

Myunghwan Shin
Liberal Studies
Kremen School of Education and Human Development
Liberal Studies
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Academic Degrees: *(Include teaching credentials, if any)*

Degree	Institution	Area of Emphasis
Ph.D. Curriculum, Instruction, & Teacher Education	Michigan State University	Science Education
MS, Science Education	Seoul National University	Science Education
BS, Earth and Space Science Education	Seoul National University	Earth and Space Science Education
Graduate Certificate in Science Education	Michigan State University	Science Education
Teaching Credential (secondary) in Earth and Space Science Education	Ministry of Education, Science and Technology of Korea	Earth and Space Science

Professional Experience:

Dates	Position/Institution
2016-present	Assistant Professor of STEM Education, Fresno State
2011-2015	Instructor & Research Assistant, Michigan State University
2010-2011	Instructor & Research Assistant, Michigan State University
2009-2011	Instructor, Seoul National Science Museum
2008-2010	Teacher, Chong-Sol Middle School

Faculty and Administrative Load: *(Should total 12 units each semester)*

<u>Fall 2018</u>		<u>Spring 2019</u>	
CI 175	6	CI 175	3
EHD 180T	3		

Community Service

Dates	Organization	Activity/Accomplishments
2018-2019	Central California Research Symposium	Oral session judge
2017-2018	Cesar Chavez Education Conference Planning Committee	Executive committee member
2016	CA STEM Symposium	California State University Leadership Team
2015	Michigan State	Workshop Organizer & Presenter: Creating Inclusive Excellence in Teacher Education Workshop
2013	MSU Science Festival	Presenter & organizer

University/School Service

Dates	Committee	Activity/Accomplishments
2017-present	Campus Planning Committee	Committee Member
2017-present	International Education Committee	Chair
2017-present	Technology Committee	Committee Member
2016-2017	Educational Equity Committee	Committee Member
2018-2019	Search Committee for an Assistant Professor of STEM Education (C&I)	Committee Member

Professional Association Memberships

Dates	Association/Organization	Role
2012-present	American Education Research Association (AERA)	Member & Proposal Reviewer
2011-present	National Association for Research in Science Teaching (NARST)	Member, Proposal Reviewer, & Journal Article Reviewer
2016-present	National Science Teaching Association (NSTA)	Member
2016-present	California Science Teachers Association (CSTA)	Member
2019-present	Association for Educational Communications and Technology (AECT)	Member

Publications (Selected)

Shin, M., Greenberg, D., & Nazar, C. (2018). "We Wanna Makerspace!": Youth Participatory Action Research Towards the Design of Equity-Oriented Making. In Calabrese Barton, A., & Tan, E. (Eds). STEM-Rich Maker Learning: Designing for Equity with Youth of Color (pp. 34-61). New York, NY: Teacher College Press.

- Tan, E., Calabrese Barton, A., Shin, M., & Turner, C. (2016). *Probing participatory partnerships: Equitably-consequential making by, for and with marginalized youth*. In *FabLearn 2016 Proceedings of the 6th Annual Conference on Creativity and Fabrication in Education* (pp. 1-8). Stanford, CA.
- Calabrese Barton, A., Tan, E., & Shin, M. (2016). *Mobilities of Criticality: Space-Making, Identity and Agency in a Youth-Centered Makerspace*. Singapore: International Society of the Learning Sciences, 2016.
- Shin, M., Calabrese Barton, A., & Johnson, L. (2016). "I am an Innovator: Quahn's Counter-Narrative of Becoming in STEM." In Marx, S. (Ed). *Qualitative Research in STEM: Studies of Equity, Access and Innovation* (pp. 15-35). New York, NY: Routledge.

