



January Theme of the Month



Embracing Neurodiversity in STEM January 24th at 12:30pm EST



Ibrahim Dahlstrom-Hakki (Moderator), Jodi Asbell-Clarke, Teon Edwards, Wendy Martin, & Lynn Cominsky

Webinar Chat

Kim Descoteaux : Thank you for joining us today! This webinar is hosted by The STEM for All Multiplex <https://multiplex.videohall.com> - Funded by NSF #1922641. Opinions expressed are those of the contributors and not necessarily those of the National Science Foundation.

Jodi Asbell-Clarke : Hi everyone - this is jodi. I work at TERC but I live in Halifax

Stephanie D : Stephanie Dykes, Executive Director of Institutional Effectiveness, North Seattle College

Manuel S : Hi Everyone, Manuel Serrato. Manager of Youth Initiatives at the American Museum of Natural History.

Kristina L : Hello. My name is Kristina Li. I am a student access manager at Wenatchee Valley College in Wenatchee, WA.

Brian M : Hi, I am Brian McNeill, I am a Extension Educator with the University of Minnesota Extension and 4-H Youth Development

Farahad D : Farahad Dastoor, University of Maine, Director and Lecturer

Michael H : Hi all, Centralia College, Director of Disability Services.

Margaret H : Margaret Hoffman - I am an Early Childhood Educator at the American Museum of Natural History

Chris M : Hi, I'm Chris Murphy. I'm a faculty member in Computer Science at Bryn Mawr College

Jena B : Jena Barchas-Lichtenstein, I direct the media research & partnerships at Knology.

Teon Edwards : Hi, all. I'm Teon Edwards from EdGE at TERC. Happy to be hear today.

Allyson R : Hi, I'm Allyson Rogan-Klyve - science education faculty at Central Washington University.

Rachel A : Hi. I'm Rachel Andler, Director of Student Support Services, South Fayette Twp School District, PA

Aixa A : Buenas tardes. My name is Aixa Aleman-Diaz, originally from Puerto Rico, and I live in Washington DC metro. I am Program Manager, Diversity Equity and Inclusion AGU nonprofit.

Emily S : Hello, all! I'm Emily Stein, Environmental Education Coordinator for PA Resources Council, a statewide nonprofit providing services and resources to build a PA where nothing is wasted. Glad to be here with all of you!

Laura C : Hi all, Laura Conner from the University of Alaska Fairbanks. I can only stay until 9 30, I apologize in advance.

Lynn Cominsky : Hi everyone from Lynn Cominsky, Professor of Physics & Astronomy and Director of EdEon STEM Learning at Sonoma State University (in northern California).

Tabatha R : Hi! I am (first) a mom to neurodivergent kiddos. I was a high school math teacher, and I am in my third year of a mathematics education doc program at the University of Tennessee.

Kelsey S : Hi, I'm Kelsey Stegner, the AccessAbility Coordinator at Grays Harbor College.

Deb B : Deb Bailey STEM Education Specialist Oregon Department of Education

Caitlin C : I'm Caitlin Callahan. I'm a faculty member in Geoscience and Science Education at Grand Valley State University (MI).

Bernie G : Hi. I'm Bernie Greenspan. I teach Intellectual Property courses at a several institutions... Bellevue College in Washington State, UCSD, and USD in San Diego, CA - where I live.

David B : David Bowers, AuDHD, research/clinical faculty at University of Tennessee, focus on teacher ed

Jennifer K : Jennifer Kouo - Assistant Research Scientist at the Institute for Innovation in Development, Engagement, and Learning Systems (IDEALS) at the Johns Hopkins School of Education and Teacher Professional Learning Team lead for the NSF-funded Engineering for US All (e4usa).

Sam T : Hi! I'm Sam Tumolo. Senior Maker Space Coordinator at the New York Hall of Science

Jodi Asbell-Clarke : looking forward to hearing your perspective @tabatha

Heidi S : Hi, I'm Heidi Schuler-Jones, and I'm with the Adult Numeracy Center at TERC but live in north Georgia.

Abbey T : Abbey Thompson, educational outreach director for Stanford Dept of Genetics

Erin B : Erin Bardar, Education Materials Director for EdGE at TERC. Zooming in from Hopewell, NJ.

Wanda B : Good afternoon from Michigan, retired Detroit Public Schools Community District middle school science teacher

Laura Z : Laura Zangori, Assoc Prof science ed at Mizzou.

Pauline L : Pauline Lake, Curriculum and PD Coordinator for the National Center for CS Education which is located in Duluth, MN but I am based in Hartford, CT

Kavitha M : Hi all, I am Kavitha Murthi, PhD student in Occupational Therapy from NYU. Excited to be here and learn from all of you!

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Daniel D : Dan Damelin from the Concord Consortium

Wendy Martin : HI all, I am a researcher at EDC. Looking forward to sharing with you and learning from you!

Dora O : I am Supervisor of occupational therapy at NYC DOE and supporter of IDEA Maker Program. Happy to be here.

