Professional and Educational Activities subCommittee

Region 8 mini series meetings spring 2021
R8 Professional and Educational Activities

Summary

Chair Introduction, by Conrad Attard (3 min)

Part I (35 min)
- New project: IEEE Continuing Education for Engineering Professionals in Africa Vincent Kaabunga & Bruce Krogh
- EAB Programs and Awards Sohiab Qamer
- IEEE Study Circle Program Pilot A. Margarida Trigo
- IEEE R8 Robot Wars Championship Conrad Attard
- STEM portal Lorena Garcia

Part II (10 min)
- Pre-university working committee, A. Margarida Trigo
- University working committee, Nizar Rokbani
- Continues education working committee, Amith Khandakar

Engage with us: https://tinyurl.com/PEASC2021
R8 Professional and Educational Activities

Member
Nizar Rokbani
University Activities Works Committee

Committee Chair
Conrad Attard PhD

Member
Amith Khandakar
Continuing Education Works Committee

Member (Past-Chair)
Stamatis Dragoumanos

Corresponding Member
Ana Margarida Trigo
University Activities Works Committee Mission

Corresponding Member
Weizhi Meng
Promotion and Media
R8 Professional and Educational Activities

Introduction

- We have established 11 objectives that cover different aspects of Professional and Education Activities.
- New committee formed
- 5 new programs focusing on practical impact of PEASC
- Construction of Arena for IEEE Region 8 Robot Wars Championship in Malta.
- Updating existing programs to reach out to more Sections
- Launched the Speakers Program Call for Speaker – nontechnical talks
- Pilot the local languages program - technical webinars in French and Arabic
- Collaborating with YP as member of the international evaluation committee IEEE Region 8 Entrepreneurship Initiative
R8 Professional and Educational Activities

2020 Education Activities Globally

- Record year for continuing education revenue $1.34M
- IEEE Academies on Artificial Intelligence and Internet of Things and Smart Grid
- IEEE learning Network now has over 1000 course accessible from 29 partners from across IEEE
- COVID response to support our Members: 55 virtual events with over 41,000 registrations
R8 Professional and Educational Activities

Part I

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- STEM portal Lorena Garcia
5 Topics 5 Minutes 5 Slides

IEEE CONTINUING EDUCATION FOR ENGINEERING PROFESSIONALS IN AFRICA

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeeer8.org/

SPEAKER
BRUCE KROGH

https://tinyurl.com/r8meetingPEASC
IEEE CONTINUING EDUCATION FOR ENGINEERING PROFESSIONALS IN AFRICA

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeer8.org/

SPEAKER
VINCENT KAABUNGA

https://tinyurl.com/r8meetingPEASC
IEEE Continuing Education for Engineering Professionals in Africa

IEEE Region 8 PEASC
March 19, 2021

Initiative Leaders

Vincent Kaabunga  Bruce Krogh
Chair, IEEE Africa CouncilIEEE Life Fellow
IEEE Continuing Education for Engineering Professionals in Africa Feasibility and Planning Study

*IEEE NIC Project – 2021-2023 (renewable annually)*

**Vision:** Develop IEEE continuing education resources relevant to the needs of practicing engineers and their employers in Africa.

**Goals**
- Make delivery accessible, affordable and effective
- Satisfy professional engineering CEU requirements
- Engage Africa-based content developers & mentors
- Develop local IEEE Section support and ownership
- Create partnerships for sustainability

**Target Countries**
- Year 1: Kenya, Zambia
- Year 2: Uganda, Rwanda, Ghana
- Year 3: Nigeria
Approach: Leverage existing IEEE resources

▸ E-learning platform with hundreds existing technical and professional courses
▸ Supports custom access and course programs for industry partners
▸ Extensible with new courses to be developed for this project

▸ Collaboration platform supporting information exchange for focused interest groups
▸ Workspaces for topic-specific student discussion and collaboration
▸ Communities for course-specific mentor support
Year 1 (2021): Pilot projects in Kenya and Zambia

Objective: Offer a few existing ILN courses to get feedback from stakeholders to guide future development and prepare for certification with the National Engineering Boards

Phase 1
- Create access to current ILN course programs in power systems and telecommunications
- Hire on the ground consultant to work on the project within Africa (likely based in Kenya)
- Engage key employers to offer courses the courses for free to their employees
- Collect and assess feedback from engineers and employers

Phase 2 (based on feedback from Phase 1)
- Engage and prepare mentors for selected courses for a more focused pilot program
- Engage employers with specific interest in the mentor-supported courses
- Collect feedback and develop plans for Year 2
Region 8 Engagement

How can you help?