Papers and Presentations (Selected)

- Shin, M. & Lee, J. (2020, accepted). *Funds of Knowledge in Making: Re-envisioning Maker Education in STEM Teacher Preparation*. 2020 National Association for Research in Science Teaching Annual International Conference, Portland, OR.
- Macias, C., & Shin, M. (2020, accepted). "They Were Teaching Us!": Preservice Teacher and Elementary Student Collaborative Inquiry in STEM Education. 2020 American Educational Research Association annual conference, San Francisco, CA.
- Phan, T., & Shin, M. (2019, October). *Re-envisioning College STEM Education Courses Using Human-centered Design*. 2019 Association for Educational Communications and Technology International Convention, Las Vegas, NV.
- Shin, M., Billen, M., Brandl, S., & Macias, C. (2019, May). "We Can Make a Difference!": Re-envisioning STEM Education with Preservice Teacher Inquiry. Presented at 2019 César Chávez Education Conference, Fresno, CA.
- Macias, C., & Shin, M. (2019, May). "Kids' Voices Matter!": Transforming Elementary STEM Education with Preservice Teachers' Collaborative Inquiry. Presented at 40th Annual Central California Research Symposium, Fresno, CA.
- Shin, M., & Nelson, F. (2018, April). *Enacting Culturally Sustaining Pedagogy in a STEM Capstone Course for Preservice Elementary Teachers*. Presented at American Educational Research Association annual conference, New York, NY.
- Shin, M., & Calabrese Barton, A. (2017, April). "We Want a Makerspace!": Youth Participatory Action Research for Designing a Youth-Centered Makerspace. Presented at National Association for Research in Science Teaching Annual International Conference. San Antonio, TX
- Shin, M. (2017, February). *Expanding the Boundaries of STEM Project-Based Learning with 3D Printers*. Presented at Western Regional Noyce Conference. Fresno, CA
- Tan, E., Calabrese Barton, A., Shin, M., & Turner, C. (2016, October). *Probing participatory partnerships: Equitably-consequential making by, for and with marginalized youth*. Presented at Annual Conference on Creativity and Fabrication in Education. Palo Alto, CA
- Shin, M., Calabrese Barton, A., Greenberg, D., & Nazar, C. D. (2016, April). *Youth Engagement and Mobilities of Learning During Making in an Equity-Oriented Makerspace*. Presented at American Educational Research Association annual conference, Washington, DC.
- Calabrese Barton, A., Shin, M., Greenberg, D., & Nazar, C. D. (2016, April). *Innovating With Scientists, Engineers, and Community Members: Youths' Engineering Design and Networks of Experts*. Presented at American Educational Research Association annual conference, Washington, DC.

- Greenberg, D., Calabrese Barton, A., Shin, M., Nazar, C. D., Shin, M., Turner, C., & Turner, C. (2016, April). *I Own My STEM Journey: Young Black Women Authoring 3-D Re-Presentations of Their STEM Pathways*. Presented at American Educational Research Association annual conference, Washington, DC.
- Shin, M., Calabrese Barton, A., Greenberg, D., Nazar, C. D., & Tan, E. (2015, April). *Little Kids Can Do Ginormous Works: Youth's Engineering Design and Identity Work*. Presented at American Education Research Association annual conference, Chicago, IL.
- Nazar, C. D., Calabrese Barton, A., Shin, M., Greenberg, D., Tan, E. (2015, April). *Hybrid Practices and Developing Expertise in Engineering Among Middle School Students*. Presented at American Education Research Association annual conference, Chicago, IL.
- Greenberg, D., Calabrese Barton, A., Shin, M., Nazar, C. D., & Tan, E. (2015, April). *Innovators Together: Collaborative, Strategic Resource Use and Movement for Identity Work in After-School Science*. Presented at American Education Research Association annual conference, Chicago, IL.
- Calabrese Barton, A., Nazar, C. D., Shin, M., Greenberg, D., & Tan, E. (2015, April). *Authoring Identity Pathways among Youth from Non-Dominant Backgrounds through Engineering for Sustainable Communities*. Presented at National Association for Research in Science Teaching annual conference, Chicago, IL.
- Calabrese Barton, A., Tan, E., Calabrese Barton, S., Caballero, D., Geier, B., Greenberg, D., Nazar, C. D., & Shin, M. (2015, February). *Tools for Teaching and Learning Engineering Practices: Pathways Towards Productive Identity Development in Engineering*. Presented at CREATE for STEM Mini Conference 2015, East Lansing, MI.
- Calabrese Barton, A., Tan, E., Sato, T., Birmingham, D., & Shin, M. (2015, February). *Becoming Community Science Experts*. Presented at CREATE for STEM Mini Conference 2015, East Lansing, MI.
- Shin, M. & Calabrese Barton, A. (2014, April). *I Can Do Science!: Wrestling with Stereotypes and Science Identity*. Presented at National Association for Research in Science Teaching annual conference, Pittsburgh, PA.
- Shin, M. & Calabrese Barton, A. (2014, April). *Chemistry as a Tool for Transformations: Knowledge and Agency*. Presented as part of a symposium entitled *Reconceptualizing High School Chemistry Based on Authentic Practices* at National Association for Research in Science Teaching annual conference, Pittsburgh, PA.
- Calabrese Barton, A., Tan, E., Sato, T., Birmingham, D., & Shin, M. (2014, April). *Empowering Underrepresented Middle School Youth in Engineering Knowledge and Productive Identity Work*. Presented as part of a symposium entitled *Structure-Agency Dialectic: Insights into Science Learning and Teaching of Historically Marginalized Youth in the US* at National Association for Research in Science Teaching annual conference, Pittsburgh, PA.

