborative Problem-Solving”. In: *Proceeding of the 32nd International Conference on Computers in Education, ICCE 2024, Quezon City, Philippines, November 25-29, 2024*. Ed. by A. Kashihara, B. Jiang, M. M. T. Rodrigo, and J. O. Sugay. Asia-Pacific Society for Computers in Education, 2024, pp. 12–22.
- [38] Díaz, B. A., **Lynch, C. F.**, Han, K., Delgado, C., “Improving Graduate Engineering Education through Communities of Practice Approach: Analysis of Implementation in Computer Science, Robotics, and Construction Engineering Courses”. In: *2023 ASEE Annual Conference & Exposition*. Baltimore, Maryland: ASEE Conferences, 2023.
- [39] Earle-Randell, T. V., Wiggins, J. B., Ruiz, J. M., Celepkolu, M., Boyer, K. E., **Lynch, C. F.**, Israel, M., Wiebe, E. N., “Confusion, Conflict, Consensus: Modeling Dialogue Processes During Collaborative Learning with Hidden Markov Models”. In: *Artificial Intelligence in Education - 24th International Conference, AIED 2023, Tokyo, Japan, July 3-7, 2023, Proceedings*. Ed. by N. Wang, G. Rebolledo-Mendez, N. Matsuda, O. C. Santos, and V. Dimitrova. Vol. 13916. Lecture Notes in Computer Science. Springer, 2023, pp. 615–626. (Acceptance Rate: 21.11%).
- [40] Díaz, B., **Lynch, C.**, Han, K., “Use of Communities of Practice to Analyze and Improve Graduate Engineering Education.” In: *2022 ASEE Annual Conference & Exposition*. Minneapolis, MN: ASEE Conferences, 2022.

- [41] Erickson, B., Heckman, S., **Lynch, C. F.**, “Characterizing Student Development Progress: Validating Student Adherence to Project Milestones”. In: *Proceedings of the 53rd ACM Technical Symposium V.1 on Computer Science Education*. Ed. by L. Merkle, M. Doyle, J. Sheard, L.-K. Soh, and B. Dorn. SIGCSE 2022. Providence, RI, USA: Association for Computing Machinery, 2022, 15–21.
- [42] Farhana, E., Rutherford, T., **Lynch, C. F.**, “Predictive Student Modeling in an Online Reading Platform”. In: *Proceedings of the AAAI Symposium on Educational Advances in Artificial Intelligence (EAAI-22) held in conjunction with the 36th AAAI Conference on Artificial Intelligence (AAAI-22), Twelfth*. Ed. by M. Guerzhoy and M. Neumann. 2022.
- [43] Gao, Z., Heckman, S., **Lynch, C.**, “Who Uses Office Hours? A Comparison of In-Person and Virtual Office Hours Utilization”. In: *Proceedings of the 53rd ACM Technical Symposium V.1 on Computer Science Education*. SIGCSE 2022. Providence, RI, USA: Association for Computing Machinery, 2022, 300–306.
- [44] Gitinabard, N., Heckman, S., Barnes, T., **Lynch, C.**, “Designing a Dashboard for Student Teamwork Analysis”. In: *Proceedings of the 53rd ACM Technical Symposium V.1 on Computer Science Education*. SIGCSE 2022. Providence, RI, USA: Association for Computing Machinery, 2022, 446–452.
- [45] Ma, Y., Martinez Ruiz, J., Brown, T. D., Diaz, K.-A., Gaweda, A. M., Celepkolu, M., Boyer, K. E., **Lynch, C. F.**, Wiebe, E., “It’s Challenging but Doable: Lessons Learned from a Remote Collaborative Coding Camp for Elementary Students”. In: *Proceedings of the 53rd ACM Technical Symposium V.1 on Computer Science Education*. SIGCSE 2022. Providence, RI, USA: Association for Computing Machinery, 2022, 342–348.
- [46] Wiggins, J. B., Earle-Randell, T. V., Bounajim, D., Ma, Y., Ruiz, J. M., Liu, R., Celepkolu, M., Israel, M., Wiebe, E., **Lynch, C. F.**, Boyer, K. E., “Building the Dream Team: Children’s Reactions to Virtual Agents That Model Collaborative Talk”. In: *Proceedings of the 22nd ACM International Conference on Intelligent Virtual Agents*. IVA ’22. Faro, Portugal: Association for Computing Machinery, 2022.
- [47] Gao, Z., **Lynch, C. F.**, Heckman, S., Barnes, T., “Automatically classifying student help requests: a multi-year analysis”. In: *Proceedings of the 2021 International Conference on Educational Data Mining, Paris France*. Ed. by I.-H. S. Hsiao, S. S. Sahebi, F. Bouchet, and J.-J. Vie. International Educational Data Mining Society, 2021, pp. 81–92.
- [48] Ma, Y., Wiggins, J. B., Celepkolu, M., Boyer, K. E., **Lynch, C. F.**, Wiebe, E. N., “The Challenge of Noisy Classrooms: Speaker Detection During Elementary Students’ Collaborative Dialogue”. In: *Artificial Intelligence in Education - 22nd International Conference, AIED 2021, Utrecht, The Netherlands, June 14-18, 2021, Proceedings, Part I*. ed. by I. Roll, D. S. McNamara, S. A. Sosnovsky, R. Luckin, and V. Dimitrova. Vol. 12748. Lecture Notes in Computer Science. Springer, 2021, pp. 268–281.
- [49] Tsan, J., Vandenberg, J., Zakaria, Z., Boulden, D. C., **Lynch, C. F.**, Wiebe, E. N., Boyer, K. E., “Collaborative Dialogue and Types of Conflict: An Analysis of Pair Programming Interactions between Upper Elementary Students”. In: *SIGCSE ’21: The 52nd ACM Technical Symposium on Computer Science Education, Virtual Event, USA, March 13-20, 2021*. Ed. by M. Sherriff, L. D. Merkle, P. A. Cutter, A. E. Monge, and J. Sheard. ACM, 2021, pp. 1184–1190.

- [50] Vandenberg, J., Rachmatullah, A., **Lynch, C. F.**, Boyer, K. E., Wiebe, E. N., “The Relationship of CS Attitudes, Perceptions of Collaboration, and Pair Programming Strategies on Upper Elementary Students’ CS Learning”. In: *ITiCSE 2021: 26th ACM Conference on Innovation and Technology in Computer Science Education, Virtual Event, Germany, June 26 - July 1, 2021*. Ed. by C. Schulte, B. A. Becker, M. Divitini, and E. Barendsen. ACM, 2021, pp. 46–52.
- [51] Akintunde, R. O., Shabrina, P., Cateté, V., Barnes, T., **Lynch, C.**, Rutherford, T., “Data-informed curriculum sequences for a curriculum-integrated game”. In: *Proceedings of LAK’20: The 10th International Conference on Learning Analytics and Knowledge, Frankfurt, Germany, March 23-27, 2020*. Ed. by C. Rensing and H. Drachsler. ACM, 2020, pp. 635–644.
- [52] Gaweda, A. M., **Lynch, C. F.**, Seamon, N., Oliveira, G. S., Deliwa, A., “Typing Exercises as Interactive Worked Examples for Deliberate Practice in CS Courses”. In: *ACE 2020, Proceedings of the Twenty-Second Australasian Computing Education Conference, Melbourne, VIC, Australia, February 4-6, 2020*. Ed. by A. Luxton-Reilly and C. Szabo. ACM, 2020, pp. 105–113. [**Winner Best Student Paper**].
- [53] Shabrina, P., Akintunde, R. O., Maniktala, M., Barnes, T., **Lynch, C.**, Rutherford, T., “Peeking through the classroom window: a detailed data-driven analysis on the usage of a curriculum integrated math game in authentic classrooms”. In: *Proceedings of LAK ’20: The 10th International Conference on Learning Analytics and Knowledge, Frankfurt, Germany, March 23-27, 2020*. Ed. by C. Rensing and H. Drachsler. ACM, 2020, pp. 625–634.
- [54] Tsan, J., Vandenberg, J., Zakaria, Z., Wiggins, J. B., Webber, A. R., Bradbury, A. E., **Lynch, C.**, Wiebe, E. N., Boyer, K. E., “A Comparison of Two Pair Programming Configurations for Upper Elementary Students”. In: *SIGCSE ’20: The 51st ACM Technical Symposium on Computer Science Education, Portland, OR, USA, March 11-14, 2020*. Ed. by J. Zhang, M. Sherriff, S. Heckman, P. A. Cutter, and A. E. Monge. ACM, 2020, pp. 346–352. [**Winner 2nd best paper award.**]
- [55] Gitinabard, N., Heckman, S., Barnes, T., **Lynch, C. F.**, “What Will You Do Next? A Sequence Analysis of the Student Transitions Between Online Platforms”. In: *Proceedings of the 12th International Conference on Educational Data Mining (EDM 2019) Montréal, Canada*. Ed. by M. C. Desmarais, C. F. Lynch, A. Merceron, and R. Nkambou. International Educational Data Mining Society, 2019, pp. 59–68.
- [56] Peddycord-Liu, Z., Cateté, V., Vandenberg, J., Barnes, T., **Lynch, C. F.**, Rutherford, T., “A Field Study of Teachers Using a Curriculum-integrated Digital Game”. In: *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, CHI 2019, Glasgow, Scotland, UK, May 04-09, 2019*. Ed. by S. A. Brewster, G. Fitzpatrick, A. L. Cox, and V. Kostakos. ACM, 2019, pp. 1–12.