- Support engagement with the local sections and chapters
- Leverage your networks for industry partners
- Recruit IEEE volunteers to serve as mentors
- Publicize the project to raise awareness of IEEE’s activities in Africa
EAB PROGRAMS AND AWARDS

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeeer8.org/

SPEAKER

SOHIAB QAMER

https://tinyurl.com/r8meetingPEASC
IEEE Region 8 Meeting - PEASC
EAB Programs and Awards

18 Mar 2021
Sohaib Qamar Sheikh
Member, IEEE Educational Activities Board
IEEE Educational Activities Programs

### Pre-university
- Try Engineering
- Try Engineering TOGETHER
- President’s Scholarship
- Try Engineering Summer Institute

### University
- IEEE Teaching Excellence HUB
- ABET
- EPICS in IEEE
- IEEE Foundation Donor Supported Program

### Continuing Education
- IEEE Learning Network
- IEEE eLearning Library
- And EAB Awards!
University Collaboration Opportunity

Service Learning Opportunity: Gives students engineering experience, while developing devices and systems to aid communities around the world

**Student Value:**
- Develop project management, technical, teamwork, and leadership skills
- Receive mentoring from engineering professionals
- Make a sustainable impact on a community level

**By Submitting a Project to EPICS**
- IEEE Volunteers:
  - Lead students in hands-on projects
  - Improve STEM education in local schools

[EPICS.ieee.org](http://EPICS.ieee.org)

Interested? Contact Ray Alcantara in Educational Activities at r.alcantara@ieee.org
University Collaboration Opportunity

IEEE-Eta Kappa Nu (IEEE-HKN)

The international honor society in the IEEE fields of interest, recognizing technical excellence, community service, exemplary character, a positive attitude, and leadership.

- IEEE-HKN members add value to the community through community service projects.
- IEEE-HKN members are sought out by employers and chapters have a close relationship with local companies.

Over 45,000 Hours of Community Service in 2020!

Interested? Contact IEEE-HKN at info@hkn.org
Adding Value to IEEE Members
Credentials: Certificates and Digital Badging

EA is charged by the IEEE to administer and manage all CEUs.

Certificates are offered for successful completion of learning events (courses, webinars, workshops, tutorials, etc.) sponsored by any IEEE Unit.

Types of certificates include:
• Continuing Education Unit (CEU)
• Professional Development Hour (PDH)
• Certificate of Completion (CoP)

Learn how your OU can offer IEEE Certificates & Badges by visiting ieee.org/education

Interested? Contact Tahiya Choudhury in Educational Activities at t.choudhury@ieee.org
EA Awards and Recognitions

**EAB Awards**
- Meritorious Achievement in **Accreditation Activities**
- Meritorious Achievement in **Continuing Education**
- Meritorious Achievement in **Outreach and Informal Education**
- Meritorious Achievement Award in **Pre-University Education**
- Major **Education Innovation**
- **Meritorious Service** to IEEE EAB
- Educational Activities Board (EAB) / Standards Association (SA) Board of Governors Standards Education Award

**EAB Scholarship and Fellowship**
- IEEE Life Members Graduate Study Fellowship in Electrical Engineering
- The Charles LeGeyt Fortescue **Scholarship**

**HKN Awards (administered by HKN ARC)**
- Outstanding **Chapter** Award
- Alton B. Zerby and Carl T. Koerner Outstanding **Student** Award
- Outstanding **Young Professional** Award
- C. Holmes MacDonald Outstanding **Teaching** Award
- **Eminent Member** Recognition
- **Distinguished Service** Award
- Asad M. Madni Outstanding Technical Achievement and Excellence Award

▶ **Employer** Professional Development
▶ **Section** Professional Development
▶ **Society/Council** Professional Development
2021 Awards Cycle

Nominations, judging, celebration

• Nominations Accepted  15 Feb – 3 May 2021
• Evaluation Period      May – Jun 2021
• Award Winner Selection During June Board
• Awardee Announcement   Jul-Aug 2021
• Awards Ceremony        During November Board Series
                         or Virtual Award Experience
Join the Conversation

