

Developing K-12 STEM Career Pathways for the Future of Work
November 15th at 3 PM ESTJoyce Malyn-Smith,
ModeratorJon
BoxermanJackie
DeLisiJaymee Nanasi
DavisHelen
Zhang**Resources Mentioned During Webinar and Webinar Chat****Resources**

- Videos:
 - Joyce: <https://multiplex.videohall.com/presentations/2101/3103>
 - Jon: <https://multiplex.videohall.com/presentations/1409/3103>
 - Jackie: <https://multiplex.videohall.com/presentations/1783/3103>
 - Jaymee: <https://multiplex.videohall.com/presentations/1734/3103>
 - Helen: <https://multiplex.videohall.com/presentations/2194/3103>

Webinar Chat

Joni Falk : We will begin two minutes after the hour. In the meantime introduce yourselves in the chat, and tell us where you are from and your role. Thanks!

Laura C : Hi all! I'm at the University of Alaska Fairbanks. Research Associate Professor in Science Education

Tina Z : Hello! Tina Zecher, STEM Ed evaluator and PhD student at Northern Arizona University in Flagstaff, AZ

Christi W : Christi Whitworth - Asheville, NC, informal educator

Tracey H : Hello, Tracey Hall I am a researcher from CAST

Nancy M : Good afternoon! Nancy Moreno, Director of the Center for Educational Outreach at Baylor College of Medicine in Houston, TX

Claudia L : Hello! I'm Claudia Ludwig (she/her) from Institute for Systems Biology in Seattle, WA; Director of Systems Education Experiences.

Jared W : Hello. I'm responsible for national programs at Questacon in Canberra, Australia

Joseph S : Hi all, I work with the College of Engineering at the University of Alaska Anchorage. I'm our K-12 Outreach Director. Nice to see UAF folks here!

Ren R : Ren Rountree (she/her) Program Coordinator at the Medical University of South Carolina. I coordinate the Teen Science Ambassador Program (high school URM program).

kaionalani m : Aloha, Kau'ionalani Mead from Hawaii and Pacific Basin, Area Health Education Center. I am the Curriculum Specialist working with the K-12 pipeline

Jackie S : Hello My name is Jackie Shia, the Director of the Challenger Learning Center at Wheeling University, in WV

Hannah W : Hello all! I'm Hannah Wroton (she/her) Workforce Development Program Coordinator for LETS GO Boys and Girls

Virginia F : Hello everyone. I'm fro University of PR at Mayaguez. Coordinator for Recruitment & Outreach for High School students.

Jack K : Hi everybody,

Aaron B : Hello, I'm Aaron Banks Missouri the Afterschool Network Career Awareness and Post-Secondary Access Entrepreneurship Coordinator.

Steven M : Steven McGee, The Learning Partnership in Chicago.

Kim Descoteaux : <https://multiplex.videohall.com/>

Adem E : Hello everyone, I'm Adem Ekmekci, director of research at Rice University School Mathematics Project (RUSMP)

Renee B : Good afternoon from Michigan. I'm the Associate Director for Engagement from CREATE for STEM Institute at Michigan State University.

Sarah T : Sarah Tinsman, Program Director at Project Exploration in Chicago

Quinn B : Quinn Burke, Digital Promise --

Jennifer A : Jennifer Albert, STEM Center Director at The Citadel (Charleston, SC)

Kim Descoteaux : Visit <https://multiplex.videohall.com> , Funded by NSF #1922641

Allison K : Allison Kirby, District Grant Writer, Lexington-Richland 5 School District (Irmo, SC)

Brittany K : Brittany Kincaid, Director of Education and Outreach Arkansas NSF EPSCoR

Regan B : Regan Bynder, Ventura County Office of Education Early Childhood Programs Department an CSUCI Faculty

Alison K : Alison Kieffer, Genomic Education @ The Jackson Laboratory

Michele R : Michele Roy, Grant Writer for SciTech Institute, the Arizona STEM Ecosystem backbone organization

Shonna S : Hello all! Shonna Smith, Executive Director at <https://whendovescode.org> focusing on curriculum development, professional development, and co-teaching programs for K-12 Comp Sci Educators, based in Northern VA.

Kevin D : Kevin Duggan, Games for Change

Tony P : Tony Perry MIT/IDSS

Sarah MacGillivray : As we listen Jackie, feel free to add your questions to the chat!

James C : James Callahan, Lowell School Washington DC, Specialist in STEM, Career Pathways related to climate action, such as energy efficiency. Middle and high school students gaining practical experience, as they work to make the Smithsonian Museums and Capitol Hill more energy efficiency (using STEM and language arts). <https://twitter.com/climatescilabs>

Valerie B : Hi, I'm a BioEYES Program Manager in Baltimore. BioEYES uses live zebrafish to excite K12 students and teachers about science.

