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Curriculum Vitae
for
Charles Hohensee

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Professional Appointments

Associate Professor, School of Education, University of Delaware, 2017–present
Joint Appointment, Department of Mathematical Sciences, University of Delaware, 2016–present
Assistant Professor, School of Education, University of Delaware, 2011–2017

Education

University of California San Diego (2007–2011), Ph.D. in Mathematics Education (August, 2011)
Dissertation title: *Backward transfer: How mathematical understanding changes as one builds upon it*
San Diego State University (2004–2007), M.A. in Mathematics Education (August, 2007)
Thesis title: *Students' emerging understanding of concepts related to similarity and slope*
Simon Fraser University (1992-1993), Secondary Mathematics and Science Teacher Certification (June, 1993)
University of Alberta (1981–1985), B.Sc. with a specialization in Physics (May 1985)

Scholarship (* indicates item was subject to peer review)

A. PUBLISHED RESEARCH ARTICLES IN REFEREED JOURNALS

*Hsu, J. L., Gartland, S., Prate, J., & Hohensee, C. (2025). Investigating student noticing of quantitative reasoning in introductory biology labs. *CBE-Life Sciences Education*, *24*(1), 1–14. https://doi.org/10.1187/cbe.24-04-0124

*Hohensee, C., Melville, M., Collier, C. L., & Ma, Y. (2025). Backward transfer influences from quadratic functions instruction on levels of linear function reasoning abilities. *Journal for Research in Mathematics Education*, *56*(2), 36–62. https://doi.org/10.5951/jresematheduc-2022-0187

*Hohensee, C., Paoletti, T., Gantt, A., Acharya, S., & Corven, J. (2025). Elementary pre-service teachers' flexible use of strategies to solve linear relationship problems with strip diagrams. *Mathematics Teacher Educator*, *13*(2), 108–121. https://doi.org/10.5951/MTE.2023-0012

*Hohensee, C., Gartland, S., Melville, M., & Willoughby, L. (2024). Comparing contrasting instructional approaches: A way for research to develop insights about backward transfer. *Research in Mathematics Education*, 1–21. https://doi.org/10.1080/14794802.2024.2388067

*Hohensee, C., & Borji, V. (2024). Preparing elementary pre-service teachers to teach early algebra: A conceptual replication study. *Journal of Mathematical Behavior*, 75, 1–19. https://doi.org/10.1016/j.jmathb.2024.101174

*Hohensee, C., Willoughby, L., & Gartland, S. (2022). Backward transfer effects on ways of reasoning about linear functions with instruction on quadratic functions. *Mathematical Thinking and Learning*, *26*(1), 71–89. https://doi.org/10.1080/10986065.2022.2037043

*Suppa, S., & Hohensee, C. (2021). Struggles pre-service teachers experience when taking a pre-symbolic algebra content course. *Mathematics Teacher Education and Development*, *23*(4), 50–73.

*Hohensee, C., Gartland, S., Willoughby, L., & Melville, M. (2021). Backward transfer influences from quadratic functions instruction on students' prior ways of covariational reasoning about linear functions. *Journal of Mathematical Behavior*, *61*. https://doi.org/10.1016/j.jmathb.2020.100834

*Cai, J., Hwang, S., Hiebert, J., Hohensee, C., Morris, A., & Robison, V. (2020). Communicating the significance of research questions: Insights from peer review at a flagship journal. *International*

Journal of Science and Mathematics Education, 18(Suppl 1), 11–24. https://doi.org/10.1007/s10763-020-10073-x

*Hohensee, C., & Lewis, W. E. (2019). Building bridges: Cross-disciplinary peer-coaching self-study. *Studying Teacher Education, 15*(2), 98–117. https://doi.org/10.1080/17425964.2018.1555525

*Hohensee, C., & Jansen, A. (2017). Elementary pre-service teachers' transitional conceptions of partitive division with proper-fraction divisors. *Mathematical Thinking and Learning, 19*(4), 210–236. https://doi.org/10.1080/10986065.2017.1346452

*Hohensee, C. (2017). Preparing elementary prospective teachers to teach early algebra. *Journal of Mathematics Teacher Education, 20*(3), 231–257. https://doi.org/10.1007/s10857-015-9324-9

