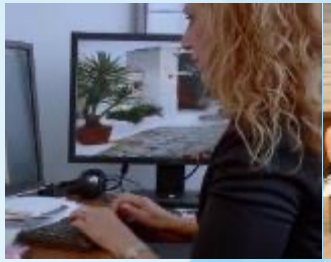


IEEE Educational Activities

IEEE SEOC - Education Volunteer Update

August 2021

IEEE

IEEE Educational Activities
Section Education Outreach Committee (SEOC)

Supavadee Aramvith, SEOC Chair

2021 Section Education Outreach Committee

Supavadee Aramvith
SEOC Chair (Region 10)

Stephen M. Phillips
EAB Vice President
Region 6

Region 1
Vince Socci

Region 2
Steve Bonk

Region 3
Damith Wickramanayake

Region 4
Anu Gokhale

Region 5
David Pierce

MGA R1-6 Rep
Loretta Arellano

Region 6
Mostafa Mortezaie

Region 7
Deyasini Majumdar

Region 8
Conrad Attard

Region 9
Betania Filha

Region 10
Preeti Bajaj

MGA R7-10 Rep
Teofilo Ramos

EA staffs support : Rachel Warnick, Jordanna Coyle, Johanna Perez

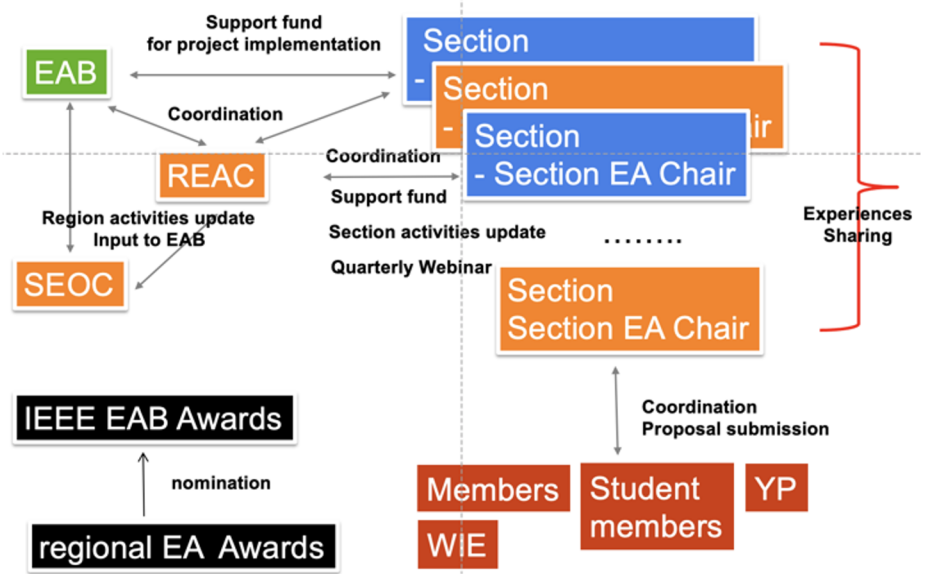
IEEE EAB - Section Education Outreach Committee

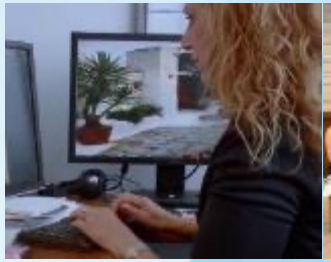
Mission

To engage and support IEEE Sections and the Section Education Activities Chairs/Coordinators in their efforts to promote and implement EAB's products and services based on local educational needs.

Scope

The SEOC will have the lead responsibility within EAB for building and maintaining strong working relationships with IEEE Regions, Sections, and Chapters in order to work with these organizational units as partners to promote EAB's products and services.





IEEE Educational Activities

Stephen Phillips, Vice President Educational Activities
Jamie Moesch, Managing Director Educational Activities

IEEE

Stephen M. Phillips, Ph.D., P.E.

2020-2021 IEEE Vice President, Educational Activities

Professor and Director of the School,
School of Electrical, Computer and Energy Engineering
Arizona State University

IEEE

IEEE Governance Organization

MEMBERS

Assembly

Board of Directors

PSPB

Educational Activities Board

Standards Assoc. Board

IEEE-USA Board

Member & Geo Activities Board

Regions & Sections

Technical Activities Board

Tech Cmtee

Societies & Tech. Councils

IEEE

IEEE Strategic 2020-2025

OUR MISSION

We foster technological innovation and excellence for the benefit of humanity.

OUR VISION

We will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology, and of technical professionals in improving global conditions.

CORE VALUES

IEEE WILL:

- Drive global innovation through broad collaboration and the sharing of knowledge
- Enhance public understanding of engineering and technology and pursue standards for their practical application
- Be a trusted source of educational services and resources to support life-long learning
- Provide opportunities for career and professional development
- Inspire a worldwide audience by building communities that advance technical interests, inform public policy, and expand knowledge for the benefit of humanity

IEEE will foster a collaborative environment that is open, inclusive, and free of bias and will continue to sustain the strength, reach, and vitality of our organization for future generations.