- [57] Zacharia, Z, Boulden, D, Vandenberg, J, Tsan, J, **Lynch, C**, Wiebe, E, Boyer, K, “Collaborative Talk Across Two Pair-Programming Configurations”. In: *A Wide Lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings, 13th International Conference on Computer Supported Collaborative Learning (CSCL) 2019*. Ed. by K. Lund, G. P. Niccolai, E. Lavoué, C. H. Gweon, and M. Baker. Vol. 1. Lyon, France: International Society of the Learning Sciences., 2019, pp. 224–231.
- [58] Peddycord-Liu, Z., Harred, R., Karamarkovich, S., Barnes, T., **Lynch, C.**, Rutherford, T., “Learning Curve Analysis in a Large-Scale, Drill-and-Practice Serious Math Game: Where Is Learning Support Needed?” In: *Artificial Intelligence in Education - 19th International Conference, AIED 2018, London, UK, June 27-30, 2018, Proceedings, Part I*. ed. by C. P. Rosé, R. M. Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, B. M. McLaren, and B. du Boulay. Vol. 10947. Lecture Notes in Computer Science. Springer, 2018, pp. 436–449.
- [59] Tsan, J., Rodríguez, F. J., Boyer, K. E., **Lynch, C.**, ““I Think We Should...”: Analyzing Elementary Students’ Collaborative Processes for Giving and Taking Suggestions”. In: *Proceedings of the 49th ACM Technical Symposium on Computer Science Education, SIGCSE 2018, Baltimore, MD, USA, February 21-24, 2018*. Ed. by T. Barnes, D. D. Garcia, E. K. Hawthorne, and M. A. Pérez-Quiñones. ACM, 2018, pp. 622–627.
- [60] Xu, Y., **Lynch, C.**, Barnes, T., “How many friends can you make in a week?: evolving social relationships in MOOCs over time”. In: *Proceedings of the 11th International Conference on Educational Data Mining, EDM 2018, Buffalo, NY, USA, July 15-18, 2018*. Ed. by K. E. Boyer and M. Yudelson. International Educational Data Mining Society (IEDMS), 2018, pp. 97–106.
- [61] Liu, Z., Cody, C., Barnes, T., **Lynch, C. F.**, Rutherford, T., “The Antecedents with and Associations of Elective Replay in an Educational Game: is Replay Worth it?” In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. Hershkovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 40–47.
- [62] Zhongxiu Peddycord-Liu, Z. L., Cody, C., Kessler, S., Barnes, T., **Lynch, C. F.**, Rutherford, T., “Using Serious Game Analytics to Inform Digital Curricular Sequencing: What Math Objective Should Students Play Next?” In: *Proceedings of the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI Play 2017)*. Ed. by B. Schouten, P. Markopoulos, and Z. Troups. ACM, 2017, pp. 195–204.
- [63] Zhou, G., Wang, J., **Lynch, C. F.**, Chi, M., “Towards Closing the Loop: Bridging Machine-induced Pedagogical Policies to Learning Theories”. In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. Hershkovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 112–119.
- [64] Liu, Z., Brown, R., **Lynch, C.**, Barnes, T., Baker, R. S., Bergner, Y., McNamara, D. S., “MOOC Learner Behaviors by Country and Culture; an Exploratory Analysis”. In: *Proceedings of the 9th International Conference on Educational Data Mining, EDM 2016, Raleigh, North Carolina, USA, June 29 - July 2, 2016*. Ed. by T. Barnes, M. Chi, and M. Feng. International Educational Data Mining Society (IEDMS), 2016, pp. 127–134.

- [65] Xue, L., **Lynch, C.**, Chi, M., “Unnatural Feature Engineering: Evolving Augmented Graph Grammars for Argument Diagrams”. In: *Proceedings of the 9th International Conference on Educational Data Mining, EDM 2016, Raleigh, North Carolina, USA, June 29 - July 2, 2016*. Ed. by T. Barnes, M. Chi, and M. Feng. International Educational Data Mining Society (IEDMS), 2016, pp. 255–262.
- [66] Zhou, G., **Lynch, C. F.**, Price, T. W., Barnes, T., Chi, M., “The Impact of Granularity on the Effectiveness of Students’ Pedagogical Decisions”. In: *Proceedings of the 38th Annual Meeting of the Cognitive Science Society, Recognizing and Representing Events, CogSci 2016, Philadelphia, PA, USA, August 10-13, 2016*. Ed. by A. Papafragou, D. Grodner, D. Mirman, and J. C. Trueswell. cognitivesciencesociety.org, 2016, pp. 2801–2806.
- [67] **Lynch, C. F.**, Ashley, K. D., “Modeling Student Arguments in Research Reports”. In: *Advances in Applied Human Modeling and Simulation Advances in Human Factors and Ergonomics 2012 14 Volume Set: Proceedings of the 4th AHFE Conference (AHFE 2012)*. Ed. by V. Duffy. CRC Press: Taylor and Francis Group, July 2012, pp. 1–10.
- [68] **Lynch, C. F.**, Ashley, K. D., Falakmassir, M. H., “Comparing Argument Diagrams”. In: *Legal Knowledge and Information Systems - The Twenty-Fifth Annual Conference (Jurix 2012), University of Amsterdam, The Netherlands, 17-19 December 2012*. Ed. by B. Schäfer. Vol. 250. Frontiers in Artificial Intelligence and Applications. IOS Press, 2012, pp. 81–90.
- [69] Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., Aleven, V., “Toward Modeling and Teaching Legal Case-Based Adaptation with Expert Examples”. In: *Case-Based Reasoning Research and Development, 8th International Conference on Case-Based Reasoning, (ICCBR 2009), Seattle, WA, USA, July 20-23, 2009, Proceedings*. Ed. by L. McGinty and D. C. Wilson. Vol. 5650. Lecture Notes in Computer Science. Springer, 2009, pp. 45–59.
- [70] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Aleven, V., “Argument Diagramming and Diagnostic Reliability”. In: *The Twenty-Second Annual Conference on Legal Knowledge and Information Systems (JURIX 2009), Rotterdam, The Netherlands, 16-18 December 2009*. Ed. by G. Governatori. Vol. 205. Frontiers in Artificial Intelligence and Applications. IOS Press, 2009, pp. 106–115.
- [71] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Aleven, V., “Toward Assessing Law Students’ Argument Diagrams”. In: *The 12th International Conference on Artificial Intelligence and Law (ICAIL 2009), Proceedings of the Conference, June 8-12, 2009, Barcelona, Spain*. ACM, 2009, pp. 222–223.
- [72] Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., Aleven, V., “A Process Model of Legal Argument with Hypotheticals”. In: *Proceedings of the Twenty-First Annual Conference on Legal Knowledge and Information Systems (JURIX 2008), Florence, Italy, 10-13 December 2008*. Ed. by E. Francesconi, G. Sartor, and D. Tiscornia. Vol. 189. Frontiers in Artificial Intelligence and Applications. IOS Press, 2008, pp. 1–10.
- [73] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Aleven, V., “Argument graph classification with Genetic Programming and C4.5”. In: *Proceedings of the 1st International Conference on Educational Data Mining (EDM 2008), Montreal, Québec, Canada, June 20-21, 2008*. Ed. by R. S. J. de Baker, T. Barnes, and J. E. Beck. 2008, pp. 137–146.