*Hohensee, C. (2016). Student noticing in classroom settings: A process underlying influences on prior ways of reasoning. *Journal of Mathematical Behavior, 42*, 69–91. https://doi.org/10.1016/j.jmathb.2016.03.002

*Hohensee, C. (2016). Teachers' awareness of the relationship between prior knowledge and new learning. *Journal for Research in Mathematics Education, 47*(1), 16–26. https://doi.org/10.5951/jresematheduc.47.1.0017

*Jansen, A., & Hohensee, C. (2016). Examining and elaborating upon the nature of elementary prospective teachers' conceptions of partitive division with fractions. *Journal of Mathematics Teacher Education, 19*(6), 503–522. https://doi.org/10.1007/s10857-015-9312-0

*Lobato, J., Walters, C. D., Hohensee, C., Gruver, J., & Diamond, J. M. (2015). Leveraging failure in design research. *ZDM - The International Journal on Mathematics Education, 47*(6), 963–979. https://doi.org/10.1007/s11858-015-0695-2

*Hohensee, C. (2014). Backward transfer: An investigation of the influence of quadratic functions instruction on students' prior ways of reasoning about linear functions. *Mathematical Thinking and Learning, 16*(2), 135–174. https://doi.org/10.1080/10986065.2014.889503

*Lobato, J., Hohensee, C., & Diamond, J. (2013). What can we learn by comparing students' diagram-construction processes with the mathematical conceptions inferred from their explanations with completed diagrams? An exploratory study. *Mathematics Education Research Journal. 26*(3), 607–634. https://doi.org/10.1007/s13394-013-0106-3

*Lobato, J., Hohensee, C., & Rhodehamel, B. (2013). Students' mathematical noticing. *Journal for Research in Mathematics Education, 44*(5), 809–847. https://doi.org/10.5951/jresematheduc.44.5.0809

*Lobato, J., Hohensee, C., Rhodehamel, B., & Diamond, J. (2012). Using student reasoning to inform the development of conceptual learning goals: The case of quadratic functions. *Mathematical Thinking and Learning*, *14*(2), 85–119. https://doi.org/10.1080/10986065.2012.656362

*Lobato, J., Rhodehamel, B., & Hohensee, C. (2012). "Noticing" as an alternative transfer of learning process. *The Journal for the Learning Sciences, 21*(3), 433–482. https://doi.org/10.1080/10508406.2012.682189

*Hohensee, C. (2009). A beginning conception of speed when acceleration is constant. *Lore: Rhetoric, Writing, Culture, 7*(1). Retrieved from http://rhetoric.sdsu.edu/lore/7_1/hohensee.pdf

B. PUBLISHED RESEARCH INTO PRACTICE ARTICLES IN REFEREED JOURNALS

*Park, J., Flores, A., & Hohensee, C. (2016). Fractions as numbers and extensions of the number system: Developing activities based on research. *Ohio Journal of School Mathematics, 73*, 13–21. Retrieved from http://hdl.handle.net/1811/80141

C. PUBLISHED BOOK CHAPTERS

*Hohensee, C. (2021). A case for theory development about backward transfer. In C. Hohensee & J. Lobato (Eds.), *Transfer of learning: Progressive perspectives for mathematics education and related fields* (pp. 81–102). Dordrecht, The Netherlands: Springer. https://doi.org/10.1007/978-3-030-65632-4_4

*Lobato, J., & Hohensee, C. (2021). Progressive perspectives on transfer. In C. Hohensee & J. Lobato (Eds.), *Transfer of learning: Progressive perspectives for mathematics education and related fields* (pp. 3–25). Dordrecht, The Netherlands: Springer. https://doi.org/10.1007/978-3-030-65632-4_1

*Jansen, A., & Hohensee, C. (2016). Why teach mathematics? Values underlying mathematics teaching in feature films. In M. Shoffner (Ed.), *Exploring teachers in fiction and film: Saviors, scapegoats and schoolmarms* (pp. 90–102). New York: Routledge. https://doi.org/10.4324/9781315671949

*Whitacre, I., Hohensee, C., & Nemirovsky, R. (2009). Expressiveness and mathematics learning. In W. M. Roth (Ed.), *Mathematical representation at the interface of body and culture* (pp. 275–308). Charlotte, NC: Information Age Publishing.