Kim Descoteaux : You can view Jackie's video here:
<https://multiplex.videohall.com/presentations/1783/3103>

Catherine P : Do you all have recommendations on research that shows the value of Project Based Learning in connection with Career Development? I'm hoping to find some type of go-to source that I can point people to that shows why this approach is the right way to go.

Kim Descoteaux : You can view Jon's video here:
<https://multiplex.videohall.com/presentations/1409/3103>

Adem E : Anyone here involved in any project that targets NON-college bound students and/or working adults to attract them to STEM fields with stackable credentials or alternative pathways?

Joni Falk : globe.gov

Steven M : @Adem we are developing pathways for using GIS in Career and Technical Ed paths

Michele R : Hi Adem - we work with Arizona Western College, who offers stackable credentials and alternative pathways

Kim Descoteaux : Jon's video: <https://multiplex.videohall.com/presentations/1409/3103>

James C : Question: Recommendations on specific networks to connect with? Part of our challenge is that professionals (already well into their careers) tend to be dismissive that young women of color could possibly contribute to their field -- especially while still being students.

Adem E : I just completed a study on the impact of allied health care programs on Hispanic economic mobility, the impact was huge! Interested to learn more about the impact of other programs

Adem E : What I meant to say was that I am interested in learning about the impact of similar programs on people from minoritized backgrounds.

Kim Descoteaux : You can view Jaymee's video here:
<https://multiplex.videohall.com/presentations/1734/3103>

Sarah MacGillivray : Questions for Jaymee?

Kim Descoteaux : You can view Joyce's video here:
<https://multiplex.videohall.com/presentations/2101/3103>

Kim Descoteaux : You can view Helen's video here:
<https://multiplex.videohall.com/presentations/2194/3103>

Martin S : What technical skills related to AI can middle-school students learn?

Irene L : Great question, Martin. Middle school students can be engaged in developing decision trees (picking features) and revising/tuning neural networks algorithms to better make predictions.

Martin S : My question distinguishes between gaining an understanding of the societal role of AI, versus skills using AI.

Sarah MacGillivray : Feel free to add your questions for any of the panelists as Joyce reviews what we've heard.

Irene L : Also, Helen mentioned, they modify datasets used to train a model as well.

Martin S : Do kids learn how to study LinkedIn or job recruitment sites such as Indeed to get a better sense of what is out there and what they could expect?

Helen Zhang : Martin, as Irene mentioned, students learn the skills of using AI such as curating datasets for training models, identifying potential biases in AI systems, and providing solutions to mitigate bias.

Svetlana D : Mister Roger's Neighborhood!

Helen Zhang : You can check our curriculum here: <https://raise.mit.edu/daily/index.html>

Sarah W : How do we engage business and industry in career-connected learning so they invest and partner with their time and financial support for long-term systemic change?

Martin S : @Helen: I see - basic data literacy as foundational skill that AI builds on. I think the other two are not specific AI skills, but general ability to assess the techno-social dimensions of new technology?

Claudia L : Thank you! I need to leave, but appreciate your time.

Kim Descoteaux : As we break into rooms, please put on your cameras and unmute

Kim Descoteaux : Breakout Questions

- 1) If you are involved in career pathways can you introduce yourself and take one minute to tell us about your work.
- 2) If you have any questions, or ideas about career pathways, please speak up

Lauren B : Thanks everyone !!

Adem E : Thank you, I gotta jump to another meeting, this was great

Svetlana D : Or an environmental steward...

Martin S : Is computer science (in Europe: Informatics) an interdisciplinary field that combines various areas, from software and programming to hardware design and usage and is ultimately the synthetic field of all of it. Or is CS more or less coding and programming?

Martin S : If the former, then the big question arose during the development of the NGSS: what gives in K-12 to teach CS?

Kim Descoteaux : Don't forget to visit the STEM for All Multiplex to view all of panelists' video, read Joyce's blog, browse the resources and most importantly join the online discussion!

https://multiplex.videohall.com/month_themes/16

Joyce Malyn-Smith : Interesting - computer science is becoming an important core skill for most people in STEM enabled and STEM producers. Having CS skills/knowledge will advantage almost any STEM worker

Kim Descoteaux : You can access the discussion here:

https://multiplex.videohall.com/month_themes/16

Benedetta B : Fantastic session---thank you!

James C : All presentations were outstanding. Discussions beautiful.

Martin S : But what exactly is it, Joyce: the broader definition?

Matthew C : Thank you!

Jackie S : It was a very interesting webinar. Thank you!

Sarah W : Thank you!