- [74] Pinkwart, N., **Lynch, C. F.**, Ashley, K. D., Alevén, V., “Re-evaluating LARGO in the Classroom: Are Diagrams Better Than Text for Teaching Argumentation Skills?” In: *Intelligent Tutoring Systems, 9th International Conference, (ITS 2008), Montreal, Canada, June 23-27, 2008, Proceedings*. Ed. by B. P. Woolf, E. Aïmeur, R. Nkambou, and S. P. Lajoie. Vol. 5091. Lecture Notes in Computer Science. Springer, 2008, pp. 90–100.
- [75] Pinkwart, N., Alevén, V., Ashley, K. D., **Lynch, C. F.**, “Evaluating Legal Argument Instruction with Graphical Representations Using LARGO”. in: *Proceedings of the 13th International Conference on Artificial Intelligence in Education, (AIED 2007), July 9-13, 2007, Los Angeles, California, USA*. ed. by R. Luckin, K. R. Koedinger, and J. E. Greer. Vol. 158. Frontiers in Artificial Intelligence and Applications. IOS Press, 2007, pp. 101–108.
- [76] Pinkwart, N., Alevén, V., Ashley, K. D., **Lynch, C. F.**, “Schwachstellenermittlung und Rückmeldungsprinzipien in einem intelligenten Tutorensystem für juristische Argumentation (Error Classification and Feedback Policies in an Intelligent Tutring System for Legal Argumentation)”. In: *e-Learning Fachtagung Informatik (DeLFI 2006), 11.-14. September 2006, Darmstadt, Germany*. Ed. by M. Mühlhäuser, G. Rößling, and R. Steinmetz. Vol. 87. LNI. GI, 2006, pp. 75–86. [**Winner, Best Paper Award**].
- [77] Pinkwart, N., Alevén, V., Ashley, K. D., **Lynch, C. F.**, “Toward Legal Argument Instruction with Graph Grammars and Collaborative Filtering Techniques”. In: *Intelligent Tutoring Systems, 8th International Conference, (ITS 2006), Jhongli, Taiwan, June 26-30, 2006, Proceedings*. Ed. by M. Ikeda, K. D. Ashley, and T.-W. Chan. Vol. 4053. Lecture Notes in Computer Science. Springer, 2006, pp. 227–236.
- [78] VanLehn, K., **Lynch, C. F.**, Schulze, K. G., Shapiro, J. A., Shelby, R., Taylor, L., Treacy, D., Weinstein, A., Wintersgill, M., “The Andes Physics Tutoring System: Five Years of Evaluations”. In: *Proceedings of the 12th International Conference on Artificial Intelligence in Education, (AIED 2005), July 18-22, 2005, Amsterdam, The Netherlands*. Ed. by C.-K. Looi, G. I. McCalla, B. Bredeweg, and J. Breuker. Vol. 125. Frontiers in Artificial Intelligence and Applications. IOS Press, 2005, pp. 678–685. [**Winner, Best Paper Award**].
- [79] VanLehn, K., Bhembé, D., Chi, M., **Lynch, C. F.**, Schulze, K. G., Shelby, R., Taylor, L., Treacy, D., Weinstein, A., Wintersgill, M., “Implicit Versus Explicit Learning of Strategies in a Non-procedural Cognitive Skill”. In: *Intelligent Tutoring Systems, 7th International Conference, (ITS 2004)*. Ed. by J. C. Lester, R. M. Vicari, and F. Paraguaçu. Vol. 3220. Lecture Notes in Computer Science. Springer, 2004, pp. 521–530.
- [80] VanLehn, K., **Lynch, C. F.**, Taylor, L., Weinstein, A., Shelby, R., Schulze, K. G., Treacy, D., Wintersgill, M., “Minimally Invasive Tutoring of Complex Physics Problem Solving”. In: *Intelligent Tutoring Systems, 6th International Conference (ITS 2002)*. Ed. by S. A. Cerri, G. Gouardères, and F. Paraguaçu. Vol. 2363. Lecture Notes in Computer Science. Springer, 2002, pp. 367–376.

Short Conference Publications (28 total, 21 as faculty)

- [81] Buddarapu, V. N., **Lynch, C.**, “Embedding Conversational Safety in AI for Education”. In: *Artificial Intelligence in Education*. Ed. by A. I. Cristea, E. Walker, Y. Lu, O. C. Santos, and S. Isotani. Cham: Springer Nature Switzerland, 2025, pp. 372–379. (Acceptance Rate: 36%).

- [82] Gao, Z., Oliveira, G. S., Babalola, D., **Lynch, C. F.**, Heckman, S., “Who Should I Help Next? Simulation of Office Hours Queue Scheduling Strategy in a CS2 Course”. In: *Proceedings of the 17th International Conference on Educational Data Mining, EDM 2024, Atlanta, Georgia, USA, July 14-17, 2024*. Ed. by D. A. Joyner, B. Paaßen, and C. D. Epp. International Educational Data Mining Society, 2024. (Acceptance Rate: 25%).
- [83] Mitros, P., Deane, P., **Lynch, C.**, Erickson, B., “The Learning Observer: A Prototype System for the Integration of Learning Data”. In: *Proceedings of The International Conference on Artificial Intelligence in Education. Posters and Late Breaking Results, Workshops and Tutorials, Industry and Innovation Tracks, Practitioners, Doctoral Consortium and Blue Sky*. Ed. by A. M. Olney, I.-A. Chounta, Z. Liu, O. C. Santos, and I. I. Bittencourt. Cham: Springer Nature Switzerland, 2024, pp. 432–438.
- [84] Díaz, B., Delgado, C., **Lynch, C.**, Han, K., “Using Social Network Analysis to Evaluate the Functioning of a Class With Multiple Collaborating Groups”. In: *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023*. International Society of the Learning Sciences, 2023, pp. 1382–1385. (Acceptance Rate: 30%).
- [85] Gao, Z., Erickson, B., Xu, Y., **Lynch, C.**, Heckman, S., Barnes, T., “Admitting you have a problem is the first step: Modeling when and why students seek help in programming assignments.” In: *2022 International Conference on Educational Data Mining (EDM-2022)*. 2022.
- [86] Akintunde, R. O., Limke, A., Barnes, T., Heckman, S., **Lynch, C. F.**, “PEDI - Piazza Explorer Dashboard for Intervention”. In: *IEEE Symposium on Visual Languages and Human-Centric Computing, VL/HCC 2021, St Louis, MO, USA, October 10-13, 2021*. Ed. by K. J. Harms, J. Cunha, S. Oney, and C. Kelleher. IEEE, 2021, pp. 1–4.
- [87] Gaweda, A., **Lynch, C. F.**, “Student Practice Sessions Modeled as ICAP Activity Silos”. In: *Proceedings of the 2021 International Conference on Educational Data Mining, Paris France*. Ed. by I.-H. S. Hsiao, S. S. Sahebi, F. Bouchet, and J.-J. Vie. International Educational Data Mining Society, 2021.
- [88] Tsan, J., Vandenberg, J., **Lynch, C.**, Wiebe, E., Boyer, K., “Examining Collaborative Support for Block-Based Programming with Upper Elementary Students”. In: *Proceedings of the 14th International Conference on Computer-Supported Collaborative Learning (CSCL), ISLS Annual Meeting: Reflecting the Past and Embracing the Future*. Ed. by C. E. Hmelo-Silver, B. D. Wever, and J. Oshima. International Society of the Learning Sciences, 2021.
- [89] Farhana, E., Rutherford, T., **Lynch, C. F.**, “Associations Between Self-Regulated Learning Strategies and Science Assignment Score in a Digital Literacy Platform”. In: *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS)*. ed. by M. Gresalfi and I. S. Horn. Vol. 1. Nashville, Tennessee: International Society of the Learning Sciences., 2020, pp. 645–648.
- [90] Farhana, E., Rutherford, T., **Lynch, C. F.**, “Investigating Relations between Self-Regulated Reading Behaviors and Science Question Difficulty”. In: *Proceedings of the 13th International Conference on Educational Data Mining, EDM 2020, Fully virtual conference, July 10-13, 2020*. Ed. by A. N. Rafferty, J. Whitehill, C. Romero, and V. Cavalli-Sforza. International Educational Data Mining Society (IEDMS), 2020, pp. 766–769.

