



# Ohio Technology Education Association 2010 Spring Conference

Growing Stronger in STEM- Learners' Cross Curricular Experiences in Technology Education

Presenter	Brief Description - Presentation
<p><b>Fred Thomas</b> 937-832-0792 <a href="mailto:fred.thomas@mathmachines.net">fred.thomas@mathmachines.net</a></p>	<p>Learn about "Math Machines" teacher workshops and see how you can build your own low-cost "actuator." Using a hobby servo motor, this actuator controls the motion of a laser pointer using free-form functions such as "<math>x = -2+.5*t-0.1*t^2</math>". Free software.</p>
<p><b>Richard DeLombard</b> <a href="mailto:00ug00@gmail.com">00ug00@gmail.com</a></p>	<p>Microgravity will be explained and demonstrated. Bring some actual microgravity into your classroom with a drop tower and demonstration techniques that relate forces and motion to the space station, drop towers, planets in orbit, and more. Challenge your students to create microgravity experiments to test in a drop tower.</p>
<p><b>Russell Mickelson</b> 800.561.7051 Email:<a href="mailto:russell.mickelson@stem101.org">russell.mickelson@stem101.org</a> URL: <a href="http://www.stem101.org">www.stem101.org</a></p> <p><b>Dr. Alan Gomez</b></p>	<p>Learn how The STEM Academy develops engineering pipeline by featuring a main line education approach providing STEM education for all students. Developed by educators for education. The STEM Academy prepares students to be competent, capable citizens in a technology-dependent society through comprehensive student assessments including traditional tests; project based learning presentations and portfolios. This STEM centric program is focused on standard based foundations, gender awareness, socio-economic concerns and general learner needs to engage as many learners as possible. Program maps to ITEA, ABET, NSTA, NCTM standard; features student certification and articulation with leading universities.</p>
<p><b>Glenn Hider</b>, Professor Applied engineering &amp; Technology California University of PA</p>	<p>Earn your Master's degree while teaching. 100% online program provides flexibility, enhancing your teaching and program. Five term program provides professional experiences in: program development, grants, STEM, sustainability, special populations, creativity, assessment, research, and more. Description of the program, faculty, courses and program objectives, along with information on finances. Examples of student work will also be shared.</p>
<p><b>Rod Pierce</b> Technology Education Teacher PLTW Teacher Thomas Worthington High School</p> <p><b>Dick Dieffenderfer</b>, ODE</p>	<p>Teaching learner's to fly..., well Rod Pierce and his Cardinal 3 team of students from Thomas Worthington high school learned much about aircraft tail section design during this year's Real World Design Challenge. Come and learn about his experiences that will help you prepare your team for 2010-2011's challenge.</p>
<p><b>Steve Lipster</b> <a href="mailto:lipster@electricaltrades.org">lipster@electricaltrades.org</a></p>	<p>The Green Power Alternative Demonstrator, or G-PAD, is a unique portable electrical generation station that is totally self-sufficient. Using solar radiation and wind energy.</p>
<p><b>Paul E. Post</b> The Ohio State University <a href="mailto:post.1@osu.edu">post.1@osu.edu</a> 614-292-7471</p>	<p>To keep a technology education program current it is important to be teaching engineering design concepts. Constraints, Optimization, and Predictive Analysis or COPA are engineering concepts that should be included. This presentation will discuss these concepts and how to implement them. Resources and examples will be provided.</p>

<p><b>Diane McElwain, PhD</b>  NASA Glenn Research Center:  Educational Outreach Team  330.807.2393  <a href="mailto:Diane.L.McElwain@nasa.gov">Diane.L.McElwain@nasa.gov</a>  Highland Middle School  1152 Bellview Ave  Barberton, OH 44203  330.848.4243</p> <p><b>Nancy Hall</b>  <a href="mailto:Nancy.R.Hall@nasa.gov">Nancy.R.Hall@nasa.gov</a></p>	<p>NASA's educational specialists will present a problem-based instructional unit (PBIU) for Physical Science that focus science classrooms into an inquiry-based curriculum design. With NASA's online resources and educational materials, teachers can transform their classroom into a learning environment where students can be scientists and investigate the same challenges found within NASA's future lunar missions and lunar outpost. NASA's problem-based activities and resources will be discussed, demonstrated, and distributed.</p>
<p><b>Tish Hevel</b>  The Ohio Center for Broadcasting-  Columbus  614.245-0555  <a href="mailto:hevel.t@beonair.com">hevel.t@beonair.com</a>  <a href="http://www.beonair.com">www.beonair.com</a></p>	<p>The emergence of new broadcast delivery systems, and the promise of more to come, makes content creation paramount. Today's entry-level candidates need to have a variety of technical and soft skills that the industry requires. This will focus on the new basics needed in any hands-on curriculum.</p>

## Elementary Teacher Focused Sessions

<b>Bob Claymier</b>	Incorporating STEM resources into the new science standards
<b>Ivery Toussant</b>	WeDo Lego robotics
<b>Jim Fitzgerald</b>	NASA resources
<b>Bexley City Schools' Teachers</b>	STEM Grant use within our district. Incorporating STEM activities in the classrooms.

**\*NOTE: Updates to presentations will be added as they are accepted.**