Facebook
@IEEEeducation
@IEEE.continuing.education

Twitter
@IEEEeducation
@IEEELearn

LinkedIn
@ieee-educational-activities

For questions or comments,
email Educational Activities at edu-activities@ieee.org
http://ieee.org/education
IEEE STUDY CIRCLE PROGRAM PILOT

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeer8.org/

SPEAKER
A. MARGARIDA TRIGO

https://tinyurl.com/r8meetingPEASC
IEEE Online Study Circles

New Initiative

Catarina Reis
Chair Portugal Blockchain WG

A. Margarida Trigo
WiE Corresponding member
PEAsC
IEEE Online Study Circles

Introduction

- This initiative intends to facilitate continuous learning using a self-managed, self-paced approach where the moto is learning by sharing
  - Curiosity: this initiative is based on study circles embraced by Sweden more than 1 century ago to solve poverty and illiteracy problems
- Ground Structure:
  - 7-12 members per circle with a common interest to learn, discuss and grow together
  - Facilitator role instead of Teacher role
  - Facilitator is one group member who engages members into the discussion, being responsible for the session to be inside the defined scope and goals
  - Agile learning with cooperation and collaboration
IEEE Online Study Circles - Proof of Concept

Hyperledger Fabric Developer - Certification Training (CHFD)

- To evaluate the potential of this initiative it will be started a Proof of Concept (PoC) in April
  - IEEE Study Circle: “Hyperledger Fabric Developer - Certification Training (CHFD)”
IEEE Online Study Circles - Proof of Concept

Hyperledger Fabric Developer - Certification Training (CHFD)

- The PoC will help to mold the resources to be used in future IEEE study circles:
  - Facilitator Handbook;
  - Circle Study Handbook;
  - The PoC will use the ScrumBan Based Learning approach.
IEEE Online Study Circles - Proof of Concept

How to be part of Learning Circles PoC

- IEEE Online Study Circles - **Proof of Concept** - Hyperledger Fabric Developer - Certification Training (CHFD) to start in April

- **Pre-requisites of PoC:**
  - Developers with knowledge in Node.js (required by certification platform)

Interested in being part of this Study Circle PoC?

Please Contact:

R8 PEAsC or blockchain@ieee-pt.org
5 Topics 5 Minutes 5 Slides

IEEE R8 ROBOT WARS CHAMPIONSHIP

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeer8.org/

SPEAKER

CONRAD ATTARD

https://tinyurl.com/r8meetingPEASC
IEEE r8 Robot Wars Championship 2022 Malta

Objective:

- Promote STEM among IEEE members and pre university.
- Establish an opportunity for industry partners to engage with IEEE by supporting various teams when building the robot.
- Promote the IEEE brand among different student organisations at various universities.
- Create the first R8 flagship Education event.
- Grow IEEE membership with students offering more motivation for members to join their local IEEE Student branch.
- Engage with both student and industry.
- Encourage problem solving, creativity, teamwork and collaboration.
IEEE r8 Robot Wars Championship 2022 Malta

Methodology

Reach out to different student branches in our Region
Update the rules and regulations of Robot wars
Issue a call and organize online information sessions
Construction of Arena
Review applications
Organise Webinars – Workshops on how to build Robots for robot wars, entrepreneurship skills needed to fund the robot and STEM communication.
STEM outreach to schools.
Championship in Malta
PreUniversity STEM Outreach Programs

Lorena Garcia

IEEE EA PreUniversity Education Coordinating Committee Chair
IEEE Pre-University Education

**SHARE**
Create and provide opportunities and resources for Volunteers, Educators, and Students

**GIVE BACK**
Volunteers engage in STEM outreach, assisting educators in bringing STEM into their classrooms and helping students explore STEM careers

**INSPIRE**
Encourage students to aspire to Engineering and Technology careers

Youth see themselves as someone who can improve the world through STEM careers!

