



IEEE-USA K-12 STEM Literacy Committee

Southeastcon 2015

April 9-12 2015

Matthew Iglesias

matthew.iglesias@ieee.org

<http://k12stemieee.org>



Agenda

- ◆ IEEE K-12 Committee
- ◆ IEEE Region 3 Member
- ◆ IEEE Region 3 Teacher
- ◆ IEEE K-12 Literacy Representative

IEEE K-12 Literacy Committee

- ◆ Established in 1984 to help **improve** the quality of precollege education
- ◆ To **raise** the level of functional and technological literacy of United States students by placing emphasis on mathematics and science.
- ◆ Our objective is to keep alive the **innate** curiosity of young children about science as they move into middle school and high school, so that they will continue to study mathematics, science, and technology.

IEEE K-12 Literacy Committee

◆ Scope

- ◆ The purpose of the K-12 STEM Literacy Committee is to help elevate math, science, and technology education of all precollege students in the United States and to help raise their functional and technological literacy. Its work is expected to have an influence at the national, state, and local levels.

IEEE K-12 Literacy Committee

◆ Functions

- ◆ To involve IEEE members in precollege activities at all levels
- ◆ It should cooperate with other technical, scientific, and professional societies and their members and with other organizations with similar goals
- ◆ It will seek the help and support of various IEEE entities such as the Member and Geographic Activities Board, the Educational Activities Board (EAB), the EAB Committee for Precollege Education Coordination, IEEE-USA Professional Activities Committees for Engineers, technical societies, and Sections
- ◆ It may work with government bodies, textbook publishers, and others, as it deems necessary.

IEEE K-12 Literacy Committee

◆ Summary

- ◆ Increase K-12 student interest and skills in science, technology, engineering and mathematics (STEM)
- ◆ Provide K-12 teacher education and curriculum ideas
- ◆ Enable IEEE members to share their interests and skills with today's youth

IEEE Region 3 Member

- ◆ What you can do?
 - ◆ Support your Section
 - ◆ Approach your nearest school or individual teachers with your ideas (Application)
 - ◆ Extracurricular Activities
 - ◆ **BSA**
 - ◆ Robotics
 - ◆ Math Competitions

IEEE Region 3 Member

- ◆ Do you need funding?
 - ◆ IEEE-USA K-12 STEM Educator Reward/Grant Program
 - ◆ Ask your Section if they have funds available for STEM activities
 - ◆ Matching funds from your Region
 - ◆ PACE Project Funding Request Form

IEEE Region 3 Teacher

- ◆ Get Funding
 - ◆ IEEE-USA K-12 STEM Activity Fund
- ◆ Get Nominated
 - ◆ IEEE-USA K-12 STEM Educator-Engineer Partnership Award
- ◆ Get Lesson Plans
 - ◆ IEEE Teacher In-Service Program (TIPS)
 - ◆ Engineering Education Service Center
 - ◆ ASEE's Engineering K-12 Center
 - ◆ Project Lead The Way (PLTW)

IEEE Region 3 Teacher

- ◆ Participate in a Competition
 - ◆ Future City Competition
 - ◆ JETS Competition
 - ◆ FIRST Robotics
 - ◆ Junior FIRST LEGO League
 - ◆ FIRST LEGO League
 - ◆ FIRST Robotics Competition
 - ◆ BEST Robotics
 - ◆ ThinkQuest

IEEE K-12 Literacy Committee Representative Duties

- ◆ Appointed by Region Directors
- ◆ Partner with national level programs that further STEM Literacy around the country
- ◆ Represent your Section and Region interests
- ◆ Work closely with PACE chairs
- ◆ Report partnerships, programs, and sponsorships back to Region and disseminate to Sections
- ◆ **Solicit applications for Educator-Engineer Partnership Award each year**
- ◆ Identify & Nurture corporate and non-profit sponsors

IEEE K-12 Literacy Committee Representative

◆ Our Goals

- ◆ Have a K-12 Representative for each of our 9 areas
- ◆ Network of Volunteers
 - ◆ By Area or Sections
 - ◆ Increase the flow of information
- ◆ Call for Nominations Educator/Engineer Award
 - ◆ Bring it Home!
- ◆ Coordinate a K-12 student program in each section.
- ◆ Share knowledge and review successful projects

IEEE-USA K-12 STEM Literacy Committee Educator-Engineer Partnership Award

◆ Purpose

- ◆ To recognize collaborative activities between K-12 educators and technical professionals who are IEEE members

◆ Form of Recognition

- ◆ The award winner(s) will receive a plaque providing the citation for the award.

◆ Eligibility

- ◆ Open to all public, private and parochial schools and IEEE members

IEEE-USA K-12 STEM Literacy Committee Educator-Engineer Partnership Award

- 💧 Motivation

- 💧 Last time in Region 3 was

- 💧 More Info

- 💧 <https://www.ieeeusa.org/volunteers/awards/award11.html>

IEEE K-12 Literacy Committee Representative

- ◆ Current activities
 - ◆ Technology Student Association (TSA)
 - ◆ Tests of Engineering Aptitude, Mathematics and Science (TEAMS)
 - ◆ Triangle Coalition for STEM Education Conference
 - ◆ Educator/Engineer Partnership Award
 - ◆ 2014 Recipients Mary Smith and John Zulaski
 - ◆ Science/Engineering Kits

IEEE K-12 Literacy Committee Representative

◆ Current activities

◆ App-E-Feat (appefeat.org)

- Winners of the Contest to be announced
- We are looking for mentors for our winners
- We are looking for engineers
- Partner with organization
- Develop mobile apps to solve problems



IEEE K-12 Literacy Committee Representative

- ◆ Other Resources/Activities
 - ◆ Project Lead the Way Partnership
 - ◆ Pre-engineering program
 - ◆ Grades 6-12
 - ◆ STAR Library Education Network (STAR_Net)
 - ◆ National Public Library
 - ◆ Space Science Institute's National Center for Interactive Learning

What's Next?

- ◆ Network of volunteers
- ◆ Nomination from every Area E/E Partnership Award
 - ◆ I truly believe we can bring this Award to our Region
- ◆ It's a lot of resources and information
 - ◆ Adapt/Modify and make it work for you!
- ◆ Help me, help you!

Questions?