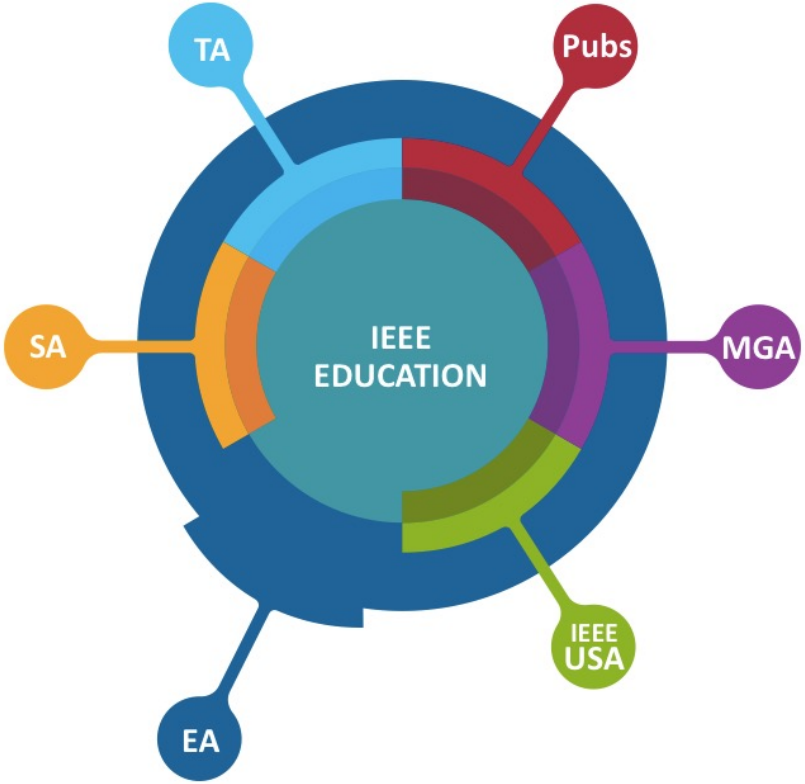
www.ieee.org/strategic-plan

Approved by the IEEE Board of Directors, November 2019

IEEE
Advancing Technology for Humanity

Education Across IEEE

Expanding our collective impact in education through coordination



IEEE Educational
Activities

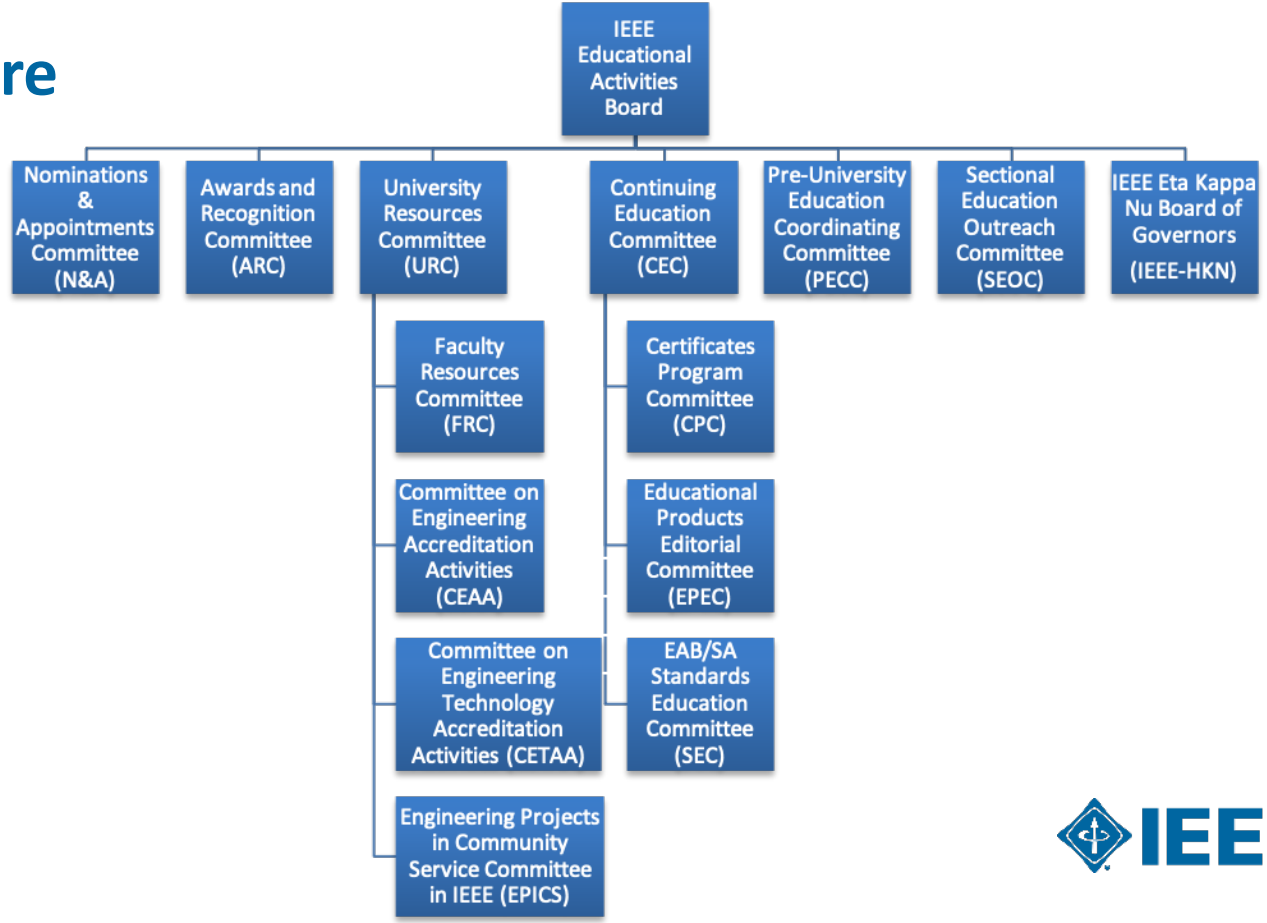
IEEE Educational Activities
Areas of Focus