**How We Do It**
- Student Workshops
- Competitions
- Teacher Workshops
- STEM Resources
TryEngineering Brand

Two-week summer college experiences for 8th to 12th grade students to introduce them to engineering and technology

A pre-university engineering education portal for educators, students and IEEE volunteers

A teacher-guided online learning platform that matches 3rd to 5th graders with mentors from industry
● Launched in 2006 as a pre-university engineering education web portal
  ○ Resources for educators to assist them in bringing engineering and technology into their classrooms
  ○ Provides students with resources to prepare them for STEM Careers

● Resources include: Lesson Plans, STEM Fields, Meet an Engineer, Games, Find a University, Virtual Learning

- Engineering Lesson Plan Toolkit
- Covid-19: eLearning Resources
- Engineering Design Process

FEATURED GAME:
What Kind of Engineer Are You?
Engineers are the inventors and problem solvers of the world. What kind are you? Click here to play What Kind of Engineer Are You?
The Challenge for IEEE’s STEM Pre-University Education Programs: A Fragmented Landscape

There are many volunteer-led pre-university STEM activities happening globally, but…

We do not know collectively what is being done across the institution. There is no:

- Place for volunteers to **SHARE** and showcase their effective programs with each other
- Set of STEM education **RESOURCES** from IEEE that volunteers can draw from when developing local STEM programs
- **IMPACT DATA** of our collective IEEE STEM efforts
IEEE Volunteer STEM Portal: **Share. Give Back. Inspire**

**Features**

- **Searchable library** of current STEM and pre-university programs *(developed by IEEE’s global communities and Partners)*
- **Resources** to support current or new STEM programs
- **Metrics and Impact** mechanism
- **Awards and Recognition** program
- **Development** grants (coming soon)

**Volunteer Engagement**

- **Ability** to share your programs
- **Find** a program to host/organize
- **Learn** best practices
- **Make** STEM connections
- **Build** a Local STEM community
- **Impact** as many students as possible
The Envisioned Future

IEEE’s Global Communities: Engaged in Pre-University STEM Activities

Mobilizing the global reach of IEEE to impact as many students as possible with hundreds of STEM activities offered each year!
Join Our STEM Team

Volunteer STEM Portal

- **Share** your great programs
- **Participate** in the pilot

Join our IEEE Pre-University **Collabratec Community** and **TryEngineering Facebook Group**

FOR MORE INFORMATION CONTACT:
Lorena Garcia [lorenagarcia@ieee.org](mailto:lorenagarcia@ieee.org), Burt Dicht [b.dicht@ieee.org](mailto:b.dicht@ieee.org), Dawna Schultz [d.j.schultz@ieee.org](mailto:d.j.schultz@ieee.org)
Register now at
R8 Professional and Educational Activities

Part II

- Pre-university working committee, Ana
- University working committee and Nizar
- Continues education working committee, Amith
Pre-University Education WG

Presented by:
Ana Trigo  PEAsC corresponding member
          WiE member
          IEEE Graduate Student Member, Portugal Section
PRE-UNIVERSITY ACTIVITIES WORKS COMMITTEE

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeer8.org/

SPEAKER

A. MARGARIDA TRIGO

https://tinyurl.com/r8meetingPEASC
Pre-University Education WG

Main Pre-University Initiatives

- Try Engineering Month Region 8
  - Encourage all R8 OUs to implement a program of STEM Portal
  - To be held in 2021 Q4
- Alpha Contest
  - Organising events to promote engineering to the society
  - Sections earn points with every educational event
- Collaboration with other OUs and R8 committees
  - Sections, SAC, SBs, YP, WiE
University Education Works Committee

Presented by: Nizar Rokbani

IEEE Senior Member
UNIVERSITY ACTIVITIES WORKS COMMITTEE
IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieeer8.org/

SPEAKER
NIZAR ROKBANI

https://tinyurl.com/r8meetingPEASC
University working committee - Nizar

Merge the language initiative with the University activities and made available the following University level Talks in French and Arabic:

- **AI and Big Data, Review & challenges**, by Prof Adel Alimi, IEEE SM, Tunisia Section, Sfax University Tunisia. (Arabic-English)
- **From Artificial Neural Networks to Deep Learning**, by Prof TareK Hamdani, IEEE SM, Tunisia Section, Monastir University Tunisia. (French)
- **Engineering with IEEE Ethics**, (Arabic-English) by Dr Hussein Mahdi IEEE SM Iraq Section, Diala University Iraq

Promoting a Specific TRYengineering/Stem content for University Students:

- Selecting and sharing on our portal a panel of TRYengineering activities which may be done virtually.
- Adapting existing content from the STEM portal to distance learning:
  - Blinking with arduino based on Tinkercad, Dc Drvie ....
University working committee

Re-estalishing the Acceleration contest under Covid

- Arranging the 2021’ Acceleration Contest as an integrative Pof & Educational Activities for R8 sections.
  - Contacting previous edition winners, 2019, and Gather feed-back and expense reports.
- Arranging the new call of the contest to be inclusive for virtual en distance activities as a Covid response
- Identifying Prof & Educational activities sections officers to help in promoting the 2021’ Edition of the contest :
  - At University level
  - At Pre-university level in collaboration with Ana Tigo
CONTINUING EDUCATION WORKS COMMITTEE

IEEE Region 8 Online Meeting Series.