D. PUBLISHED BOOKS

*Hiebert, J., Cai, J., Hwang, S., Morris, A. K., & Hohensee, C. (2023). *Doing research: A new researcher's guide*. Dordrecht, The Netherlands: Springer. http://doi.org/10.1007/978-3-031-19078-0

*Hohensee, C., & Lobato, J. (2021). *Transfer of learning: Progressive perspectives for mathematics education and related fields.* : Springer. https://doi.org/10.1007/978-3-030-65632-4

E. PUBLISHED EDITORIAL ARTICLES

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S., L, & Hiebert, J. (2020). Improving the impact of research on practice: Capitalizing on technological advances for research. *Journal for Research in Mathematics Education, 51*(5), 518–529. https://doi.org/10.5951/jresematheduc-2020-0165

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Cirillo, M., Kramer, S. L., & Hiebert, J. (2020). Timely and useful data to improve classroom instruction. *Journal for Research in Mathematics Education, 51*(4), 387–398. https://doi.org/10.5951/jresematheduc-2020-0056

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Cirillo, M., Kramer, S. L., & Hiebert, J. (2020). Working across contexts: Scaling up or replicating with variations? *Journal for Research in Mathematics Education, 51*(3), 258–267. https://doi.org/10.5951/jresemtheduc-2020-0007

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L., & Hiebert, J. (2020). Addressing the problem of always starting over: Identifying, valuing, and sharing professional knowledge for teaching. *Journal for Research in Mathematics Education, 51*(2), 130–139. https://doi.org/10.5951/jresematheduc-2020-0015

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L., Hiebert, J. & Bakker, A. (2020). Maximizing the quality of learning opportunities for every student. *Journal for Research in Mathematics Education, 51*(1), 12–25. https://doi.org/10.5951/jresematheduc.2019.0005

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L. & Hiebert, J. (2019). So what? Justifying conclusions and interpretations of data. *Journal for Research in Mathematics Education, 50*(5), 470–477. https://doi.org/10.5951/jresematheduc.50.5.0470

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L. & Hiebert, J. (2019). Choosing and justifying robust methods for educational research. *Journal for Research in Mathematics Education, 50*(4), 342–348. https://doi.org/10.5951/jresematheduc.50.4.0342

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L. & Hiebert, J. (2019). Theoretical framing as justifying. *Journal for Research in Mathematics Education, 50*(3), 218–244. https://doi.org/10.5951/jresematheduc.50.3.0218

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., Cirillo, M., Kramer, S. L. & Hiebert, J. (2019). Posing significant research questions. *Journal for Research in Mathematics Education, 50*(2), 114–120. https://doi.org/10.5951/jresematheduc.50.2.0114

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2019). Research pathways that connect research and practice. *Journal for Research in Mathematics Education, 50*(1), 2–10. https://doi.org/10.5951/jresematheduc.50.1.0002

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2018). Reconceptualizing the roles of researchers and teachers to bring research closer to teaching. *Journal for Research in Mathematics Education, 49*(5), 514–520. https://doi.org/10.5951/jresematheduc.49.5.0514

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2018). Using data to understand and improve students' learning: empowering teachers and researchers through building and using a knowledge base. *Journal for Research in Mathematics Education, 49*(4), 362–372. https://doi.org/10.5951/jresematheduc.49.4.0362

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2018). Building and structuring knowledge that could actually improve instructional practice. *Journal for Research in Mathematics Education, 49*(3), 238–246. https://doi.org/10.5951/jresematheduc.49.3.0238

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2018). Data in a brave new world: Reducing isolation to amplify the impact of educational research on practice. *Journal for Research in Mathematics Education, 49*(2), 118–124. https://doi.org/10.5951/jresematheduc.49.2.0118

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2018). The role of replication studies in educational research. *Journal for Research in Mathematics Education, 49*(1), 2–8. https://doi.org/10.5951/jresematheduc.49.1.0002

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2017). A future vision of mathematics education research: Blurring the boundaries of research and practice to address teachers' problems. *Journal for Research in Mathematics Education, 48*(5), 466–473. https://doi.org/10.5951/jresematheduc.48.5.0466