- [91] Farhana, E., Rutherford, T., **Lynch, C. F.**, “Understanding Reading Behaviors of Middle School Students”. In: *L@S'20: Seventh ACM Conference on Learning Scale, Virtual Event, USA, August 12-14, 2020*. Ed. by D. Joyner, R. F. Kizilcec, and S. Singer. ACM, 2020, pp. 385–388.
- [92] Gitinabard, N., Okoilu, R., Xu, Y., Heckman, S., Barnes, T., **Lynch, C. F.**, “Student Teamwork on Programming Projects. What can GitHub logs show us?” In: *Proceedings of the 13th International Conference on Educational Data Mining, EDM 2020, Fully virtual conference, July 10-13, 2020*. Ed. by A. N. Rafferty, J. Whitehill, C. Romero, and V. Cavalli-Sforza. International Educational Data Mining Society (IEDMS), 2020, pp. 409–416.
- [93] Xue, L., **Lynch, C. F.**, “Incorporating Task-specific Features into Deep Models to Classify Argument Components”. In: *Proceedings of the 13th International Conference on Educational Data Mining, EDM 2020, Fully virtual conference, July 10-13, 2020*. Ed. by A. N. Rafferty, J. Whitehill, C. Romero, and V. Cavalli-Sforza. International Educational Data Mining Society (IEDMS), 2020, pp. 531–537.
- [94] Bradbury, A., Wiebe, E., Vandenberg, J., Tsan, J., **Lynch, C.**, Boyer, K., “The Interface Design of a Collaborative Computer Science Learning Environment for Elementary Aged Students”. In: *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Vol. 63. 1. SAGE Publications Sage CA: Los Angeles, CA. 2019, pp. 493–497.
- [95] Wiggins, J. B., Wilkinson, J., Baigorria, L., Huang, Y., Boyer, K. E., **Lynch, C.**, Wiebe, E. N., “From Doodles to Designs: Participatory Pedagogical Agent Design with Elementary Students”. In: *Proceedings of the 18th ACM International Conference on Interaction Design and Children, IDC 2019, Boise, ID, USA, June 12-15, 2019*. ACM, 2019, pp. 642–647.
- [96] Gitinabard, N., Khoshnevisan, F., **Lynch, C.**, Wang, E. Y., “Your Actions or Your Associates? Predicting Certification and Dropout in MOOCs with Behavioral and Social Features”. In: *Proceedings of the 11th International Conference on Educational Data Mining, EDM 2018, Buffalo, NY, USA, July 15-18, 2018*. Ed. by K. E. Boyer and M. Yudelson. International Educational Data Mining Society (IEDMS), 2018, pp. 404–410.
- [97] Seshadri, A., Gitinabard, N., **Lynch, C. F.**, Barnes, T., Heckman, S., “Predicting Student Performance Based on Online Study Habits: A Study of Blended Courses”. In: *Proceedings of the 11th International Conference on Educational Data Mining, EDM 2018, Buffalo, NY, USA, July 15-18, 2018*. Ed. by K. E. Boyer and M. Yudelson. International Educational Data Mining Society (IEDMS), 2018, pp. 411–417.
- [98] Cook, J., **Lynch, C. F.**, Hicks, A., Mostafavi, B., “Task and Timing: Separating Procedural and Tactical Knowledge in Student Models”. In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. HersHKovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 186–191.
- [99] Crossley, S., Barnes, T., **Lynch, C.**, McNamara, D. S., “Linking Language to Math Success in an On-Line Course”. In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. HersHKovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 180–185.

- [100] Xue, L., **Lynch, C. F.**, Chi, M., “Mining Innovative Augmented Graph Grammars for Argument Diagrams through Novelty Selection”. In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. Hershkovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 296–301.
- [101] Tsan, J., Boyer, K. E., **Lynch, C. F.**, “How Early Does the CS Gender Gap Emerge?: A Study of Collaborative Problem Solving in 5th Grade Computer Science”. In: *Proceedings of the 47th ACM Technical Symposium on Computing Science Education, Memphis, TN, USA, March 02 - 05, 2016*. Ed. by C. Alphonse, J. Tims, M. E. Caspersen, and S. Edwards. ACM, 2016, pp. 388–393.
- [102] Zhou, G., Price, T. W., **Lynch, C. F.**, Barnes, T., Chi, M., “The Impact of Granularity on Worked Examples and Problem Solving”. In: *Proceedings of the 37th Annual Meeting of the Cognitive Science Society, CogSci 2015, Pasadena, California, USA, July 22-25, 2015*. Ed. by D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, and P. P. Maglio. The Cognitive Science Society: cognitivesciencesociety.org, 2015, pp. 2817–2822.
- [103] **Lynch, C. F.**, Ashley, K. D., “Empirically Valid Rules for Ill-Defined Domains”. In: *Proceedings of The 7th International Conference on Educational Data Mining (EDM 2014)*. Ed. by J. Stamper and Z. Pardos. International Educational Datamining Society IEDMS, 2014, pp. 237–240.
- [104] **Lynch, C. F.**, Ashley, K. D., Chi, M., “Can Diagrams Predict Essay Grades?” In: *Intelligent Tutoring Systems - Proceedings of the 12th International Conference, (ITS 2014)*. Ed. by S. Trausan-Matu, K. E. Boyer, M. E. Crosby, and K. Panourgia. Vol. 8474. Lecture Notes in Computer Science. Springer, 2014, pp. 260–265.
- [105] Aleven, V., Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., “AIED Applications in Ill-Defined Domains”. In: *Proceedings of the 13th International Conference on Artificial Intelligence in Education, (AIED 2007), July 9-13, 2007, Los Angeles, California, USA*. ed. by R. Luckin, K. R. Koedinger, and J. E. Greer. Vol. 158. Frontiers in Artificial Intelligence and Applications. IOS Press, 2007, p. 713.
- [106] Ashley, K. D., Pinkwart, N., **Lynch, C. F.**, Aleven, V., “Learning by diagramming Supreme Court oral arguments”. In: *Proceedings of the Eleventh International Conference on Artificial Intelligence and Law (ICAIL 2007), June 4-8, 2007, Stanford, California, USA*. ACM, 2007, pp. 271–275.
- [107] Pinkwart, N., **Lynch, C. F.**, Ashley, K. D., Aleven, V., “Student’s Usage of Multiple Linked Argument Representations in LARGO”. in: *Mensch & Computer 2007: Konferenz für interaktive und kooperative Medien, Bauhaus-Universität Weimar, Weimar, Germany, 2-5 September 2007*. Ed. by T. Gross. Oldenbourg Verlag, 2007, pp. 245–250.
- [108] Aleven, V., Ashley, K. D., **Lynch, C. F.**, “Helping Law Students to Understand US Supreme Court Oral Arguments: A Planned Experiment”. In: *Proceedings of the Tenth International Conference on Artificial Intelligence and Law (ICAIL 2005)*. ACM, 2005, pp. 55–59.