Pre-University Activities
TryEngineering.org; Volunteer STEM Portal; Summer Institutes; TryEngineeringTogether

University Activities
Accreditation Coordination; EPICS in IEEE; IEEE-Eta Kappa Nu

Continuing Education
eLearning; Certificates; IEEE Learning Network

IEEE Educational Activities Structure



2021 IEEE Educational Activities Board

Stephen M. Phillips
EAB Vice President
Region 6

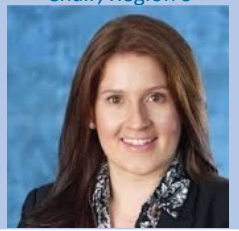
Witold M. Kinsner
Past VP, Nominations & Appointments Chair
Region 7

Antonio Ferreira
Treasurer
Region 9

Babak Dastgheib-Beheshti
Continuing Education Committee Chair
Region 1

Timothy Kurzweg
University Resources Committee Chair
Region 2

Lorena Garcia
Pre-University Education Coordination Committee Chair, Region 9

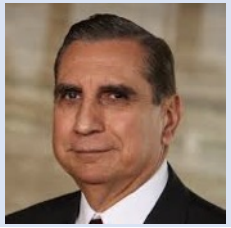


Russ Meier
Technical Activities Board Representative
Region 4

Takako Hashimoto
Technical Activities Board Representative
Region 10

Loretta Arellano
Membership Geographic Activities Board Representative, Region 6

Teofilo Ramos
Membership Geographic Activities Board Representative, Region 9



Avron Barr
Standards Activities Board Representative
Region 6

Ron Jensen
IEEE Eta Kappa Nu President
Region 4

2021 IEEE Educational Activities Board

17 members,
14 voting, 3 non-voting

Sohaib Sheikh
Awards & Recognition Committee Chair
Region 8

Supavadee Aramvith
Section Education Outreach Committee Chair
Region 10

Flavia Dinca
Young Professionals Representative
Region 8

Sharon DeVivo
Women in Engineering Representative
Region 1

Jamie Moesch
Secretary

IEEE
Advancing Technology for Humanity

2021 EAB Awards

IEEE Educational Activities Board

Learn more about Educational Activities programs

www.ieee.org/education

2021 Virtual Ceremony coming in November

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

Jamie Moesch

Managing Director, Educational Activities

j.moesch@ieee.org

Educational Activities Priorities for 2021

1. IEEE LearningNetwork
2. IEEE eLearning LIBRARY
3. Powered by IEEE TRYEngineering.org
4. Powered by IEEE TRYEngineering Summer Institute
5. ABET
6. TryEngineering TOGETHER — Powered by IEEE and In2Books
7. TRYEngineering STEM Portal
8. HKN IEEE Eta Kappa Nu
9. EPICS IN IEEE — Engineering Projects In Community Service
10.

11. EAB Awards Program
12. President's Scholarship

New IEEE Teaching Excellence HUB

IEEE Education Week™ 4-8 April 2022

A celebration of IEEE's impact in Pre-University STEM, University, and Continuing Professional Education

When?

- Soft Launch: IEEE Day 2021 (5 October)
- IEEE Education Week: April 4-8, 2022

Why?

To **highlight the impact of IEEE educational efforts globally** and **increase usage/attendance**

What is Being Planned?

- **Website** where IEEE units can submit educational events, offerings, and websites (available now or in the future), and have them featured
- **Live virtual sessions** throughout the week
- **Gamification** to encourage members to engage with educational offerings, with the opportunity to earn a digital badge
- **Contests and prizes**
- **Special offers** for members on education from IEEE

How Do I Get Involved?

Plan an educational event during the week, submit your IEEE group's content on our website, and help spread the word about IEEE Education Week!

Sign up for updates: **educationweek.ieee.org**

Continuing Professional Education

Babak Beheshti

Chair, Continuing Education Committee

Jennifer Fong

Director, Education Product, Sales and Marketing

IEEE

IEEE Continuing Professional Education (CPE)

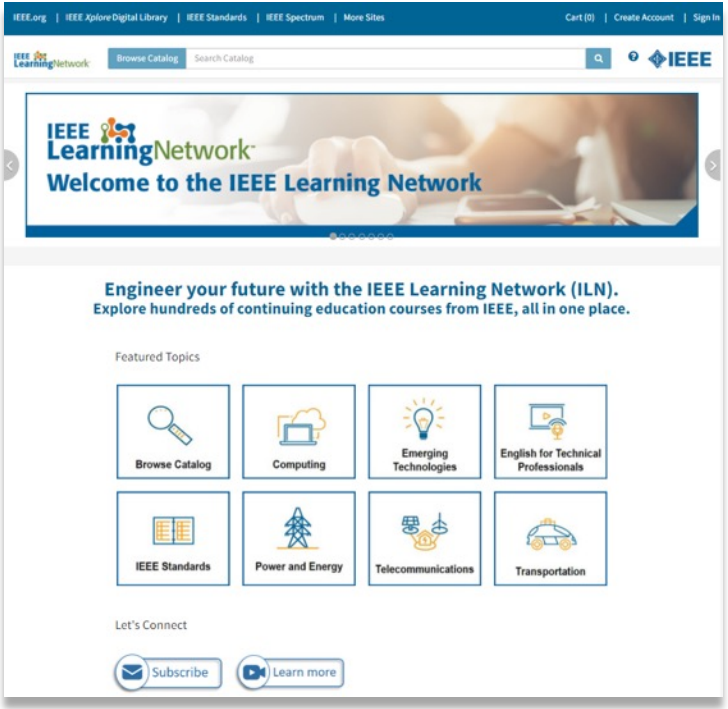
Providing professional education for working engineers and technologists