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2017). Making classroom implementation an integral part of research. *Journal for Research in Mathematics Education, 48*(4), 342–347. https://doi.org/10.5951/jresematheduc.48.4.0342

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2017). Clarifying the impact of educational research on learning opportunities. *Journal for Research in Mathematics Education, 48*(3), 230–236. https://doi.org/10.5951/jresematheduc.48.3.0230

Cai, J., Morris, A., Hohensee, C., Hwang, S., Robison, V., & Hiebert, J. (2017). Clarifying the impact of educational research on students' learning. *Journal for Research in Mathematics Education, 48*(2), 118–123. https://doi.org/10.5951/jresematheduc.48.2.0118

Cai, J., Morris, A., Hwang, S., Hohensee, C., Robison, V., & Hiebert, J. (2017). Editorial: Improving the impact of educational research. *Journal for Research in Mathematics Education, 48*(1), 2–6. https://doi.org/10.5951/jresematheduc.48.1.0002

F. ARTICLES UNDER REVIEW OR IN REVISE AND RESUBMIT

*Hohensee, C., Normand, E., Gartland, S., & Ma, Y. (2023). *Pre-covariational reasoning framework: unpacking the levels of reasoning that precede covariational reasoning.* Manuscript under review.

*Gartland, S., Hohensee, C., & Collier, C. (2023). *Backward transfer influences from quadratic functions instruction on linear functions performance.* Manuscript in R&R.

*Hohensee, C., Paoletti, T., Corven, J., & Gantt, A. (2023). *Elementary preservice teachers, early algebra, and reasoning deductively with diagrams.* Manuscript between reviews.

*Hohensee, C., & Suppa, S. (2020). *Encompassing consequential transitions when prospective elementary teachers prepare to teach early algebra.* Manuscript between reviews.

G. ARTICLES IN REFEREED PROCEEDINGS

*Sharmin, S., Koiler, R., Sadik, R., Bhattacharjee, A., Patre, P. R., Kullu, P., Hohensee, C., Getchell, N., & Barmaki, R. L. (2024, January). Cognitive engagement for STEM+C education: Investigating serious game impact on graph structure learning with fNIRS. In *Proceedings of the 2024 IEEE International Conference on Artificial Intelligence and eXtended and Virtual Reality (AIxVR)* (pp. 195–204). Los Angeles, CA. http://doi.org/10.1109/AIxVR59861.2024.00032.

*Hohensee, C., Gartland, S., Ma, Y., & Acharya, S. (2023). A study of what students focus on and notice about quadratic functions representations during instruction. In T. Lamberg, & D. Moss, *Proceedings of the 45th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 2, pp. 16–24). Reno, NV: University of Nevada.

*Hohensee, C., Gartland, S., Ma, Y., & Acharya, S. (2023). Comparing teacher goals for student focusing and noticing with student outcomes for focusing and noticing. In M. Ayalon, B. Koichu, R. Leikin, L. Rubel, & M. Tabach, *Proceedings of the 46th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3, pp. 75–82). Haifa, Israel: PME.

*Paoletti, T., Hohensee, C., Gantt, A. (2022). Quantitative reasoning, deductive reasoning, and operating with algebraic symbols: A novel framework. *Proceedings of the 44th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 284–289). Nashville, TN: PME-NA.

*Paoletti, T., Gantt, A. L., Corven, J., & Hohensee, C. (2022). Moving beyond solving equations: Characterizing elementary pre-service teachers' development of algebraic reasoning. In S. S. Karunakaran & A. Higgins (Eds.). *Proceedings of the 24th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 437–445). Boston, MA.

*Hohensee, C., Melville, M., Collier, C., & Ma, Y. (2021, October). Differential backward transfer effects for students with different levels of linear function reasoning abilities. In D. Olanoff, K. Johnson, & S. Spitzer (Eds.), *Proceedings of the 43rd annual meeting of the North American Chapter of the*

International Group for the Psychology of Mathematics Education (pp. 1238–1246). Philadelphia, PA: PME-NA.

*Hohensee, C., Gartland, S., & Willoughby, L. (2019, November). Backward transfer effects on action and process views of functions. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1415–1423). St Louis, MO: University of Missouri.