Conference Poster Publications (24 total, 22 as faculty)

- [109] Gao, Z., Zahn, M., **Lynch, C.**, Heckman, S., “From Confidence to Doubt: A Multi-year Analysis of Students’ Problem-Solving Attitudes in a CS2 Course”. In: *Proceedings of the 57th ACM Technical Symposium on Computer Science Education V.2*. SIGCSE TS 2026. USA: Association for Computing Machinery, 2026, 1343–1344.
- [110] Gao, Z., Islam, S., Scott, C., **Lynch, C.**, Heckman, S., “Comparing Students’ and Teachers’ Assessments of Office Hours”. In: *Proceedings of the 56th ACM Technical Symposium on Computer Science Education V. 2*. SIGCSETS 2025. Pittsburgh, PA, USA: Association for Computing Machinery, 2025, 1459–1460.
- [111] Islam, S., Gao, Z., Bacher, J., Silva De Oliveira, G., Patwardhan, V., Heckman, S., **Lynch, C.**, “EclipseMonitor: A Real-Time Student Programming Environment Data Collection Tool”. In: *Proceedings of the 56th ACM Technical Symposium on Computer Science Education V. 2*. SIGCSETS 2025. Pittsburgh, PA, USA: Association for Computing Machinery, 2025, 1489–1490.
- [112] Gao, Z., Gaweda, A., **Lynch, C.**, Heckman, S., Babalola, D., Oliveira, G., “Using Survival Analysis to Model Students’ Patience in Online Office Hour Queues”. In: *Proceedings of the 55th ACM Technical Symposium on Computer Science Education V. 2*. SIGCSE 2024. Portland, OR, USA: Association for Computing Machinery, 2024, 1646–1647. (Acceptance Rate: 59%).
- [113] Gaweda, A. M., **Lynch, C. F.**, “Exploration of the Week-by-Week ICAP Transitions by Students”. In: *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 2*. SIGCSE 2022. Providence, RI, USA: Association for Computing Machinery, 2022, p. 1088.
- [114] Farhana, E., Potter, A., Rutherford, T., **Lynch, C. F.**, “Feedback and Self-Regulated Learning in Science Reading”. In: *Proceedings of the 2021 International Conference on Educational Data Mining, Paris France*. Ed. by I.-H. S. Hsiao, S. S. Sahebi, F. Bouchet, and J.-J. Vie. International Educational Data Mining Society, 2021.
- [115] Zakaria, Z., Tsan, J., Vandenberg, J., **Lynch, C. F.**, Boyer, K., Wiebe, E., “Identifying Productive Conflict During Upper Elementary Students’ Collaborative Programming.” In: *Proceedings of the 14th International Conference on Computer-Supported Collaborative Learning (CSCL), ISLS Annual Meeting: Reflecting the Past and Embracing the Future*. Ed. by C. E. Hmelo-Silver, B. D. Wever, and J. Oshima. International Society of the Learning Sciences, 2021.
- [116] Vandenberg, J., Tsan, J., Hinckle, M., **Lynch, C.**, Boyer, K. E., Wiebe, E. N., “Gender Differences in Upper Elementary Students’ Regulation of Learning while Pair Programming”. In: *ICER 2020: International Computing Education Research Conference, Virtual Event, New Zealand, August 10-12, 2020*. Ed. by A. V. Robins, A. Moskal, A. J. Ko, and R. McCauley. ACM, 2020, p. 311.
- [117] Gaweda, A. M., **Lynch, C. F.**, “Giving Students Canned Code using Typing Exercises”. In: *Proceedings of the 50th ACM Technical Symposium on Computer Science Education, SIGCSE 2019, Minneapolis, MN, USA, February 27 - March 02, 2019*. Ed. by E. K. Hawthorne, M. A. Pérez-Quiñones, S. Heckman, and J. Zhang. ACM, 2019, p. 1281.

- [118] Tsan, J., Vandenberg, J., Fu, X., Wilkinson, J., Boulden, D., Boyer, K. E., **Lynch, C.**, Wiebe, E., “An Investigation of Conflicts Between Upper-Elementary Pair Programmers”. In: *Proceedings of the 50th ACM Technical Symposium on Computer Science Education, SIGCSE 2019, Minneapolis, MN, USA, February 27 - March 02, 2019*. Ed. by E. K. Hawthorne, M. A. Pérez-Quiñones, S. Heckman, and J. Zhang. ACM, 2019, p. 1264.
- [119] Vandenberg, J., Tsan, J., Zakaria, Z., Boyer, K. E., **Lynch, C.**, Wiebe, E., “The Development and Validation of Survey Items on Upper Elementary Students’ Perspectives and Attitudes on CS”. in: *Proceedings of the 50th ACM Technical Symposium on Computer Science Education, SIGCSE 2019, Minneapolis, MN, USA, February 27 - March 02, 2019*. Ed. by E. K. Hawthorne, M. A. Pérez-Quiñones, S. Heckman, and J. Zhang. ACM, 2019, p. 1264.
- [120] Xu, Y., Gitinabard, N., **Lynch, C. F.**, Barnes, T., “What You Say is Relevant to How You Make Friends: Measuring the Effect of Content on Social Connection”. In: *Proceedings of the 12th International Conference on Educational Data Mining (EDM 2019) Montréal, Canada*. Ed. by M. C. Desmarais, C. F. Lynch, A. Merceron, and R. Nkambou. International Educational Data Mining Society, 2019, pp. 679–682.
- [121] Agrawal, A., Xu, Y., Medhekar, A. N., **Lynch, C. F.**, “Hyperparameter Optimization of Machine Learning Models for Educational Datasets”. In: *Proceedings of the 11th International Conference on Educational Data Mining, EDM 2018, Buffalo, NY, USA, July 15-18, 2018*. Ed. by K. E. Boyer and M. Yudelson. International Educational Data Mining Society (IEDMS), 2018, pp. 571–575.
- [122] Crossley, S. A., Sirbu, M., Dascalu, M., Barnes, T., **Lynch, C. F.**, McNamara, D. S., “Modeling Math Success Using Cohesion Network Analysis”. In: *Artificial Intelligence in Education - 19th International Conference, AIED 2018, London, UK, June 27-30, 2018, Proceedings, Part II*. ed. by C. P. Rosé, R. M. Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, B. M. McLaren, and B. du Boulay. Vol. 10948. Lecture Notes in Computer Science. Springer, 2018, pp. 63–67.
- [123] Li, H., **Lynch, C. F.**, Barnes, T., “Early Prediction of Course Grades: Models and Feature Selection”. In: *Proceedings of the 11th International Conference on Educational Data Mining, EDM 2018, Buffalo, NY, USA, July 15-18, 2018*. Ed. by K. E. Boyer and M. Yudelson. International Educational Data Mining Society (IEDMS), 2018, pp. 492–495.
- [124] Shen, S., Mostafavi, B., **Lynch, C.**, Barnes, T., Chi, M., “Empirically Evaluating the Effectiveness of POMDP vs. MDP Towards the Pedagogical Strategies Induction”. In: *Artificial Intelligence in Education - 19th International Conference, AIED 2018, London, UK, June 27-30, 2018, Proceedings, Part II*. ed. by C. P. Rosé, R. M. Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, B. M. McLaren, and B. du Boulay. Vol. 10948. Lecture Notes in Computer Science. Springer, 2018, pp. 327–331.
- [125] Sirbu, M., Dascalu, M., Crossley, S. A., McNamara, D. S., Barnes, T., **Lynch, C. F.**, Trausan-Matu, S., “Exploring Online Course Sociograms Using Cohesion Network Analysis”. In: *Artificial Intelligence in Education - 19th International Conference, AIED 2018, London, UK, June 27-30, 2018, Proceedings, Part II*. ed. by C. P. Rosé, R. M. Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, B. M. McLaren, and B. du Boulay. Vol. 10948. Lecture Notes in Computer Science. Springer, 2018, pp. 337–342.