Who We Serve:

- IEEE Members and other working professional engineers with a bachelor's degree or higher
- Institutions with a need for workforce development training solutions

What We Offer:

- Continuing professional education online courses, virtual events, etc.
- Cost-effective training solutions for institutions on a broad range of engineering topics
- CEUs/PDHs to help maintain professional licenses



IEEE Continuing Professional Education Products

Available Now

- eLearning Library (100's of peer reviewed online courses)
- eLearning Front List (20+ new courses/yr)
- Course Programs (Several courses on a topic)
  Some of our programs:
  - Enterprise Blockchain
  - Artificial Intelligence Standards
  - 5G Networks (with Nokia)
  - Finite Element Method for Photonics
  - Automotive Cyber Security
- English for Technical Professionals
- IEEE | Rutgers Online Mini-MBA for Engineers
- Mars Space Colony Standards Game
- Live Virtual Events (paid and free)
- IEEE Certificates and Digital Badges
- Sponsorship/Advertising Opportunities

New Products This Year

- Course Programs
  - Machine Learning: Predictive Analysis for Business Decisions
  - Digital Transformation: Moving Toward a Digital Society
  - 5G Deployment
  - Designing Blockchain Solutions
  - IEEE Standards for Aerospace and Defense
  - Practical Applications of AR/VR Technology
- IEEE | IAPP Data Privacy Engineering Collection
  - In collaboration with IEEE Standards and the International Association of Privacy Professionals (IAPP)
- ISACA Cybersecurity Nexus Platform (CSX)

Credentials for Learning Achievement

Certificates

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

EA issues certificates for successful completion of learning events (courses, webinars, workshops, tutorials, etc.) sponsored by EA, IEEE Societies, Sections, Chapters, OUs and pre-approved external organizations.

Types of certificates include:

- Continuing Education Unit (CEU)
- Professional Development Hour (PDH)
- Certificate of Completion (CoP)

Certificates Stats:

- Over 79K certificates issued since 2017
- 52 OUs/providers offered our certificates

Digital Badging

EA launched digital badges in 2020.

- Badges contain embedded metadata that reflects specific skills earned.
- Follows the Open Badge standard
- Can be shared on CVs, social media platforms, and email signatures
- Tied to individual bodies of knowledge that may be delivered via an eLearning course program and/or event (virtual and/or live).
- Credentials are verified by unique blockchain ID.
- EA issued 469 digital badges in 2020.

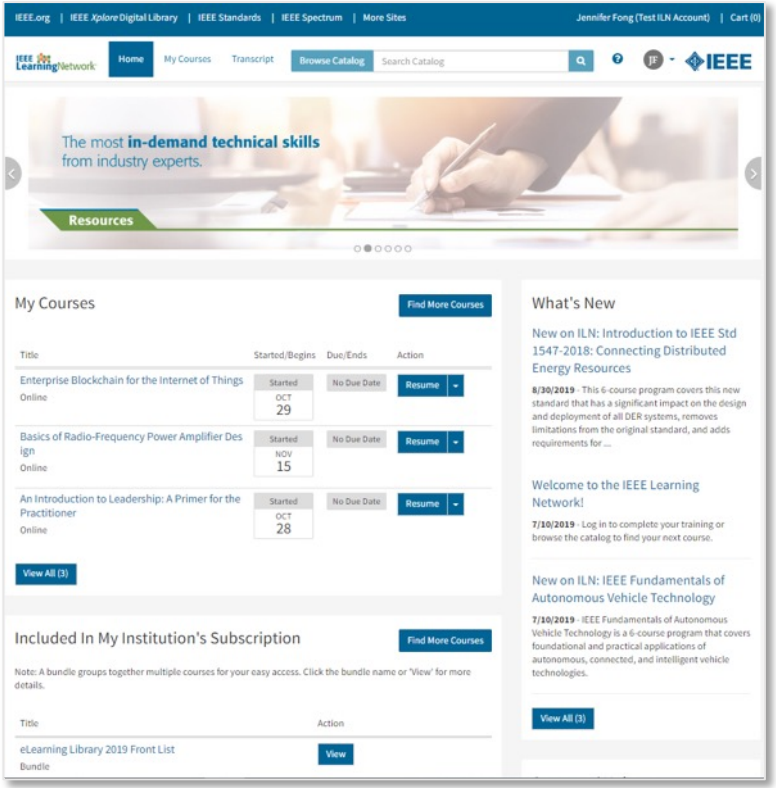
IEEE

IEEE LearningNetwork™

One platform for discovery of continuing education across IEEE

Shared learning management system for continuing education across IEEE

Built to improve learner experience with continuing education from IEEE



IEEE LearningNetwork™

IEEE

Online Courses from 35 Units Across IEEE

Learn about the **latest technologies**

Earn **certificates, CEUs, PDHs** and **digital badges** that will help you advance your career

Sign up for **weekly mailers** on the newest courses and educational offerings

Help spread the word to your volunteers. Access ILN Marketing material at ea.ieee.org