Grants and Research

Dates	Activity/Agency	Amounts
2019	Dandoy Research Grant, Fresno State	\$3,000
2018	Dandoy Research Grant, Fresno State	\$2,667

Collaborative Works/Projects (with public schools, community agencies, etc.)

STEM Education Center, Assistant Director, Fall 2017-present

I have served for the Fresno State's STEM Education Center as an assistant director and worked with College of Science and Math faculty to operate the center and to redesign its activities. For example, I co-developed the STEM Education Center outreach program to better serve local public school teachers and students at Central Valley.

Course Redesign, Lead-developer, 2018-2019

As working with LEBSE, CI faculty and local school teachers, I redesigned CI 175 course (science instruction and applied technology) in the multiple subject credential program to emphasize social justice, integrated STEM education, and CA Next Generation Science Standards.

Collegial Works/Projects (i.e., grants, articles, conference presentations, etc.)

NSF-DRK proposal writing, Co-PI, October 2019

I have collaborated with my colleagues to explore avenues to integrate STEM in projects and courses. For example, I wrote a research grant proposal (Co-PI) targeting National Science Foundation, Discovery Research PreK-12 grant working with faculty in the Kremen School of Education and Human Development and the College of Science and Mathematics. In the proposed project, my team will propose a new professional development model to help preschool teachers teach children STEM through research- and evidence-based teaching practices. This proposed project will contribute to reducing the STEM opportunity or achievement gap among preschoolers in Central Valley.

STEM Education Showcase, Co-organizer, December 2018

I also worked with faculty in College of Science and Mathematics to organize the STEM Education Showcase in which undergraduate and graduate students who were taking STEM courses at Fresno State presented their STEM education research or projects at the end of the semester

College STEM Teaching seminar, invited speaker, April 2018

I was also invited as a speaker for Conversations about College STEM Teaching seminar series hosted by the College of Science and Mathematics Faculty Learning Community (FLOCK) to educate STEM faculty about culturally sustaining pedagogy.

Professional Development

I participated in multiple professional development activities to enhance my knowledge and skills in science or STEM education. Especially I attended the Maker Faire to learn how to use new tools and resources about maker education or STEM education. Additionally, I explored new research topics or trend by participating in various conferences. I also participated in workshops about grant writing to sharpen my grant writing skills.

â€¢ Maker Faire Bay Area, San Mateo, CA, May 2019

â€¢ Canvas Workshop: Getting Started with Canvas, Fresno, CA, March 2019

â€¢ 40th Annual Central California Research Symposium, Fresno, CA, May 2018

â€¢ 2019 CÃ©sar ChÃ¡vez Education Conference, Fresno, CA, May 2018

- â€¢ 2018 American Educational Research Association annual conference, New York, NY, April 2018
- â€¢ Foundation Directory Online workshop, Fresno, CA, November 2017
- â€¢ Grantlaunch workshop, Fresno, CA, October 2017
- â€¢ National Science Teachers Association National Conference, Los Angeles, CA, March, 2017
- â€¢ California STEM Symposium, Anaheim, CA, October, 2016
- â€¢ Multiple Subject Transition Plan Workshop, Fresno, CA, October, 2016
- â€¢ Universal Design Learning Workshop, Fresno, CA, September, 2016

Honors (Optional)