- [126] Gitinabard, N., **Lynch, C. F.**, Heckman, S., Barnes, T., “Identifying Student Communities in Blended Courses”. In: *Proceedings of the 10th International Conference on Educational Data Mining, EDM 2017, Wuhan, Hubei, China, June 25-28, 2017*. Ed. by X. Hu, T. Barnes, A. Hershkovitz, and L. Paquette. International Educational Data Mining Society (IEDMS), 2017, pp. 402–403.
- [127] **Lynch, C. F.**, Xue, L., Chi, M., “Evolving Augmented Graph Grammars for Argument Analysis”. In: *Genetic and Evolutionary Computation Conference, GECCO 2016, Denver, CO, USA, July 20-24, 2016, Companion Material Proceedings*. Ed. by T. Friedrich et al. SIGEVO. ACM, 2016, pp. 65–66.
- [128] Brown, R., **Lynch, C. F.**, Eagle, M., Albert, J., Barnes, T., Baker, R., Bergner, Y., McNamara, D., “Good Communities and Bad Communities: Does membership affect performance?”. In: *Proceedings of the 8th International Conference on Educational Data Mining (EDM 2015)*. Ed. by C. Romero and M. Perchenizkiy. International Educational Data Mining Society, 2015, pp. 612–613.
- [129] Mostafavi, B., Zhou, G., **Lynch, C. F.**, Chi, M., Barnes, T., “Data-Driven Worked Examples Improve Retention and Completion in a Logic Tutor”. In: *Artificial Intelligence in Education - 17th International Conference, AIED 2015, Madrid, Spain, June 22-26, 2015. Proceedings*. Ed. by C. Conati, N. T. Heffernan, A. Mitrovic, and M. F. Verdejo. Vol. 9112. Lecture Notes in Computer Science. Springer, 2015, pp. 726–729.
- [130] Price, T. W., **Lynch, C. F.**, Barnes, T., Chi, M., “An Improved Data-Driven Hint Selection Algorithm for Probability Tutors”. In: *Proceedings of the 8th International Conference on Educational Data Mining (EDM 2015)*. Ed. by C. Romero and M. Perchenizkiy. International Educational Data Mining Society, 2015, pp. 610–611.
- [131] **Lynch, C. F.**, Falakmassir, M. H., Ashley, K. D., “Matching Hypothesis Text in Diagrams and Essays”. In: *Proceedings of The 7th International Conference on Educational Data Mining (EDM 2014)*. Ed. by J. Stamper and Z. Pardos. International Educational Datamining Society IEDMS, 2014, pp. 383–384.
- [132] Pinkwart, N., **Lynch, C. F.**, Ashley, K. D., Alevan, V., “Assessing Argument Diagrams in an Ill-defined Domain”. In: *Proceedings of the 14th International Conference on Artificial Intelligence in Education, (AIED 2009), July 6-10, 2009, Brighton, UK*. ed. by V. Dimitrova, R. Mizoguchi, B. du Boulay, and A. C. Graesser. Vol. 200. Frontiers in Artificial Intelligence and Applications. IOS Press, 2009, pp. 590–592.

Workshop Publications (23 total, 13 as faculty)

- [133] Gao, Z., Buddarapu, N., Babalola, D., **Lynch, C.**, Deane, P., Mitros, P., “Automatic Essay Scoring for K-12 Writing Assignments with Open Source LLM.”. In: *Proceedings of the 2024 Workshop on Educational Data Mining in Writing and Literacy Instruction: Held in Conjunction with the 17th International Conference on Educational Data Mining*. Atlanta Georgia, 2024.

- [134] Gao, Z., Collin F. L., Heckman, S., “Too long to wait and not much to do: Modeling student behaviors while waiting for help in online office hours.” In: *Proceedings of the 2023 International Workshop on Data Mining in CS Education (in press)*. Ed. by B. Akram, T. Price, Y. Shi, P. Brusilovsky, S. Hsiao, and J. Leinonen. 2023.
- [135] Hoq, M., Shi, Y., Leinonen, J., Babalola, D., **Lynch, C. F.**, Akram, B., “Detecting ChatGPT-Generated Code in a CS1 Course”. In: *Proceedings of the 2023 International Workshop on Empowering Education with LLMs - the Next-Gen Interface and Content Generation at AIED2023 (in press)*. Ed. by S. Moore, R. Tong, Z. Liu, X. Hu, Y. Lu, J. Liang, H. Khosravi, P. Denny, A. Singh, C. Brooks, J. Stamper, and C. Cao. 2023.
- [136] Kumar, A., Bharadwaj, A. G., Starly, B., **Lynch, C.**, “FabKG: A Knowledge graph of Manufacturing Science domain utilizing structured and unconventional unstructured knowledge source”. In: *Proceedings of SUKI: Structured and Unstructured Knowledge Integration Workshop at NAACL 2022 at Seattle, WA on July 14, 2022*. Ed. by W. Chen, X. Chen, Z. Chen, Z. Yao, M. Yasunaga, T. Yu, and R. Zhang. 2022.
- [137] Gitinabard, N., Heckman, S., Barnes, T., Bergner, Y., McNamara, D., **Lynch, C.**, “Piazza Data Analysis Tool”. In: *Proceedings of the 3rd Educational Data Mining in Computer Science Education (CSEDM) Workshop*. Ed. by D. Azcona, Y. V. Paredes, S. I.-H. Hsiao, and T. Price. 2019.
- [138] Harred, R., Cody, C., Maniktala, M., Shabrina, P., Barnes, T., **Lynch, C.**, “How Long is Enough? Predicting Student Outcomes with Same-Day Gameplay Data in an Educational Math Game”. In: *Proceedings of the Workshop on EDM & Games: Leveling Up Engaged Learning with Data-Rich Analytics, held in conjunction with the International Conference on Educational Data Mining (EDM 2019)*. Ed. by J. Rowe, B. Mott, L. Paquette, and S. Lee. 2019.
- [139] Xu, Y., Gitinabard, N., Barnes, T., **Lynch, C. F.**, “What do You Want? Applying Deep Learning Models to Detect Question Topics in MOOC Forum Posts”. In: *In Proceedings of the 2019 KDD Workshop on Deep Learning for Education (DL4Ed), held in conjunction with 2019 KDD Anchorage, Alaska, U.S.A.*. Ed. by A. S. Lan, B.-H. Kim, R. Baraniuk, M. Mozer, and J. Whitehill. 2019.
- [140] Farhana, E., Kapadia, M. S., Cao, W., **Lynch, C. F.**, “Predicting Post-College STEM Career Entrance from Middle School Clickstream Data”. In: *Proceedings of the 2018 Workshop on Scientific Findings from the ASSISTments Longitudinal Data Competition held in conjunction with EDM 2018*. Ed. by N. Heffernan, R. Baker, and B. P. Woolf. 2018.
- [141] Lawrence, H. V., **Lynch, C. F.**, “Norms, Compliance, and Credit: Evaluating EDM in Context”. In: *Proceedings of the 2018 Workshop on Policy and Educational Data Mining*. Ed. by B. P. Woolf and C. F. Lynch. 2018.
- [142] Gitinabard, N., Xue, L., **Lynch, C. F.**, Heckman, S., Barnes, T., “A Social Network Analysis on Blended Courses”. In: *CoRR abs/1709.10215 (2017)*.
- [143] Tsan, J., Rodríguez, F. J., Boyer, K. E., **Lynch, C. F.**, “Let’s Work Together: Improving Block-Based Environments by Supporting Collaboration”. In: *Proceedings of the Blocks and Beyond Workshop at VLHCC 2017*. Ed. by F. Turbak, J. Gray, C. Kelleher, and M. Sherman. 2017.

