

# PEPSA PROFESSIONAL DEVELOPMENT

Free!



Partnership for Effective Programs for Students with Autism

*Jacksonville, FL*

## Engineering is Everywhere

Presented by: Tyler Ley, Ph.D.

Hosted by: UF-Jacksonville CARD and FDLRS-MDC, FDLRS/Crown, Duval County Schools, and FDLRS/NEFEC

February 22, 2018

4:30 – 6:00 pm

Online

Instructions for viewing will be e-mailed to registered participants

### Registration Information:

**REGISTRATION IS MANDATORY**

**DEADLINE:** February 19, 2018

Limited to first 100 participants

Register online at:

<http://doepartnership.fmhi.usf.edu/trainings.html>

For more information contact:

Autumn Mauch

[autumn.mauch@jax.ufl.edu](mailto:autumn.mauch@jax.ufl.edu) or

(904) 633-0801

*Be sure to contact your ESE District Staff or Staff Development Contact to determine the process for receiving in-service.*

### About the Presenter

**Dr. Tyler Ley** is a National Science Foundation Early Career Awardee. His grant work uses new experimental techniques to investigate the microstructure and elemental makeup of industrial byproducts to be used as cements for construction applications. This work aims to improve the sustainability, economy, and long term performance of concrete, the second most used commodity in the world (over 6 billion cubic meters produced annually). Dr. Ley has had more than 15 years of experience in the fields of structural and concrete materials engineering. He has worked as an engineer with a design consultant, construction contractor, government agency, and as a professor at Oklahoma State University. He was awarded the Halliburton Excellent Young Teaching Award in 2011 and 2014, the Williams Foundation Professor in 2013 for the College of Engineering, the ACI Walter P. Moore Faculty Achievement Award in 2014, the Researcher of the Year Award from the College of Engineering in 2014, and the OSU Regents Research Award in 2014.

### Training Description

#### Target Audience: STEM Teachers

Dr. Ley intends this training to be used to supplement the elementary science and math curriculum and to highlight career applications of these basic skills. While there are a number of excellent online STEM career videos targeted for young adults, such as The Secret Life of Scientists and Engineers, his plan with this project is an innovative combination of virtual media, student-led activities, and teacher resources that will fill a new niche. This project will provide an age-appropriate career mentoring model that will encourage and broaden participation of individuals that are underrepresented in Oklahoma STEM education and the workforce.

This unique curriculum pathway and accompanying activity trunk offer hands-on opportunities for students to explore how microstructures are important to structural and material engineers. Three video lectures and super cool handheld microscopes encourage students to explore how real-life engineers, like Dr. Ley, use math and science to improve their designs.

### Training Videos

- Video Lesson One – Introduction to Engineering
- Video Lesson Two – Structural Engineering and Mathematics Concepts
- Video Lesson Three – Materials Engineering and Science Concepts



Regional Trainings are hosted by the Center for Autism and Related Disabilities, through the Partnership for Effective Programs for Students with Autism (PEPSA), a program funded by the State of Florida, Department of Education, K-12 Public Schools, Bureau of Exceptional Education and Student Services, through federal assistance under the Individuals with Disabilities Education Act (IDEA), Part B. [www.DOEpartnership.org](http://www.DOEpartnership.org)