IEEE R8 PEASC
http://pea.ieee8.org/

SPEAKER
AMITH KHANDAKAR

https://tinyurl.com/r8meetingPEASC
Essential Skills for Development

Entrepreneur.com put out an article about the top 9 reasons millennials get fired, and the top five are: the need for independence, lack of confidence, anxiety, miscommunication, and that millennials lack vision.

These are what we in the education world call “soft skills.”
PEA Speakers Program

Should have already received the call for nomination for the speakers program.

Deadline: 26th March 2021

This time we are asking speakers to nominate themselves and also recommend the language they can the workshops on.

- English
- Arabic
- French
- Spanish
- Portuguese
- Other:

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IEEE Region 8 Professional and Educational Speakers Program Committee (PEA SPC) is looking for thought-leaders, innovators, distinguished and experienced professionals who are willing to share their valuable knowledge in PEASC’s fields of interest to IEEE Region 8 members and help them by providing guidance on developing useful skills for their professional life.

The program contains two tiers of speaker profiles: Distinguished Speakers and Experienced Speakers.

**Distinguished Speakers:**
These speakers are international thought leaders from academia, industry, and government and will be available primarily to present face-to-face sessions if requested by IEEE Region 8 OUs. Region 8 PEASC funds the travel of these individuals to OU events and the OU is expected to cover local costs.

**Experienced Speakers:**
These speakers are experienced professionals from academia, industry, and government and will be available primarily for online sessions. They can also be invited for face to face sessions. PEASC doesn’t cover any costs of these speakers.

We invite you to nominate such individuals, or yourself, in order to participate in our team of speakers.

Please read our PEA Speakers Program Manual before 26th March 2021.

The selected PEA Speakers’ term will last until the end of 2021. The form is available on the link below:

[Form to Fill]

Regards
Conrad Attar PhD
PEASC Subcommittee chair
IEEE Region 8 Entrepreneurship Initiative

The whole committee is envisioned as:

- R8 Professional and Educational Activities
- R8 Action for Industry
- R8 Student Activities
- Abdullateef Aliyu - R8 Humanitarian Activities, R8 Entrepreneurship Initiative
- Mohamed El Dallal - IEEE Entrepreneurship, R8 Entrepreneurship Initiative
- Rawan El Jamal - R8 Young Professionals, R8 Entrepreneurship Initiative
- Seif El Hajjem - R8 Young Professionals, R8 Entrepreneurship Initiative
- Laura Gonzalez Llamazares - R8 Entrepreneurship Initiative
- Mohammad Zidan - R8 Entrepreneurship Initiative
- Vinko Lesic, R8 Young Professionals, R8 Entrepreneurship Initiative, R8 Life Members
Discussion:

Share with us some ideas you have planned for the coming months. Which are your favorite professional and educational activities?

Engage with us: https://app.sli.do/event/m8c0cudf
https://tinyurl.com/PEASC2021
R8 Professional and Educational Activities

Educational Activities Key Principles

1. We invite you to reach out different OUs when organising activities

2. Educational concepts are very important when organising activities to ensure that STEM events are successful

3. Results are important! They need to be measured

4. Inform PEASC of your events and submit your activities through the STEM portal. Let’s know about them.
2021 EAB Awards
IEEE Educational Activities Board

Learn more about Educational Activities programs
www.ieee.org/education

Nominations accepted 15 February to 3 May

2020 EAB Virtual Awards Ceremony – Awardee Videos
https://ieeetv.ieee.org/event/2020-eab-awards
Professional and Educational Activities

Thank you

Keep in touch!

Like our FB page: /ieeeR8PEA

Engage with us: https://app.sli.do/event/m8c0cudf
https://tinyurl.com/PEASC2021