Growth Through Engagement and Teamwork

Lorenzo Lo Monte
VP - Education

January 17&18, 2020

Courtyard San Antonio Riverwalk
Welcome to the new EdCom

Yonina Eldar
Francesca Filippini
Kathleen Kramer
Lorenzo Lo Monte
Marina Ruggieri
## AESS 2017 Strategy: Where are We?

<table>
<thead>
<tr>
<th>AESS Strategy 2017 Tasks</th>
<th>Has Improved?</th>
<th>Needs Improvement</th>
<th>Priority</th>
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</thead>
<tbody>
<tr>
<td>Establish/reinvigorate Education activities where there are concentrations of members.</td>
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<tr>
<td>Improve and increase alignment of lectures with society technical interests.</td>
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<tr>
<td>Improve and increase the global distribution of our lecturers.</td>
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<tr>
<td>Reach YP (Young Professional) and WIE audiences.</td>
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<tr>
<td>Increases DL usage by and support to chapters.</td>
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<td>Expand tutorial offerings and access online and through AESS conferences and publications.</td>
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<tr>
<td>Develop and improve programs that support Young Professional (YP) and student members:</td>
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<td>Improve submissions for Robert T. Hill Dissertation Award.</td>
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<tr>
<td>Work with and for YP and student projects and events, including undergraduate projects,</td>
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<tr>
<td>interaction with IEEE-HKN, educational activities aligned with the Radar Systems Panel.</td>
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<td>Develop fundamentals tutorials for these members.</td>
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<td>Support region IEEE student conferences, such as IEEE Rising Stars, and conference activities for students.</td>
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<td>Increase awareness and opportunity for educational programs:</td>
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<td>Ensuring online presence is well supported and current.</td>
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<td>“Chapter’s First DL” program to encourage chapter participation.</td>
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<tr>
<td>Regular support and coverage in AESS publications, including Systems Magazine and QEB.</td>
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<tr>
<td>Promoting AESS education activities to YP and students at AESS conferences.</td>
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</table>
AESS Distinguished Lecturer Program

75 Distinguished Lectures in 2019!
# DL Technical Diversity

<table>
<thead>
<tr>
<th>Topic</th>
<th>DL Diversity</th>
<th>Total DL Presented</th>
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<tbody>
<tr>
<td>Avionics</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Control&amp;Guidance</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Cyber Security</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Gyro and Accelerometers</td>
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<td>0</td>
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<tr>
<td>Navigation Systems</td>
<td>3</td>
<td>5</td>
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<tr>
<td>Radar Systems</td>
<td>12</td>
<td>48</td>
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<tr>
<td>Space Systems</td>
<td>3</td>
<td>2</td>
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</table>
## DL Regional Diversity

<table>
<thead>
<tr>
<th>IEEE Region</th>
<th>DL</th>
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<tbody>
<tr>
<td>Region 1</td>
<td>28</td>
</tr>
<tr>
<td>Region 2</td>
<td>7</td>
</tr>
<tr>
<td>Region 3</td>
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<td>Region 4</td>
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<td>Region 8</td>
<td>19</td>
</tr>
<tr>
<td>Region 9</td>
<td>2</td>
</tr>
<tr>
<td>Region 10</td>
<td>4</td>
</tr>
</tbody>
</table>
# Effect of Active Outreach of Chapter Chairs

<table>
<thead>
<tr>
<th>AESS Chapter</th>
<th>AESS POC</th>
<th>Desired DL</th>
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</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>Giovanna Ramírez Ruiz</td>
<td>Zhihua Gu</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:giovis.941@gmail.com">giovis.941@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>Giovanna Ramírez Ruiz</td>
<td>George T. Schmidt</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:giovis.941@gmail.com">giovis.941@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>Avid Roman-Gonzalez</td>
<td>Kathleen Kramer</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:avid.roman-gonzalez@ieee.org">avid.roman-gonzalez@ieee.org</a></td>
<td></td>
</tr>
<tr>
<td>Guadalajara</td>
<td>Luis Valtierra</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="mailto:luis.valtierra@outlook.com">luis.valtierra@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>Lu Yilong,</td>
<td>Jade Morton</td>
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<tr>
<td></td>
<td><a href="mailto:EYLU@ntu.edu.sg">EYLU@ntu.edu.sg</a></td>
<td></td>
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<tr>
<td>Bolivia</td>
<td>Paola Escobari Vargas</td>
<td>Lorenzo Lo Monte</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:nragajcs@ieee.org">nragajcs@ieee.org</a></td>
<td></td>
</tr>
<tr>
<td>Denver</td>
<td>Nagaraj Shivaramaiah</td>
<td>Short Course</td>
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<td></td>
<td><a href="mailto:Nagarajcs@ieee.org">Nagarajcs@ieee.org</a></td>
<td></td>
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<tr>
<td>Florida West Coast</td>
<td>Jim Anderson</td>
<td>Kathleen Kramer</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:jim.anderson@ieee.org">jim.anderson@ieee.org</a></td>
<td></td>
</tr>
<tr>
<td>Manitoba</td>
<td>Dustin Isleifson</td>
<td>Kathleen Kramer</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Dustin.Isleifson@umanitoba.ca">Dustin.Isleifson@umanitoba.ca</a></td>
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1/22/2020
DL Program Summary