IEEE Aerospace and Electronics Systems Society

IEEE Author Engagement, Tools & Support

IEEE Biometrics Council

IEEE Boston Section

IEEE Brain

IEEE Broadcast Technology Society

IEEE Communications Society

IEEE Computer Society

IEEE Consumer Technology Society

IEEE Continuing Education for Engineering Professionals in Africa

IEEE Educational Activities

IEEE Electronics Packaging Society

IEEE Engineering in Medicine & Biology Society

IEEE Entrepreneurial Program

IEEE Future Directions

IEEE Geoscience and Remote Sensing Society

IEEE Humanitarian Activities Committee

IEEE Industry Applications Society

IEEE Instrumentation and Measurement Society

IEEE Intelligent Transportation Systems Society

IEEE Intellectual Property Rights

IEEE Microwave Theory and Techniques Society

IEEE Photonics Society

IEEE Power & Energy Society

IEEE Power Electronics Society

IEEE Product Safety Engineering Society

IEEE SIGHT

IEEE Signal Processing Society

IEEE Smart Cities

IEEE Smart Grid

IEEE Standards Association

IEEE Solid State Circuits Society

IEEE Transportation Electrification Community

IEEE USA

IEEE Women in Engineering

iln.ieee.org

IEEE LearningNetwork PARTNER

IEEE

Pre-University Education Committee

Lorena Garcia, PECC Chair
lorenagarcia@ieee.org

Burt Dicht, Director Student and Academic Education Programs
b.dicht@ieee.org

IEEE

Pre-University Education Coordinating Committee (PECC)

Mission

- Promote and enhance the level of technological literacy of pre-university educators and students,
- Be the primary source of resources, curricula and pedagogical practices for pre-university educators
- Encourage students to aspire to IEEE related careers

Powered by IEEE TRYEngineering.org

STEM Portal

TryEngineering TOGETHER
Powered by IEEE and In2Books

Powered by IEEE TRYEngineering Summer Institute

IEEE

TryEngineering Programs

TryEngineering.org

- All lesson plans converted to new format
- New lesson plan content
- Translation initiative
- New STEM field content
- Integration with STEM Portal

Powered by IEEE TRYEngineering

TryEngineering Tuesday

- Working in partnership with IEEE Societies
- Monthly webinars featuring a 4-Step Blog (Explore, Discover, Inspire, Share)
- 14 Sept - Solar Power (PES)
- 21 Sept – Girls in STEM (WIE)

IEEE Aerospace and Electronic Systems Society TryEngineering TUESDAY IEEE

IEEE Photonics Society TryEngineering TUESDAY IEEE

TryEngineering Together

- 2020-2021 academic term - 37 classrooms, 845+ students and mentors, 10,000+ letters exchanged
- 2021-2021 academic term - 36 classrooms and 820+ students confirmed
- 5 new curriculum topics added by December

TryEngineering TOGETHER

IEEE

Volunteer STEM Portal

Volunteer STEM Portal

- The **Volunteer STEM Portal** leverages the reach of IEEE's global communities and volunteers
- Objective is to engage and impact as many students as possible in pre-university STEM outreach
- The portal is a "go-to" resource for volunteers and features:
  - A searchable library of current STEM programs
  - "How-to" resources to facilitate STEM outreach activities
  - Impact data and the ability to share results
  - STEM guides and resource materials
- Currently 36 programs in portal library
- 90 STEM outreach events reported as of 31 July

Volunteer STEM Portal Grant Program

- The IEEE Volunteer STEM Portal Grant Program is designed to spur innovative STEM outreach programs and to test news ideas
- 83 proposals were received
- 18 grants were awarded totaling $35.5K
- Activities completed by 1 Dec, impact data reported, and program added to the STEM Portal library
- Plans for the 2022 program are in development

Powered by IEEE TRY Engineering™

IEEE STEM Ambassador

- The IEEE STEM Ambassador Program recognizes IEEE volunteers for their contributions to pre-university STEM outreach
- Ambassadors will organize STEM activities, share results, and help build a community of STEM volunteers
- Application window opened on 1 July and closed on 20 August
- 80 applications received and selections to be announced on 15 Sept
- Ambassadors will conduct one STEM outreach event by 31 December

IEEE

IEEE STEM Summit (New)

- Designed for IEEE members and volunteers interested in pre-university STEM outreach
- The objective is to build our STEM community by coming together and encouraging, supporting and inspiring each other

Topics Include:

- Inspiring a Passion for STEM Education
- Engaging in STEM Outreach
- Assessing the Impact of STEM Outreach
- STEM Outreach Tips
- Family Build Challenge

Seven virtual sessions featuring experienced IEEE STEM Outreach Volunteers and STEM Education Leaders

1 to 6 November 2021

Look for more details soon

IEEE

University Resources Committee

Timothy Kurzweg, URC Chair

kurzweg@ieee.org

Burt Dicht, Director Student and Academic Education Programs

b.dicht@ieee.org

IEEE

EPICS IN IEEE

A signature program of the IEEE Foundation and EA that organizes university and high-school students to work on engineering-related projects with local community organizations

Student Benefits:

- Improve technical engineering and problem-solving skills
- Enhanced communication skills
- Develop and expand leadership skills
- Real life experience and measurable result

Community Benefits:

- Obtain a solution to a problem or need
- An immediate impact on humanity
- A measurable result

2021 Status	
Submitted UEF Grant Proposal	Working with the Foundation to raise funds to reach this year's development goal
Sharing success stories and impact of projects and programs	Implemented new metric reporting system