*Hohensee, C., Willoughby, L., & Gartland, S. (2018, July). Backward transfer effects when learning about quadratic functions. In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.), *Proceedings of the 42nd Conference of the International Group for the Psychology of Mathematics Education* (Vol. 5, p. 65). Umeå, Sweden: PME.

*Hohensee, C. (2017, July). Investigating backward transfer effects. In B. Kaur, W. K. Ho, T. L. Toh, & B. H. Choy (Eds.), *Proceedings of the 41st Conference of the International Group for the Psychology of Mathematics Education* (Vol. 2, p. 31). Singapore: PME.

*Hohensee, C., & Young, S. (2015). Elementary mathematics pre-service teachers' consequential transitions from formal to early algebra. In T. Fukawa-Connelly, N. Infante, K. Keene, and M. Zandieh (Eds.), *Proceedings of the 18th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 603–608). Pittsburgh, PA.

*Hohensee, C., & Jansen, A. (2014). Pre-service teachers' evolving conceptions of partitive division with fractional divisors. In S. Oesterle, C. Nicol, P. Liljedahl, & D. Allan (Eds.), *Proceedings of the Joint Meeting of PME 38 and PME-NA 36* (Vol. 6, p. 101). Vancouver, Canada: PME.

*Hohensee, C. (2012). Conceptual Connections Between Student Noticing and Productive Changes in Prior Knowledge. In L. R. Van Zoest, J. J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 296–303). Kalamazoo, MI: Western Michigan University.

*Hohensee, C. (2006). Students' thinking about domains of piecewise functions. In S. Alatorre, J. L. Cortina, M. Sáiz, and A. Méndez (Eds.), *Proceedings of the 28th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* Vol. 2 (pp. 586–593). Mérida, México: Universidad Pedagógica Nacional.

H. SCHOLARLY PRESENTATIONS

*Hsu, J., Gartland, S., Prate, J., & Hohensee, C. (2024, July). *Investigating student noticing of quantitative reasoning in introductory biology labs*. Presented at the 14th Annual Society for the Advancement of Biology Education Research National Meeting, Minneapolis, Minnesota.

*Gartland, S., & Hohensee, C. (2023, October). *Backward transfer and students' performance on linear functions problems.* Presented at the 2023 National Council for Teachers of Mathematics Research Conference, Washington, DC.

*Hohensee, C., Gartland, S., Ma, Y., & Acharya, S. (2023, October). *A Study of what students focus on and notice about quadratic functions.* Presented at the 45th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, NV.

*Hohensee, C., Gartland, S., Ma, Y., & Acharya, S. (2023, July). *Comparing teacher goals for student focusing and noticing with student outcomes for focusing and noticing.* Presented at the 46th annual meeting of the International Group for the Psychology of Mathematics Education, Haifa, Israel.

Hohensee, C. (2023, June). *Backward transfer research 2017-2023*. Presented at the Bi-Annual National Science Foundation DRK-12 PI Meeting, Arlington, VA.

*Hohensee, C., Ma, Y., & Acharya, S. (2023, February). *Teaching that promotes student noticing of mathematically important features of quadratic functions*. Presented at the 27th annual Association of Mathematics Teacher Educators Conference, New Orleans, LA.

*Paoletti, T., Hohensee, C., Gantt, A., & Colvin, J. (2022, November). *Quantitative and deductive reasoning in algebra: A novel framework*. Presented at the 44th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Nashville, TN.

*Paoletti, T., Gantt, A., Colvin, J., & Hohensee, C. (2022, February). *Moving beyond solving equations: Characterizing elementary pre-service teachers' development of algebraic reasoning.* Presented at the 24th Annual SIGMAA on Research in Undergraduate Mathematics Education Conference, Boston, MA.

*Hohensee, C., Melville, M., Collier, C., & Ma, Y. (2021, October). *Differential backward transfer effects for students with different levels of linear function reasoning abilities.* Presented at the 43rd annual

meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Philadelphia, PA.

*Hohensee, C. (2020, April). Making a case for methods. In J. Cai (Chair), *Communicating empirical research in mathematics education: Insights from flagship journal peer review.* Presented at the annual meeting of the American Educational Research Association, New York, NY. https://convention2.allacademic.com/one/aera/aera20/ (Conference cancelled)

*Hohensee, C., Gartland, S., Willoughby, L., & Melville, M. (2019, November). *Backward transfer effects on action and process views of functions.* Presented at the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, St. Louis, MO.