- [144] Brown, R., **Lynch, C. F.**, Wang, Y., Eagle, M., Albert, J., Barnes, T., Baker, R., Bergner, Y., McNamara, D., “Communities of Performance & Communities of Preference”. In: *Workshops Proceedings of EDM 2015: 8th International Conference on Educational Data Mining*. Ed. by K. Porayska-Pomsta and K. Verbert. Vol. 1446. CEUR-WS, June 2015.
- [145] **Lynch, C. F.**, Price, T. W., Chi, M., Barnes, T., “Using the Hint Factory to Analyze Model-Based Tutoring Systems”. In: *Workshops Proceedings of EDM 2015: 8th International Conference on Educational Data Mining*. Ed. by K. Porayska-Pomsta and K. Verbert. Vol. 1446. CEUR-WS, June 2015.
- [146] Xue, L., **Lynch, C. F.**, Chi, M., “Graph Grammar Induction by Genetic Programming”. In: *Workshops Proceedings of EDM 2015: 8th International Conference on Educational Data Mining*. Ed. by K. Porayska-Pomsta and K. Verbert. Vol. 1446. CEUR-WS, June 2015.
- [147] Catete, V., Hicks, A., Barnes, T., **Lynch, C. F.**, “Snag’em: Graph Data Mining for a Social Networking Game”. In: *Proceedings of the Workshops held at Educational Data Mining 2014, co-located with 7th International Conference on Educational Data Mining (EDM 2014), London, United Kingdom, July 4-7, 2014*. Ed. by S. G. Santos and O. C. Santos. Vol. 1183. CEUR Workshop Proceedings. CEUR-WS.org, 2014.
- [148] **Lynch, C. F.** “AGG: Augmented Graph Grammars for Complex Heterogeneous Data”. In: *Proceedings of the Workshops held at Educational Data Mining 2014, co-located with 7th International Conference on Educational Data Mining (EDM 2014), London, United Kingdom, July 4-7, 2014*. Ed. by S. G. Santos and O. C. Santos. Vol. 1183. CEUR Workshop Proceedings. CEUR-WS.org, 2014.
- [149] Sheshadri, V., **Lynch, C. F.**, Barnes, T., “InVis: An EDM Tool For Graphical Rendering And Analysis Of Student Interaction Data”. In: *Proceedings of the Workshops held at Educational Data Mining 2014, co-located with 7th International Conference on Educational Data Mining (EDM 2014), London, United Kingdom, July 4-7, 2014*. Ed. by S. G. Santos and O. C. Santos. Vol. 1183. CEUR Workshop Proceedings. CEUR-WS.org, 2014.
- [150] Ashley, K. D., **Lynch, C. F.**, Pinkwart, N., Alevén, V., “Borderline Cases of Ill-Definedness - and How Different Definitions Deal with Them”. In: *Proceedings of the 4th Workshop on Intelligent Tutoring Systems for Ill-Defined Domains*. Ed. by C. F. Lynch, K. D. Ashley, T. Mitrovic, V. Dimitrova, N. Pinkwart, and V. Alevén. Pittsburgh, PA, USA, 2010, pp. 1–8.
- [151] **Lynch, C. F.**, Pinkwart, N., Ashley, K. D., Alevén, V., “What Do Argument Diagrams Tell Us About Students’ Aptitude Or Experience? A Statistical Analysis In An Ill-Defined Domain.” In: *Assessment and Feedback in Ill-Defined Domains: Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2008)*. Ed. by V. Alevén, K. D. Ashley, C. F. Lynch, and N. Pinkwart. Montréal, Canada., 2008, pp. 56–67.
- [152] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Alevén, V., “Argument diagramming as focusing device: does it scaffold reading?” In: *Proceedings of the Workshop on AIED Applications for Ill-Defined Domains (IllDef 2007)*. Ed. by V. Alevén, K. D. Ashley, C. F. Lynch, and N. Pinkwart. Marina Del Rey, California, U.S.A., 2007, pp. 51–60.

- [153] Aleven, V., Pinkwart, N., Ashley, K. D., **Lynch, C. F.**, “Supporting Self-explanation of Argument Transcripts: Specific v. Generic Prompts”. In: *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2006)*. Ed. by V. Aleven, K. D. Ashley, C. F. Lynch, and N. Pinkwart. National Central University, Jhongli, Taiwan, 2006, pp. 47–55.
- [154] **Lynch, C. F.**, Ashley, K. D., Aleven, V., Pinkwart, N., “Defining Ill-Defined Domains: A literature survey”. In: *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains (IllDef 2006)*. Ed. by V. Aleven, K. D. Ashley, C. F. Lynch, and N. Pinkwart. National Central University, Jhongli, Taiwan, 2006, pp. 1–10.
- [155] Pinkwart, N., Aleven, V., Ashley, K. D., **Lynch, C. F.**, “Using Collaborative Filtering in an Intelligent Tutoring System for Legal Argumentation”. In: *Proceedings of Workshops held at the 4th International Conference on Adaptive Hypermedia and Adaptive Web-Based Systems (AH 2006)*. Ed. by S. Weibelzahl and A. Cristea. Lecture Notes in Learning and Teaching. Dublin, Ireland: National College of Ireland, 2006, pp. 542–551.

Technical Reports (4 total)

- [156] Elfenbein, M., Lippman, J., M. D., C. L., **Lynch, C. F.**, Ashley, K. D., Schunn, C., *To Revise or Not To Revise: What influences Undergraduates to Implement Peer Critiques of Their Argument Diagrams?* Poster to be presented at the 4th Biennial Conference of the International Society for the Psychology of Science and Technology, University of Pittsburgh, Pittsburgh, PA.. July 2012.
- [157] Herring, D., **Lynch, C. F.**, *Enhancing Traditional Law Teaching to Produce Measurable Gains*. Tech. rep. 2012.
- [158] Herring, D., **Lynch, C. F.**, *Teaching Skills of Legal Analysis: Does the Emperor Have any Clothes?* Tech. rep. 2011.
- [159] **Lynch, C. F.**, Ashley, K. D., Pinkwart, N., Aleven, V., *Computational argument as a diagnostic tool: the role of reliability*. Tech. rep. 2009.

INVITED PRESENTATIONS

Testing is Ethics	2024
Global Harwell Online Forum	
The Ethics of AI	2022
Osher Lifelong Learning Institute, North Carolina State University	
The Past and (Near) Future of AI	2021
Osher Lifelong Learning Institute, North Carolina State University	

- Ethics & Artificial Intelligence** 2019
Osher Lifelong Learning Institute, North Carolina State University
- Big Data and Education: Opportunities and Ethical Nightmares** 2019
International Symposium on the Application of Artificial Intelligence in Education: Assessment, Improvement, and Advancement. Beijing, PRC
- Self Improving Tutors for Argumentation & Policy Questions** 2018
2018 Army Research Laboratory & Institute for Intelligent Systems Expert Workshop on Self-Improving Systems at Vanderbilt University in Nashville Tennessee
- Who Prophets from Big Data in Education: New Insights and New Challenges** 2017
“Big Data and Education: Ethical and Moral Challenges” at The Haifa Center for Law and Technology, University of Haifa, Israel
- Analysis of Diagrams to Support Student Argumentation** 2015
College of Education. North Carolina State University.
- Analysis of Diagrams to Support Student Argumentation** 2015
College of Education, University of Illinois at Urbana Champaign.
- Argumentation and Argument Diagrams** 2015
Department of Computer Science, University of North Carolina at Greensboro
- Diagnosing Arguments** 2014
Department of Computer Science. North Carolina State University.
- Educational Datamining and Ill-Defined Domains.** 2009
Invited talk at Institute for Informatics, Technical University of Clausthal, Clausthal-Zellerfeld, Germany
- Concepts and Goals: What Makes a Problem or Domain Ill-Defined?** 2009
Invited talk for the Army Research Institute: Workshop on Adaptive Training Technologies. Charleston, South Carolina
- Public Policy and Electronic Voting: The Allegheny County Situation** 2008 & 2009
Invited lecture in the Fall 2008 & Spring 2009 Public Policy Course at the University of Pittsburgh. Prof. Ralph Bangs
- Out of the Lab Room and Into the Fire:
Preliminary Lessons for Classroom Integration** 2008
Invited poster presentation at the 2008 Inter-Sciences of Learning Centers Conference in Seattle Washington.
- Hypothetical Games; A Research Overview** 2006
Graduate Program in Intelligent Systems Seminar Series.
- Hypothetical Case Generation: A Proposed Model** 2005
Graduate Program in Intelligent Systems Seminar Series.

MEDIA APPEARANCES

Developments of AI in the Carolinas 2024
Carolina Business Review

PH.D. THESIS ADVISEES

Dr. Zhikai Gao 2024

Assistant Professor, Western Carolina University

Gao, Z. "Modeling and Predicting CS Students' Help-Seeking Activity in Office Hours." *Advisor*: Collin F. Lynch; *Committee*: Sarah Heckman, Tiffany Barnes, Soonhye Park. PhD thesis. North Carolina State University, 2025

Dr. Gabriel Silva de Oliveira 2024

Teaching Assistant Professor, Syracuse University

Oliveira, G. S. "Understanding Coding Struggle in a Large Project-Based CS2 Course." *Co-Advisors*: Collin F. Lynch & Sarah Heckman; *Committee*: Tzvetelina Battestilli, Kanton Reynolds. PhD thesis. North Carolina State University, 2024

Dr. Aman Kumar 2023

NLP Research Scientist, Industrial AI Lab, Hitachi Inc.