Accreditation

- Oversee the accreditation of 800+ engineering, computing and technology programs in IEEE's fields of interest
- More than 400 IEEE volunteers (accreditation committees and program evaluators) are involved with accreditation activities

2021 Status	
Program Evaluations Conducted Virtually for 2020 and 2021	Supporting Program Criteria in IEEE's Fields of Interest
Completed training of 2020 PEV Candidates	Promoting Role of Accreditation through Webinar Series

ABET
BE CONFIDENT™

How an IEEE Program Evaluator prepares for University Visit – Webinar
4 August 2021

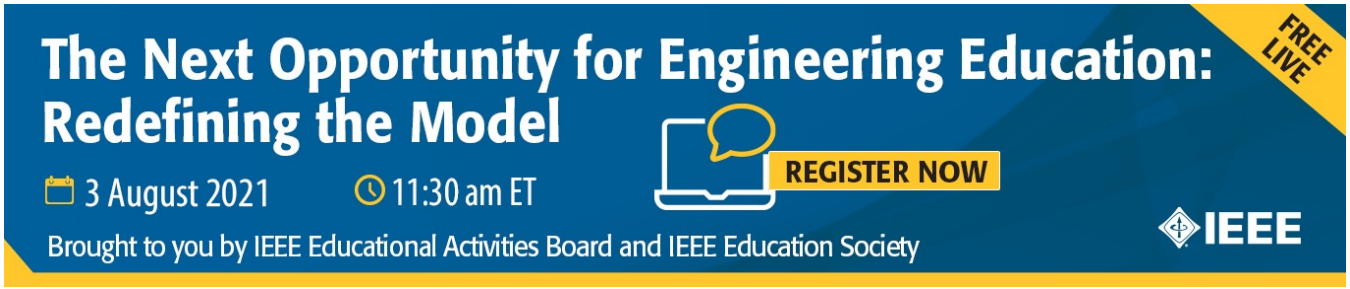
IEEE

Engineering Education 2.0 Webinar Series

- The **Faculty Resources Committee** (FRC) in collaboration with the **Education Society** – conducted the **Engineering Education 2.0 Webinar Series** featuring **Dr. Arnold Pears in 2020 – 2021**

- Session 1 – 30 Sept 2020
  - Models, Methods and Techniques for Innovation
- Session 2 – 11 Nov 2020
  - Approaches to Innovative Instructional Design
- Session 3 – 11 March 2021
  - Interviews in the Field
- Session 4 – 29 June 2021
  - Digital Transformation of Teaching in a Post-Pandemic World

University Resources Committee Town Hall Jointly Organized with the Education Society



- Held on **3 August** – the **Town Hall** featured an array of recognized experts in the field
- Attendees left with tips and guidance they could put into action immediately
- The focus was on how remote learning has changed pedagogical practices and what that means for in-person instruction

Panelists:

- **Manuel Castro**
- **Aruquia Peixoto**
- **Sean Bentley**
- **Kathleen Kramer**
- **Olugbemiga Olatidoye**

Moderated by Tim Kurzweg and Steve Watkins

[The Next Opportunity for Engineering Education]

IEEE

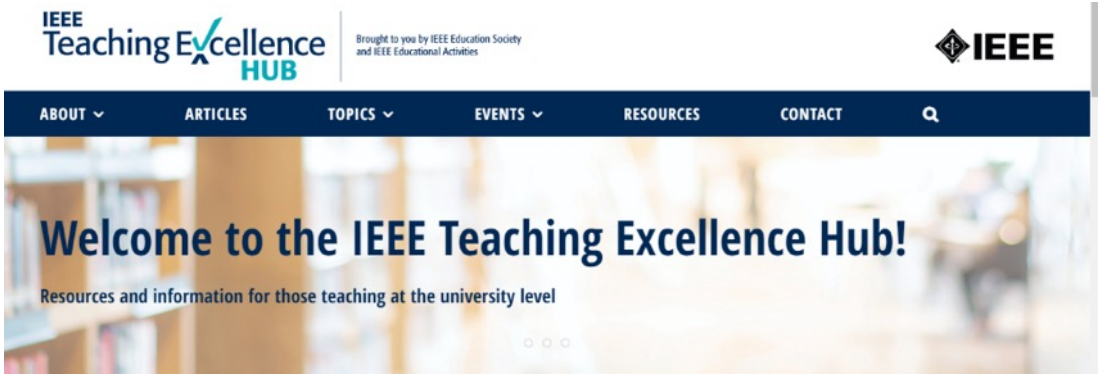
IEEE Teaching Excellence HUB

A collaboration between IEEE Educational Activities Board and the IEEE Education Society

Description

- Designed to provide professional development resources to those teaching at the university level
- Content (blogs, articles, events) developed by experts from IEEE Education Society and EA Faculty Resources Committee

Launched April 2021



Hub Update

- Articles, events and resources are now posted to the site
  - 9 articles in library
  - 8 events posted

To contribute articles, events and resources contact sadiq.mitchell@ieee.org

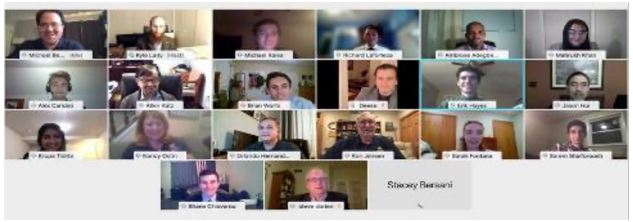
http://teaching.ieee.org

IEEE

IEEE-HKN: The Honor Society of IEEE

IEEE-Eta Kappa Nu (IEEE-HKN) is the international honor society in the IEEE fields of interest, recognizing technical excellence, community service, exemplary character, a positive attitude, and leadership. The Society inducts Student and Professional Members who uphold the tenets of the society and desire to advance the mission of IEEE-HKN.