*Hohensee, C., Willoughby, L., & Gartland, S. (2018, July). *Backward transfer effects when learning about quadratic functions*. Presented at the 42nd annual meeting of the International Group for the Psychology of Mathematics Education, Umeå, Sweden.

*Hohensee, C. (2017, July). *Investigating backward transfer effects*. Presented at the 41st annual meeting of the International Group for the Psychology of Mathematics Education, Singapore.

*Hohensee, C., Thanheiser, E., Conner, A. M., & Jansen, A. (2016, January). *Listening and Responding to Student Voices: Fostering Caring Relationships with Prospective Teachers Through Pre-Course Meetings.* Presented at the 20th annual Association of Mathematics Teacher Educators Conference, Irvine, CA.

*Jansen, A., & Hohensee, C. (2016, January). *Why Teach Mathematics? Prospective Teachers' Reflections on Representations of Mathematics Teaching in Feature Films* (poster). Presented at the 20th annual Association of Mathematics Teacher Educators Conference, Irvine, CA.

*Hohensee, C. (2015, April). *Teacher Noticing of Relationships Between Earlier and Later Learning.* Presented at the 2015 National Council for Teachers of Mathematics Research Conference, Boston, MA.

*Hohensee, C., & Young, S. (2015, February). *Elementary mathematics pre-service teachers' consequential transitions from formal to early algebra.* Presented at the 18th Annual SIGMAA on Research in Undergraduate Mathematics Education Conference, Pittsburgh, PA.

*Hohensee, C., & Jansen, A. (2014, July). *Pre-service teachers' evolving conceptions of partitive division with fractional divisors.* Presented at the 38th annual meeting of the International Group for the Psychology of Mathematics Education, Vancouver, Canada.

*Hohensee, C. (2013, April). Backward Transfer as Productive Influences on Prior Knowledge (poster). In Randi Engle (Chair), *Division C - Learning and Instruction: The Transfer Showcase: Exciting Contemporary Advances About an Educationally Central Phenomenon*. Presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

*Hohensee, C. & Jansen, A. (2013, January). *Making Sense of the Partitive Model of Division of Fractions: Conceptual challenges for preservice teachers*. Presented at the 17th annual Association of Mathematics Teacher Educators Conference, Orlando, FL.

*Hohensee, C. (2012, November). *Conceptual Connections Between Student Noticing and Productive Changes in Prior Knowledge.* Presented at the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Kalamazoo, MI.

*Hohensee, C., Lobato, J., & Diamond, J. (2012, April). Relationships Between *How* Students Construct Diagrams and Their Mathematical Understandings. In T. Ricks (Chair), *SIG-Research in Mathematics Education: Students' Mathematical Thinking and Learning.* Presented at the annual meeting of the American Educational Research Association, Vancouver, BC.

*Hohensee, C. (2009, April). Relationships between representation use and quadratic function conceptions. In E. Tillema (Chair), *Quantity-based approaches to quadratic functions.* Presented at the Research Pre-Session of the annual meeting of the National Council of Teachers of Mathematics, Washington, D.C.

*Hohensee, C. (2009, April). A beginning conception of speed when acceleration is constant. In K. Gossett (Chair), *The ecstasy of speed*. Presented at the annual Crisis Carnival Conference at San Diego State University, San Diego, CA.

*Hohensee, C. (2009, February). *A beginning conception of speed when acceleration is constant.* In A. Chizhik (Chair), Learning approaches to STEM curriculum. Presented at the annual San Diego State University Student Research Symposium, San Diego, CA.

*Lobato, J., & Hohensee, C. (2008, March). The psychological and social organization of "noticing" mathematical regularities. In A. Izsák (Chair), *Learning as an interactively constituted phenomenon:*

New approaches in mathematics education. Presented at the annual meeting of the American Educational Research Association, New York, NY.

*Hohensee, C. (2006, November). *Students' thinking about domains of piecewise functions.* Presented at the 28th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mérida, México.