Theresa S : Theresa Summer from the Astronomical Society of the Pacific, hello all!

Dan M : Science Teaching and Teacher Education PhD candidate at the University of Arizona

Paula D : Paula Dorfman at Challenger Center based in DC

Yadina C : Hi, I'm a neurodivergent staff member at the Maine Center for Research in STEM Education and occasional lecturer.

Kim Descoteaux : Please visit the follow on discussion at https://multiplex.videohall.com/month_themes/24

Diane S : Diane Simpson Brown, Psychology Instructor, Everett Community College, Everett WA

Andrew G : Hi everyone, I'm a researcher and evaluator from WestEd.

James C : I am both a formal and informal educator. In each case hands-on STEM labs is central to the way my teams teach. Hands-on STEM bring out strengths in neurodiversity, that lectures POWERPoint and and teach to the test does not. -- Jim Callahan Mobile Climate Science Labs. California and Washington DC Metro region.

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James M : James McCabe, Education Program Manager, Challenger Center, Washington DC

Deborah T : Hi! I work with school systems to build more inclusive practices with a specific focus on students with extensive support needs.

Kerry B : Kerry Brenner in the Board on Science Education at the National Academies of Sciences, Engineering, and Medicine. We are currently planning an NSF sponsored conference for summer 2023 on people with disabilities in the STEM workforce.

<https://www.nationalacademies.org/our-work/beyond-compliance-promoting-the-success-of-people-with-disabilities-in-the-stem-workforce>

Mika H : Hi, I'm a research assistant, and former early ed (0-5) teacher

Candi J : Hello, I am a program coordinator at Southern Illinois University Edwardsville for 0-adult learners.

Peter T : Hi, I'm a curriculum/instructional design associate at Education Development Center (EDC)

Tony M : Autism is normal, just not majority. I am myself Autistic, what was called Asperger's syndrome, and have not returned for an updated ASD diagnosis. I am an associate instructor in engineering at the Santa Rosa Junior College and am now semi retired from my over 35 year career in Mechanical Engineering. My career was working in aerospace on spaceplanes (X-30), rockets (SSTO, Rocketplane, Roton, USL etc.), mad scientist works (high energy acoustic weapons at sara.com), solar energy (key engineer helping Enphase Energy), sats (Kepler, NPP, SBSS, Worldview). My late father was also Autistic, (both he and I are pre diagnosis time, pre 1994), and has the key patents in Nuclear Fusion for ICF, at KMS fusion and was on the team that first achieved lab based fusion in the early 70s. We have been here, are here, and will continue to be here. I found major issues overlooked by other engineers on the X-30, Space station loads model, and more. So yes, being ASD has been a help and a burden.

Bennett A : to clarify - the number of students whose data we were able to use while meeting the WWC standards for baseline equivalence of groups was considerably smaller than 1009.

James C : I would like to invite California based colleagues to consider taking advantage of STEM festival season in the Bay Area. 7 STEM festivals take place each year, mostly between March and April. Events draw as many as 30,000 students, teachers and families in one day! We are creating space in our booths this year for colleagues working in this field. (Neurodiversity) Mobile Climate Science Labs is given multiple booths each year. We always have guests and

partners organizations join us. Our booths are swarmed by people of all ages. Totally engaged in STEM. Very Neurodiversity diverse! Jamesc@climatechangeeducation.org

Valerie F : Challenger Center is a STEM education organization with 35 locations in the US (30 states). We develop and run participatory simulations of STEM challenges with ~250,000 annually. Our programs are designed and run with the broadest set of students, including neurodiverse students. If you need a pilot partner, please reach out -- vfittonkane@challenger.org.

James C : Example of STEM Festival where colleagues are welcome <https://www.northbayscience.org> Saturday March 11. Sonoma County Fairgrounds. Santa Rosa. We partner with Sonoma State University, specifically multiple NASA EOP programs.

James C : Mobile Climate Science Labs video examples, inviting YOU to take advantage of what we can provide you for free <https://stemforall2022.videohall.com/presentations/2537>
<https://stemforall2021.videohall.com/presentations/2253>

James C : Another event is on April 1st, specifically with kids in the Black and African American communities. Being held in the Golden State Warriors arena. Join with us, connecting with kids and families in STEM!

Kim Descoteaux : You can see Lynn's video as well as all the panelist videos here <https://multiplex.videohall.com/playlists/3760>

Kelly P : For more information on INFACT, please contact edge_admin@terc.edu.

Ariana R : <https://n3.sonoma.edu/internships>

David B : Are any of the panelists neurodivergent? I'm hearing a lot about including neurodiverse voices, but I can't tell if any of the panelists directly represent neurodiverse voice

Tony M : I am myself also Autistic, and am also curious which members on this panel are autistic?


Tony M : Excellent point David.

Jodi Asbell-Clarke : to answer David's question, we have parents of ND kids on the panel and we all have ND researchers on our teams

David B : I heard that, but I'm inferring from your phrasing that none of the panelists are?