- Members must be invited to join
- 268 Chapters worldwide
- More than 200,000 members inducted
- Lifetime Designation



IEEE-Eta Kappa Nu

IEEE

IEEE-Eta Kappa Nu: What We Do

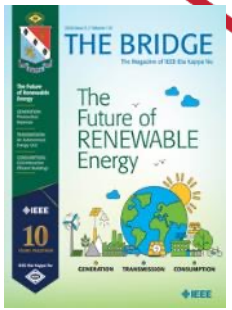
IEEE-Eta Kappa Nu
HKN Experience

IEEE-HKN
Diversity and Inclusion
DISCUSSION

IEEE-HKN
PATHWAYS to Industry

IEEE-HKN
Alumni 2020 Newsletter

- Recognize Excellence and inspire future leaders
- Provide Professional Development
- Provide Chapter and Student Leadership Development
- Network, Mentor, Tutor
- Community Service: 60,000 hours logged by Chapters in 2021
- Recognize outstanding individuals and chapters through our Awards Program
- Produce THE BRIDGE, our award-winning Magazine



IEEE-HKN
Awards & Recognition
CEREMONY

HKN Connection

IEEE-HKN
XFactor

IEEE-HKN
Founders Day
28 OCTOBER

IEEE-HKN
2021
Student Leadership
CONFERENCE

IEEE-Eta Kappa Nu
GradLab

IEEE-Eta Kappa Nu

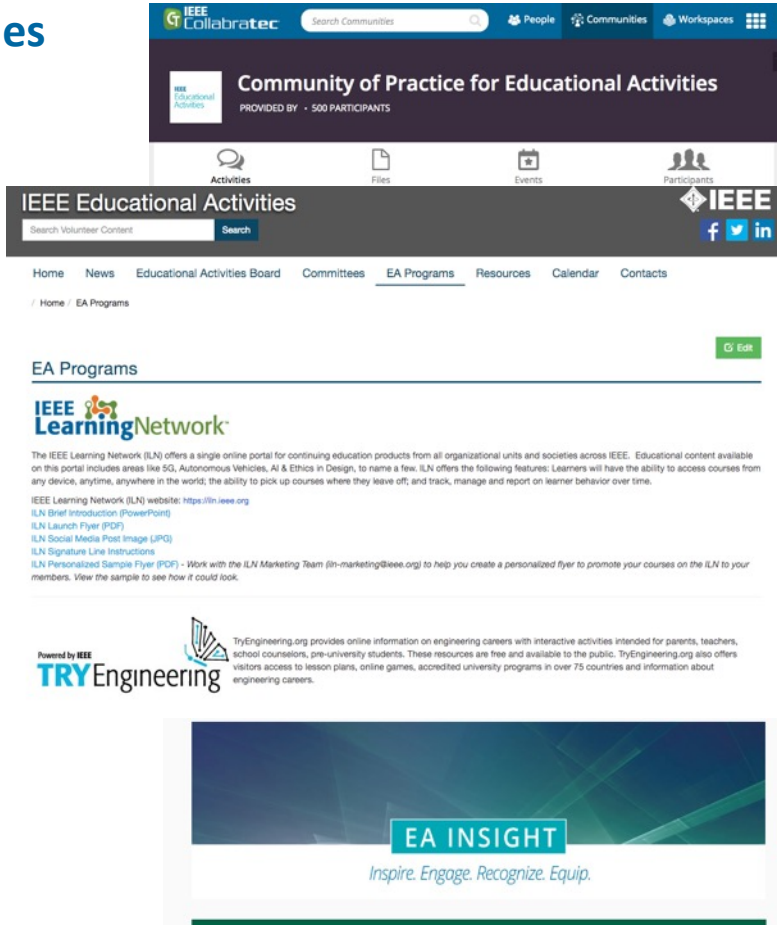
IEEE
IEEE

Section Education Outreach Committee

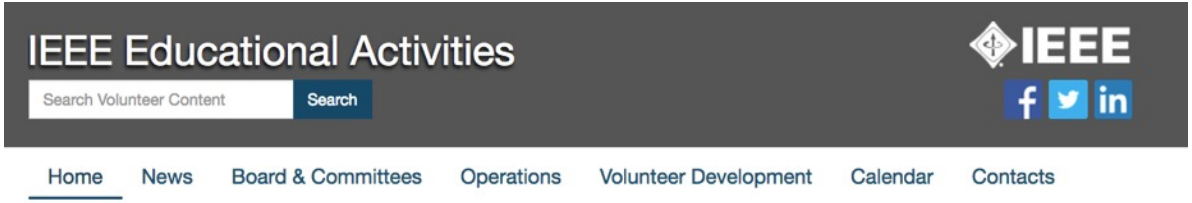
Supavadee Aramvith, SEOC Chair

Resources for Education Volunteers & SEOC Activities

- **EA Programs page available on ea.ieee.org**
  - Details on EA's programs, links to flyers, slides
  - Added feedback link
- Piloted program to **support Region/Section leaders with EA information and product outreach**
- Orientation for **Sections and Chapters Education Volunteers**
- Integration into ***EA Insight*** newsletter
- Leveraged **IEEE Collabratec Community of Practice for Educational Activities**
  - Aligns with EA's overall social media plan
- Launched **partnership program** for local units



Resources



- Educational Activities Volunteer Website
  - https://ea.ieee.org/
- 2021 Educational Activities Board Member List
  - https://rosters.ieee.org/home.html
- 2021 Educational Activities Committee Rosters
  - https://rosters.ieee.org/home.html
- 2021 Educational Activities Staff Listing
  - https://ea.ieee.org/contacts/educational-activities-staff-contacts

IEEE

Stephen M. Phillips, Ph.D., P.E.