I. INVITED TALKS/PRESENTATIONS

Hohensee, C. (2022, November). *Backward transfer and teaching quadratic functions.* Invited talk for the Department of Mathematics, Boise State University, Boise, ID.

Hohensee, C. (2019, May). *Backward transfer and reasoning about linear functions.* Invited poster presentation for the Center of Research in Mathematics and Science Education, San Diego State University, San Diego, CA.

Hohensee, C. (2019, March). *Backward transfer: When new learning influences prior ways of reasoning*. Invited talk for the Mathematics Education Student Association, College of Education, University of Georgia, Athens, GA.

Hohensee, C. (2016, March). *Current research in mathematical noticing, quantitative reasoning, and backward transfer.* Invited talk for Mathematics and Science Education Concentration Area, Teaching and Learning Department, Temple University, Philadelphia, PA.

Hohensee, C. (Presenter). (2016, January 18). Episode 1602: Teachers' awareness of the relationship between prior knowledge and new learning [Audio podcast]. In S. Otten (Producer), *Math Ed Podcast.* Retrieved from http://mathed.podomatic.com/entry/2016-01-25T07_00_55-08_00

J. GRANTS

Principal Investigator, *Mixed Methods Investigation of Backward Transfer Effects in Mathematics Education*. (1,617,496). National Science Foundation DRL - Discovery Research K-12 (DRK-12). 2025-2028. [under review]

Co-Principal Investigator, *BCSER: Making Capacity Building a Reality: An Institute for Nurturing Early-Career Researchers in Mathematics Education* (Dr. Jinfa Cai, PI; Dr. Anne Morris, Co-PI; Dr. Stephen Hwang, Co-PI; Dr. James Hiebert, Co-PI) ($1,000,000). National Science Foundation - ECR Building Capacity in STEM Education Research (ECR: BCSER), 2024-2026. [Unfunded]

Co-Principal Investigator, *Conference: Mentoring Early-Career Researchers: A Follow-Up Conference* (Dr. Jinfa Cai, PI; Dr. Anne Morris, Co-PI; Dr. James Hiebert, Co-PI) ($97,492). National Science Foundation - ECR Building Capacity in STEM Education Research (ECR: BCSER), 2023-2024. [Unfunded]

Co-Principal Investigator, RETTL: Multimodal Embodied Framework for Cognitive and Physical Development of Children in Playful Math Learning (Dr. Roghayeh Barmaki, PI; Dr. Nancy Getchell, Co-PI) ($850,000). National Science Foundation – Research on Emerging Technologies for Teaching and Learning (RETTL), 2024-2027. [Unfunded]

Co-Principal Investigator, *Conference Proposal: Looking Back and Looking Forward: Increasing the Impact of Educational Research on Practice*. (Dr. Jinfa Cai, PI; Dr. James Hiebert, Co-PI; Dr. Anne Morris, Co-PI) ($99,971). National Science Foundation - Discovery Research PreK–12 (DRK12), 2019–2022. [Funded]

Principal Investigator, *NSF CAREER: Investigating Backward Transfer Effects in the Context of Instructional Activities About Linear and Quadratic Functions*. ($880,300.00). National Science Foundation CAREER program through Discovery Research K–12 (DRK12), 2017-2023. [Funded] (http://www.udel.edu/udaily/2017/may/nsf-career-award-hohensee/) (https://www.udel.edu/udaily/2019/july/national-science-foundation-award-algebra-charles-hohensee/)

Service

A. EXTERNAL SERVICE

Conference Facilitator for Early Career Researchers (2021, 2022). Conference supported by NSF.

Associate Journal Editor: *Journal for Research in Mathematics Education* (2015–2020). JRME has been recognized as the top journal in the field of mathematics education.