- Total Cost of DL: 7,000
- Total Number of DL: 75
- Average Cost of DL: $95
Distinguished Lectures and Tutorial Recognition

Continuing Education Unit (CEU) - Meets our strict CEU guidelines
In order for a participant to receive a CEU certificate, the course must consist of:
- **Assessment**: case study, class assignment, class quiz/test or facilitated questions and answers
- **Instructional Method**: lecture, class discussion, panel discussion, problem solving
- **Feedback**: evaluation form

Professional Development Hour (PDH) - meets our comprehensive PDH guidelines
In order for a participant to receive a PDH certificate, the course must consist of:
- **Feedback**: evaluation form
  - can be offered by watching a webinar, site tour, research, etc.
AESS Resource Center

The Resource Center is now an IEEE-wide activity, where many society are heavily investing.

AESS started the lead, but we need to add more useful information.
Resource Center: What can we add?

- conference presentation videos
- conference presentation slides
- tutorials
- webinars
- short courses
- keynote presentations
- technical panel sessions
- interviews
- Distinguished Lectures
- Technical Data
RSP Initiative: Create a MOOC through the IEEE Learning Network

- RSP (Stralka/Charlish) is leading this effort
- IEEE rate = $10k / hour of content developed
  - discount for multi-hour programs
- Hosting is $4/person in blocks of 250 people
- Material could be:
  - Bob O’Donnel (MIT)
  - Radar Summer School
Recommended Host Platform: IEEE Learning Network (ILN)

- IEEE launched the “IEEE Learning Network (ILN)” in July 2019
  - open to all IEEE members
    - but no free option
  - ILN built upon Meridian Learning Management System (LMS)
    - allows societies to offer the course right in ILN
    - allows discovery of educational content from across IEEE
    - points users to other platforms if the society is hosting the course someplace else
    - no discussion forums or integrated online programming or simulation tools
MOOC Info

- **Development**
  - Society has to use a 3rd-party developer for course creation
    - $10k - $15k per hour of course content
  - Learning Library TV (LLTV)
    - IEEE rate = $10k / hour of content developed

- **Hosting:**
  - ILN charge for hosting course is $4/person (license) in blocks of 250 people
    - May not charge if we just “link” content (Bob O Donnel already there!!)

- **Process**
  - Identify subject matter experts (SMEs)
  - Write script and storyboard
  - Develop “talking head” lecture
    - record SMEs
  - Create animations

- **Time frame**
  - 1 hour of high-quality content = 6 weeks of development time
Objective Description
Distinguished Lecture Program

S – Establish DL Termination / Disengagement Rules, including Certificates.

M – Rules Approved by EdCom, BoG and Posted on Website.

A – EdCom

R – DL

T – Next BoG Meeting
Objective Description
Distinguished Lecture Program

S – Establish Criteria for DL Selection that include technical and regional diversity.

M – Rules approved by EdCom

A – EdCom

R – DL

T – Next BoG Meeting

16 DL Submissions!!
Objective Description
Engineering Scholarship Award

S – Formally Include the “Engineering Scholarship Award” in the Education Committee

M – Award is handled by EdCom

A – EdCom

R – “Develop programs that support students and YP”

T – end 2020
Objective Description

Distinguished Lecture Program

S – Establish Semiannual Call for DL to all Chapter Chairs

M – Email sent

A – Lorenzo Lo Monte

R – “Chapter First DL” program

T – Jun 2020
Objective Description
Chapter Handbook for Distinguished Lecturers

S – Create a Section on the Chapter’s Handbook describing how to request DL.

M – Chapter is added

A – EdCom and Member Services

R – Relevant to which goal(s) and how?

T – Time period for performance
Objective Description
Robert Hill Process

S – Formalize the Submission and Selection process of the Robert Hill Award, including
  - English Requirement
  - Prior submission to AESS conferences

M – Rules will be published on the website

A – EdCom

R – “Improve Submission for Hill Award”

T – Next BoG
Objective Description
Faculty Development Award

S – The Faculty Course Development Award ($10,000) is to support and encourage faculty members to develop a new course with specific focus on AESS, taught in an accredited (in accordance to the accepted rules of the country of applicant) engineering curriculum

M – Present Proposal to Fall BoG

A – EdCom

R – “Develop Educational Programs

T – End 2020
Objective Description
AESS Resource Center

S – Organize Resources in a more natural fashion, including linking slides with videos

M – New allocation will be posted online

A – EdCom

R – “Ensure Online Presence is well supported and current”

T – Next BoG Meeting
Objective Description
AESS Resource Center

S – Create the figure of “AESS Tutorial Liaison,” a POC responsible of engaging all tutorial chairs and help them setting up video recording.

M – Person will be appointed by next BoG

A – EdCom and Conferences

R – “Develop Fundamental Tutorials”

T – Next BoG Meeting
Objective Description
AESS Resource Center

S – Upload our first MOOC on ILN.

M – Course will be available on ILN

A – RSP and EdCom

R – “Develop Fundamental Tutorials”

T – end of 2020