

## Dayton Engineering and Sciences Symposium “Humanitarian Engineering and Sciences”

### *STEAM+ Track: “Education for Purpose-Driven Thinking and Creating”*

*Limited funding is available to support registration fees and substitute teacher costs for educators who can only attend with such support. Email Dr. Kevin Hallinan ([khallinan1@udayton.edu](mailto:khallinan1@udayton.edu)) to request.*

**Goals of Track** -The purpose of this session is to highlight educational innovators in Greater Dayton who are creating and implementing K-16 curriculum aimed at promoting purpose-driven thinking and creating, while also strengthening content knowledge. This session offers ‘hands-on’ thinking and creating experiences, teacher perspectives on why this is important, “how-to” examples, and stories about the impact on students.

**Who should attend?** Educators interested in improving the education of their students; Scientists and engineers interested in supporting the education of our community (It really does take a village!); Anyone interested in growing perspective on education and on innovative thinking.

#### Session Schedule:

8:00 – 8:30	Registration
8:15 – 8:45	<b>Purpose-driven thinking and creating sprints</b> (5-10 mins each). Sprints organized by presenting teachers to engage as many of the attending educators, scientists and engineers
8:50 – 9:10	<b>Matt Szodza, Art Teacher, Centerville Schools</b> , “Teaching a Process for Culture Change”, will be discussing his approach to education that helps develop purpose-driven students, with stories of the impact on students.
9:10 – 9:30	<b>Tracy Martz, Science Teacher, Dayton Early Academy High School</b> , “Active Learning Experiences Impacting the Lives of Diverse and Socioeconomically Disadvantaged Students in Dayton.”
9:30 – 9:50	<b>Linda Hallinan, Maker and Computer Science Teacher, Miami Valley School</b> , “Human-Centered Applied Creativity through Making and Computer Science.” Linda will be discussing her
9:50 – 10:05	Break
10:05 – 10:25	<b>Aaron Roberts, Innovative Learning Coach, Mason City Schools</b> , “Giving Students Creative Agency over Their Learning”
10:25 – 10:50	<b>Brian LaDuca, UD, Institute for Applied Creativity Director, Kevin Hallinan, Professor, Mechanical Engineering</b> , “GEMnasium: A Transdisciplinary Educational Curriculum and Space Addressing Human Needs in Dayton.” Will describe their experiment with 10 classes from different disciplines, 14 faculty, and 270 students addressing the Dayton addiction crisis.
11:00 – 11:25	<b>Community Brainstorming Event</b> – It takes a village – “How can WE help to create unique education for SW Ohio...and beyond?”
11:25 – 12:00	<b>Demos and Posters on Humanitarian Engineering and Science.</b>
12:00 – 12:20	Get lunch, welcome, undergraduate student prizes
12:20 – 1:20	<b>Lunch Speaker, Dean Still, Executive Director of Aprovecho Research Center and CEO of ASAT, Inc.</b> (leading worldwide organization for healthier and more efficient cook stoves, “Humanity-Centered Engineering”

#### Session Organizers:

Dr. Kevin Hallinan, Professor, University of Dayton  
Mr. Matt Szodza, Teacher, Centerville Schools