IEEE Aerospace Electronic Systems VP Education

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AESS BoG Meeting

25th - 26th March 2022

*Facilitate quality **in-person events** while expanding **online educational resources**.*

Main Activities:

▸ Online educational resources

▸ Distinguished lecturer program

▸ Educational events

▸ Awards

Introduction

▸ Strengths
- Virtual distinguished lectures have been a huge success.
- Educational events organized by the technical panels (e.g. Radar Summer School - RSP).

▸ Weaknesses
- Resource center and IEEE Learning Network usage.

▸ Opportunities
- Capitalize on experience gained organizing online educational events.
- Capitalize on experience gained organizing educational events (e.g. RSS & Radar Challenge - RSP).

▸ Threats
- Deterioration of in-person events.
- Necessity to change educational offerings in order to meet current demands.

Online Educational Resources

IEEE Learning Network (ILN)

▸ AESS Resource Center has not been highly used by AESS members.

▸ ILN is an IEEE-wide platform for offering educational resources.

▸ Material from the resource center is being transitioned to ILN. Progress was slow last year but the transition is now almost complete.

▸ How an we encourage contributions to ILN?

▸ How can we increase the offerings in ILN and the usage of ILN?

Near-term strategy:

▸ Transition all existing educational videos to ILN.

▸ Continue to add virtual distinguished lectures to ILN.

▸ Add Radar Summer School videos to ILN.

▸ Obtain more resources from virtual conferences.

Webinar Series (new initiative)

▶ Virtual distinguished lectures have been incredibly successful and have highlighted the demand for online educational resources.

▶ How can we expand online educational resources beyond the distinguished lectures?

Idea:

▶ Launch a series of webinars in addition to the virtual DLs.

Topical Webinar	Technical Webinar
30 minute webinar with very broad general interest	1 hour technical webinar Distinguished lecture for non-DLs

Near-term strategy:

▶ Launch an initial series of 6 prerecorded topical webinar videos.

▶ Starting at a suitable time in 2022.

Advertising ILN (new initiative)

▸ Virtual distinguished lectures have highlighted the demand for online educational resources, however, the resource center had very low usage.

▸ How can we raise awareness of the online resources?

Idea:

▸ Use short max. 2 minute teaser videos to advertise the resources being added to ILN.

▸ Each webinar and virtual DL should have an associated 2 minute teaser video.

▸ Videos are prerecorded by the speaker and only reviewed by us.

Near-term Strategy:

▸ Invite speakers for new webinars initiative and virtual DLs to contribute a teaser video.

▸ Publish videos using existing social media channels.

▸ Use more standard advertising (e.g. website, one paper for the magazine, flyer for conferences,…).

Distinguished Lecturer Program

Distinguished Lecturer Program

▸ Lower number of in-person distinguished lectures during Covid times.

▸ Virtual Distinguished Lecturer Program
   - 44 virtual lectures in 2020 and 2021.
   - Attendance has been very good.

Near-term Strategy:

▸ Continue running DL program as usual. Call for new lecturers end of 2022.

▸ Add the requirement that a lecturer must give a least one virtual lecture during their tenure.

▸ Invite lecturers to contribute a 2 minute teaser video.

▸ Invite the chapters to host virtual DLs.

▸ One 2022 series of virtual DLs to be held at regular intervals over the year.

Educational Events

Facilitate new Summer School events (new initiative)

▸ Radar summer school has established itself over last 5 years, with an attendance regularly between 60 – 100.

▸ Two days of lectures and demonstrations given by international experts aimed at new members of the community. Often combined with a YP event.

▸ GlueTech organized an online summer school in 2021.

▸ Can this success be transitioned to other AESS areas?

Near-term strategy:

▸ Reach out to technical panels and conferences regarding new summer schools.

▸ Provide best practices, process for AESS funding, and contact for a mentor.

▸ Potentially in the future: expand to challenge events.

Awards

IEEE AESS Robert T. Hill Best Dissertation Award

▸ Nine candidates in 2021.

▸ First judging round reduced the number of candidates to 3. Final round selected the winner.

▸ Winner: Joe Khalife

Near term strategy:

▸ Maintain a high number of entries → publicity.

IEEE AESS Michael C. Wicks Radar Student Travel Grant

▸ Awarded for the first time in 2022 in conjunction with the IEEE Radar Conference 2022.

▸ All AESS student members presenting a paper were automatically considered.

▸ 17 candidates from Europe and the USA

▸ Three recipients receiving hotel accommodation, conference registration, tutorials and RSS.

Lessons learned:

▸ No candidates from outside Europe and the USA. Because of Covid? Or AESS student membership?

▸ Paper quality rating was difficult to determine quickly.

- Use the rating from the paper review process.

▸ Decision should ideally be made faster.

Near term goal: Improve process in future years leading to 1) Faster decision, 2) Recipients from low GDP per capita PPP countries.

- AES Scholarship Program initiated in 2017 for award in 2018
  - Graduate level in Systems Engineering (1)
    - SE specified to attract more students to this important discipline
  - Undergraduate level in electronics/computer engineering (1)
    - Systems Engineering not generally offered as undergraduate degree program
  - Initially $5,000 each but increased to $10,000 in 2021
    - $5,000 not considered adequate in today's expensive college environment

- Interest has been high- typically 10 to 12 applicants

- Program administered by Bob Rassa, Kathleen Kramer, and Hugh Griffiths
  - 2022 program evaluations will start shortly and be announced by April 30
  - 2023 applications will be accepted as of Sept 1, 2022

Projects & Collaboration Opportunities

	Existing	New	Collaboration
Online Educational Resources	Resource center IEEE Learning Network	Webinar series Teaser videos Acquisition of more resources	Short course committee Technical operations Conferences & Publications Industry relations
Distinguished lecturer program	Virtual DLs In-person DLs	Teaser videos	
Educational events		Summer schools	Technical operations Conferences
Awards	R. Hill Award M. Wicks Award Engineering Scholarship		Membership Student activities co-chairs