2020-2021 IEEE Vice President, Educational Activities

Professor and Director of the School,
School of Electrical, Computer and Energy Engineering
Arizona State University

IEEE

Working together to expand our impact

The future success of Educational Activities relies on our ability to partner across IEEE

IEEE LearningNetwork

Partnering with numerous IEEE societies, Future Directions, Standards, MGA, Legal and Human Resources, IT and Publications on development

IEEE eLearning LIBRARY

Partnering with Standards, Future Directions, IEEE Marketing & Sales and many IEEE societies on course development and marketing

EPICS IN IEEE
Engineering Projects In Community Service

Key partnership with the IEEE Foundation

TRY Engineering STEM Portal

Toolkit for volunteers to manage local events for pre-university students

IEEE

Call for 2022 IEEE Educational Activities Volunteers

Applications & Nominations due by 3 October

Abbreviated application for current volunteers

IEEE Educational Activities Board

- Treasurer
- Member and Geographic Activities (MGA) Board, R1-6 Rep
- Member and Geographic Activities (MGA) Board, R7-10 Rep
- Standards Association (SA) Representative
- Technical Activities Board (TAB) Representatives

Educational Activities Liaisons

- IEEE Conference Committee
- IEEE Future Directions Committee (FDC)
- IEEE Member Engagement and Life Cycle Committee (MELCC)
- IEEE Publication Services and Products Board (PSPB)
- IEEE TAB/PSPB Products and Services Committee

Committee Chairs & Members

- Continuing Education Committee (CEC)
  - Credentialing Program Committee (CPC)
  - Educational Products Editorial Committee (EPEC)
- University Resources Committee (URC)
  - Faculty Resources Committee (FRC)
  - Engineering Projects in Community Service Committee (EPICS) in IEEE
- Pre-University Education Coordinating Committee (PECC)
- Awards & Recognition Committee (ARC)
- Section Education Outreach Committee (SEOC)

Click here to apply or visit ea.ieee.org

Join the Conversation

Facebook
@IEEEeducation
@IEEE.continuing.education

Twitter
@IEEEeducation
@IEEELearn

LinkedIn
@ieee-educational-activities

IEEE

Questions, Comments

Send along to r.o.warnick@ieee.org following call.

IEEE Educational Activities | 2020 STRATEGY

Goal

Our goal is to ensure that Educational Activities:

- is grounded in addressing the needs of today and tomorrow,
- understands the evolving needs of those we aim to serve,
- is agile in exploring new opportunities,
- harnesses the most impact from our valuable resources, and;
- provides guidance and support throughout IEEE with regards to education.

Core Purpose

To develop and deliver educational products and services to our members, professionals, educators, and students that excite and inspire understanding of IEEE's fields of interest; support career preparation and professional enhancement, foster diversity, and ensure access to lifelong learning opportunities.

Core Values

- **Commitment to quality and ethics:** Ensuring high value to users
- **Grounded in knowledge and expertise:** Vetting technical and educational excellence
- **Inspirational to lifelong learners:** Relevant learning in IEEE's fields of interest
- **Maximizing impact:** Make a difference at scale
- **Collaboration:** Leverage relationships and partnerships within IEEE and beyond to reach our goals
- **Fiscal stewardship:** Getting the most impact from our resources

Areas of Focus

- Member value
- Impact on the profession
- Resource for practitioners
- Service provider to all of IEEE
- Global relevance of our offerings with assured local quality
- Resource for pre-university educators
- Customer value
- Revenue generation to invest in impact

Core Users

- Members
- Practitioners *(Young Professionals, Seasoned Professionals)*
- Educators
- Students *(kindergarten, primary to high school, colleges, universities,post-graduate)*
- Retirees

For More Information

Program	Website	Contact
TryEngineering.org	https://tryengineering.org/	Dawna Schultz d.j.schultz@ieee.org
TryEngineering Tuesday	https://tryengineering.org/teachers/tryengineering-tuesday/	Dawna Schultz
TryEngineering Together	https://cricketmedia.com/tryengineeringtogether/	Burt Dicht b.dicht@ieee.org
STEM Portal	https://stemportal-tryengineering.ieee.org/	Dawna Schultz
Grant Program	https://tryengineering.org/volunteer-stem-portal/stem-portal-grant/	Dawna Schultz
Ambassador Program	https://tryengineering.org/volunteer-stem-portal/ieee-stem-ambassador-program/	Lynn Bowlby l.bowlby@ieee.org
STEM Summit	In Development	Dawna Schultz

IEEE

For More Information

Program	Website	Contact
EPICS in IEEE	https://epics.ieee.org/	Ray Alcantara r.alcantara@ieee.org
Accreditation	https://www.ieee.org/education/accreditation.html	Regina Samson r.m.samson@ieee.org
Webinars and Town Halls	Various (Check “Events” on the Teaching Excellence Hub)	Sadiq Mitchell sadiq.mitchell@ieee.org
IEEE Teaching Excellence Hub	https://stemportal-tryengineering.ieee.org/	Sadiq Mitchell

IEEE