Kumar, A. "Information Extraction and Knowledge Graph Development for Manufacturing Science Domain using Natural Language Processing". *Advisor*: Binil Starly, & Collin F. Lynch; *Committee*: Rohan Shirwaiker, Paul Cohen, Gracious Ngaile. PhD thesis. North Carolina State University, 2023

Dr. Adam Gaweda 2022

Teaching Assistant Professor, North Carolina State University

Gaweda, A. M. "Encouraging Student Practice using Nudge Theory Recommendations during Study and Struggle." *Advisor*: Collin F. Lynch; *Committee*: Sarah S. Heckman, Eric Wiebe, Noboru Matsuda. PhD thesis. North Carolina State University, 2022

Dr. Yiqiao Xu 2022

Data Scientist, MetLife Inc.

Xu, Y. "Analyzing and scaffolding semi-structured MOOC forums to support social learning and help-seeking." *Advisor*: Collin F. Lynch; *Committee*: Cesar Delgado, Sarah Heckman, Tiffany Barnes. PhD thesis. North Carolina State University, 2022

Dr. Effat Farhana 2021

Assistant Professor of Computer Science & Software Engineering, Auburn University

Farhana, E. "Science Reading Behavior of Middle School Students within a Digital Literacy Platform". *Advisor*: Collin F. Lynch; *Committee*: James Lester, Noboru Matsuda, Teomara Rutherford. PhD thesis. North Carolina State University, 2021

- Dr. Niki Gitinabard** 2021
Research Engineer, Google Inc.
 Gitinabard, N. "Understanding Student Habits in Blended Courses: An Integration of Student Activities on Different Platforms to Support Students Better." *Advisor*: Collin F. Lynch; *Committee*: Tiffany Barnes, Sarah Heckman, Eric Wiebe. PhD thesis. North Carolina State University, 2021
- Dr. Jennifer Tsan** 2020
Research Associate, WestEd, Computer Science
 Tsan, J. "Developing Adaptive Support for Collaborative Problem Solving Between Upper-Elementary Computer Science Learners." *Advisor*: Collin F. Lynch, & Kristy Boyer *Committee*: Tiffany Barnes, Eric Wiebe. PhD thesis. North Carolina State University, 2020
- Dr. Linting Xue** 2020
NLP/NLU Engineer at Google Research
 Xue, L. "Incorporating Task-specific Features into End-to-End Models to Extract Argument Structures from Natural Language Corpora." *Advisor*: Collin F. Lynch; *Committee*: Chris Healey, James Lester, Tianfu Wu. PhD thesis. North Carolina State University, 2020
-

M.S. THESIS ADVISEES

- Niranj Jyothish** 2021
 Tracking the Spread of COVID-19 Information: Using Network Effects to Improve Q/A Systems
- Zhikai Gao** 2020
 Automatically Classifying Real-time Course Questions on My Digital Hand
- Rasika Pande** 2018
 Automating the Extraction and Evaluation of Comments in Source Code
- Amanul Haque** 2018
 Prioritizing Blended Course Discussion Forum Posts using Linguistic Features and Metadata with Limited Labeled Instances
- Adithya Seshadri** 2016
 Sessions Analysis : Mining Online Tool Use to Predict the Performance in Blended Courses
-

CONFERENCE & WORKSHOP ORGANIZATION

- Co-Organizer** 2024
Educational Data Mining in Writing and Literacy Instruction Co-Located with EDM 2024: Co-Located with the 17th International Conference on Educational Data Mining, Atlanta, Georgia, USA

- Co-Organizer** 2024
The Learning Observer: A Prototype System for the Integration of Learning Data
 Co-Located with AIED 2024: the 25th International Conference on Artificial Intelligence in Education, Recife Brazil
- Track Chair: Educational Applications of AI** 2023
Educational Advances in Artificial Intelligence Co-Located with AAAI 2023: The 37th AAAI Conference on Artificial Intelligence, Washington D.C., USA
- Co-Organizer** 2022
Fairness, Accountability, and Transparency in Educational Data (FATED) Co-Located with EDM 2022: The 15th International Conference on Educational Data Mining. Durham University, Durham, United Kingdom.
- Co-Organizer** 2020
Fairness, Accountability, and Transparency in Educational Data (FATED) Co-Located with EDM 2020: The 13th International Conference on Educational Data Mining. Al Akhawayn University, Morocco.
- Program Co-Chair** 2019
EDM 2019: The 12th International Conference on Educational Data Mining. Montréal, Quebec, Canada.
- Doctoral Consortium Co-Chair** 2018
 International Conference on Educational Data Mining (EDM)
- Co-Organizer** 2018
Policy and Educational Data Mining: Norms, Risks, & Safeguards. Held in conjunction with the 11th International Conference on Educational Data Mining (EDM 2018).
- Co-Organizer** 2017
GEDM 2017: The Third International Workshop on Graph-Based Educational Data Mining. Held in conjunction with the 10th International Conference on Educational Data Mining (EDM 2017).
- Posters Chair** 2016
 9th International Conference on Educational Data Mining
- Co-Organizer** 2015
GEDM 2015: The Second International Workshop on Graph-Based Educational Data Mining. Held in conjunction with the 8th International Conference on Educational Data Mining (EDM 2015).
- Co-Organizer** 2014
GEDM 2014: The First International Workshop on Graph-Based Educational Data Mining. Held in conjunction with the 7th International Conference on Educational Data Mining (EDM 2014). London U.K.
- Student Volunteers Co-Chair** 2010
ITS 2010: 10th International Conference on Intelligent Tutoring Systems. Held in Pittsburgh Pennsylvania.

- Co-Organizer** 2010
Intelligent Tutoring Systems for Ill-Defined Domains. Held in conjunction with the 10th International Conference on Intelligent Tutoring Systems (ITS 2010), Pittsburgh, Pennsylvania, U.S.A.
- Co-Organizer** 2008
Assessment and Feedback in Ill-Defined Domains Held in conjunction with the 9th International Conference on Intelligent Tutoring Systems (ITS 2008). Montreal, Quebec, Canada.
- Co-Organizer** 2007
Artificial Intelligence and Education Applications for Ill-Defined Domains. Held at the 13th International Conference on AI in Education (AIED 2007). Marina Del Rey, California, U.S.A
- Co-Organizer** 2006
Intelligent Tutoring Systems for Ill-Defined Domains Held in conjunction with the 8th International Conference on Intelligent Tutoring Systems (ITS 2006). Jhongli, Taiwan.

ACADEMIC SERVICE

Associate Editor: International Journal of AI in Education (IJAIED)

Reviewer: National Science Foundation

Evaluator: Comisión Nacional de Investigación Científica Tecnológica - Chile

Charter Member: International Educational Data Mining Society (IEDMS).

Member: Association for Computing Machinery (ACM)

Member: ACM Special Interest Group on CS Education.

Member: International Society for AI in Education.

Member of the Editorial Board: International Journal of Educational Data Mining (JEDM)

Reviewer: Springer Artificial Intelligence Review

Reviewer: Computers and Education

Reviewer: ACM Special Interest Group on Computer Science Education (SIGCSE)

Reviewer: Journal of Learning and Instruction

Reviewer: International Journal on Writing Analytics

Reviewer: IEEE Transactions on Learning Technologies (IEEE TLT).

Reviewer: International Journal of AI in Education (IJAIED).

Reviewer: International Journal of Computers and Education.

PC-Member: International Workshop on Argument Mining

PC Member: ACM Special Interest Group on Computer-Human Interaction (CHI)

PC Member: IEEE Conference on Computational Intelligence and Games

PC Member: International Conference on AI in Education (AIED)

PC Member: International Conference on Educational Data Mining (EDM)

PC Member: International Conference on User Modeling, Adaptation and Personalization

PC Member: International Conference on Intelligent Tutoring Systems (ITS).

PC-Member: International Workshop on Computational Models of Natural Argument

PC Member: AAAI Conference on Artificial Intelligence

PC Member: Annual Meeting of the International Society of the Learning Sciences (ICLS)