Jodi Asbell-Clarke : I will let the panelists each speak for themselves about their own neurodivergence. I, for one,, am not diagnosed as ND

Tony M : Jodi, as an autistic person, your answer is unclear to me, is there in fact no autistics ON this panel?


Dan M : Reacted to "Tony you should be a..." with 

Tony M : FYI, great voice on this <https://petewharmby.com/>

Deborah T : Here is a great set of tools on collaboration and co-design from the TIES Center <https://tiescenter.org/topics/inclusive-instruction/5-15-45-tool>

Tony M : Yes, that is a great capture, while Autistics differ from Neurotypicals, we also differ a lot within our population in how it actually manifests in us individually. More that we rhyme, vs all being the same?

Deborah T : This is not as much student voice as Dr. Edwards is suggesting (which is great)

Deborah T : Reacted to "Yes, that is a great..." with 

David B : And when you're doing job searches, you build in accommodations

Yadina C : Neurodiversity includes neurotypicals

David B : In the same sense that gender diversity includes cis-men, yes. Included, but occupying the position of hegemonic power.

Lynn Cominsky : Indeed, which is why our NASA project uses the term Neurodiversity - we are a network of neurotypicals and neurodivergent folks working together.

Tony M : Many autistics have no issue in speaking up, at least I struggle with when I should not, or how. Use of a talking stick or other accommodation can turn a meeting from a nightmare into something that is manageable.

Bernie G : @Jodi - I think all teams benefit from members taking time to think about their solutions or contributions before group discussions or work. Too often, one dominant individual or a person in a "leadership position" will unduly influence the outcome.

Laura C : I love this about autonomy of thought-- we have a big emphasis on collaboration and group work in education right now, which is of course very important, but I think learners of all kinds can benefit greatly from being given the space to work and think on their own

Teon Edwards : Over the course of the co-design process, I embraced the term neurodivergent, largely because that's how various of our team members identified themselves. For us, this is distinct from neurodiverse, which includes everyone — it's the diversity of how we all think, and that diversity is a strength.

Jodi Asbell-Clarke : Bernie - I am guilty of that myself on my own team, so I hear you! 😊

Tony M : yes, society is mostly run by "majority" rules run by neurotypical, in the same way "majority" sexuality used to dictate what was "normal" for sexuality, we have made so much progress in the latter, I have hopes for the former! World is much more accepting of gender and other diversities since the 70s.

Sarka F : Giving people options gives them the feeling of having more control over the situation/learning etc..

Stephanie D : I'm struck by how these best practices with neurodivergent students would work with non - neuro - divergent students, i.e. agency, choice, etc.

Tony M : Everyone wins when we do inclusive society. As I say, even bike riders use wheelchair ramps, win win

Lynn Cominsky : Codesigning activities that already meet UDL standards improves them even further for all learners.

Laura C : Stephanie, I agree! We have a STEAM framework that encapsulates many of the practices suggested here.

Sarka F : That's a great question — too many options/choices = too overwhelming

Laura C : The framework is part of our NSF- funded Fostering STEAM program if anyone is interested. fosteringsteam.org

James C : You've organized yet ANOTHER fantastic webinar!! I am trying to be in two places at once. CLEAN has an essential Zoom meeting going on right now. Important that I am there too. (As you know, Mobile Climate Science Labs puts together the SFAVS videos for CLEAN each year.) Both Zoom meetings are so important!

Tabatha R : I appreciate that each of these lead projects center in “nothing about us without us mentality.” It's great to have a space where this is the normative conversation. I do community engaged work and empathetically value the nuanced levels of deconstructing power dynamics, which each member shared on. thanks.

Valerie H : Thank you!

Tony M : no problem!

Anne T : Thank you for a great session.


Teon Edwards : We're facing a lot of challenges around balancing offering options without offering too many options. Overwhelm is an issue, even when the intent is to give the learner control.


Manuel S : Thank you so much!


Farahad D : Thank you for increasing my awareness.

Kim Descoteaux : Please visit the follow on discussion at https://multiplex.videohall.com/month_themes/24

Teon Edwards : An asset-based approach still has issues, especially in what's considered an asset

Deborah T : Reacted to "An asset-based appro..." with 

Matthew B : Reacted to "An asset-based appro..." with 

Sam T : Reacted to "An asset-based appro..." with 

Jena B : Reacted to "An asset-based appro..." with 

Teon Edwards : Intersectionality (race, gender, sexual identity, ...)

Teon Edwards : Specific examples, suggestions, and resources for current, active educators

Lynn Cominsky : Sara Seager's book "Smallest Lights in the Universe" is quite an amazing read (which I learned about from Jodi)

Kim Descoteaux : Please visit the follow on discussion at https://multiplex.videohall.com/month_themes/24

Tony M : this is a long term campaign, made of many interactions like this one.

Kelsey S : Thank you!