Manuscript reviewer for the following journals:

American Education Research Journal, Cognition and Instruction, Educational Studies, Journal of

Mathematical Behavior, *Journal for Research in Mathematics Education, Journal of Mathematics Teacher Education, Journal of Teacher Education, Mathematical Thinking and Learning*, *Research in Mathematics Education, Teachers and Teacher Education*

NSF Grant Proposal Review Panel (2016, 2018, 2022)

Conference proposal reviewer for the following conferences:

Psychology of Mathematics Education – North American Chapter Annual Conference
American Educational Research Association Annual Conference

B. INTERNAL SERVICE

University NSF Career Academy Planning Committee (2018–2019)
University Committee on Teacher Education (2017–2019)
University Professional Education Conduct Board (2015–2021)
CEHD College School Academic Review Task Force (2015)
CEHD Graduate Studies Committee (2014–2015)
SOE Chair CT Associate Professor in Mathematics Education Search (2019–2020)
SOE Promotion and Tenure Committee (2018–2019)
SOE Committee on Undergraduate Studies in Education (2015–2016)
SOE Ed.D. Admissions Committee (2014–2016)
SOE Welfare Committee (2012–2013)
SOE Committee on Graduate Studies in Education (2012)

Teaching Experience

University of Delaware, School of Education

Undergraduate

MATH 217: *Algebra for Middle School Teachers*
MATH 252: *Mathematics for K-8 Teachers: Rational Numbers and Probability*
MATH 253: *Mathematics for K-8 Teachers: Geometry, Algebra and Measurement*
EDUC 267: *Representations of Mathematics Teachers in Contemporary Films*
EDUC 367: *Observing/ reflecting on high school mathematics teaching in a real classroom*

Graduate

EDUC 833: *Theory and Research on Mathematical Thinking and Learning*
EDUC 834: *Theory and Research on Mathematics Teaching*
EDUC 835: *Theory and Research on Mathematics Curriculum*

San Diego State University, Department of Mathematics and Statistics

Undergraduate:

Math 315: *Topics in Elementary Mathematics*

University of California San Diego, Continuing Education

Undergraduate:

EDUC 31738: *Statistics for Tests and Measure*

Crawford High School, San Diego, CA

Secondary Mathematics (2001–2007)

Fontana High School, Los Angeles, CA

Secondary Mathematics (2000–2001)

Vancouver Learning Center, Vancouver, Canada

Middle School and Secondary Mathematics (1993–2000)

Research and Teaching Interests

Algebraic reasoning in elementary and secondary mathematics, generalization of learning, development of quantitative reasoning in mathematics and science, teaching for conceptual understanding, beginning conceptions of complex mathematics concepts, mathematical knowledge for teaching

Advisement

Doctoral Student Primary Advisor

Srujana Acharya (Ph.D.; Current), Crystal Collier (Ph.D.; Current), Jonathan Dinkins (Ed.D.; Current), Kelly McCormick (Ed.D.; Current), Jessica Parsell (Ed.D.; Graduated), Diana Roscoe (Ed.D., Graduated), Kristin McKenney (Ph.D.: Graduated), Robert Mixell (Ph.D.; Graduated), Eileen Voltz (Ed.D.; Graduated)

Doctoral Student Committee Member

Casey Griffin (Ph.D.; Current), Amanda Mirzaei (Ph.D.; Current). Matthew Melville (Ph.D.; Graduated), Kathleen Wilson (Ed.D.; Graduated), Laura Willoughby (Ph.D.; Current), Sudha Aravindan (Ed.D.; Graduated), Jennifer Bonham (Ed.D.; Graduated), Nathan Ndiforamang (Ed.D.; Graduated), Mike Dao (Ed.D.; Graduated), Susanna Molitoris Miller (Ph.D.; Graduated), Heather Gallivan (Ph.D.; Graduated), Erin Meikle (Ph.D.; Graduated), Emily Miller (Ph.D.; Graduated), Lauren Patson (Ed.D.; Graduated)

Distinctions, Awards, Grants

Early Career Publication Award (2015) from AERA's Special Interest Group for Research in Mathematics Education [SIG-RME]. The SIG/RME Early Career Publication Award recognizes outstanding mathematics education research published by individuals within five years of receiving their doctoral degrees.

Service, Teaching and Research (STaR) Fellow (2012) – the STaR program, which is National Science Foundation funded, supports early career mathematics educators in establishing a career trajectory that leads to promotion and tenure. Participation in the program as a STaR Fellow is competitive. Fellows are selected based on the application materials that applicants submit.

San Diego State University Student Research Symposium College Dean's Award (2009)

California State University Chancellor's Doctoral Incentive Program (CDIP) Award (2008–2011)

School Site Teacher of the Year (2006–2007): Invention and Design Educational Academy, Crawford High School, San Diego, CA