FES ACE AWARD

Entry Title:

Miami Chapter - Inspiring the Next Generation

FES Award for Chapter Excellence

Presented by the
FES Leadership Advisory Committee

Deadline for Application: April 30, 2020
Ⅰ. Chapter: Miami Chapter

Administrative year from: June 2019 to June 2020

President: Elia Nunez, P.E

Address: 9020 SW 137th Avenue, Suite 250

Miami Florida 33186

Ⅱ. Provide a brief description of the activity.

We maintain our Chapter traditions with focus on chapter goals. This year’s emphasis is on Inspiring the Next Generation with the following goals:

Increase Student Engagement
We participate, sponsor and lead activities that encourage visibility of the engineering profession in the classrooms and in local educational programs. Our chapter works with all grade levels. Several ways we did this was through the following activities:

- The Education Fund - Teach A Thon
- Kids and the Power and Work - KAPOW
- Future Cities
- Mathcounts
- Roadmap to Success
- STEM Industry Advisory Board Member/ STEM Mega Conference
- Golf Tournament

Increase Chapter Membership
Encouraging other engineers to get involved and become a member of FES helps our chapter become stronger in all of our activities and helps create leaders.
Develop A Succession Plan
We strategized and began to develop a succession plan to identify key lead roles and activities within our chapter that we want to ensure continue through the years. Developing a succession plan provides us the ability to identify key leaders who are experienced, capable and prepared to assume these new roles when they become available.

III. Provide a summary of the plan or timetable for the activity:
We started our year with a strategic planning meeting held on July 10th, 2019. The new 2020 Chapter Board of Directors (BOD) and committee chairs met to discuss, plan, and strategize on the year’s established goals. In addition, monthly BOD meetings were scheduled for every 2nd week of the month to update the chapter’s plan for current events and upcoming events. This year, we held 10 BOD meetings. The meetings were held during lunch and hosted by our members firm’s offices, such as WSP, NOVA Consulting, Snubbs Consulting Engineering, EAC Consulting and Consor Engineering. We have two additional planned BOD meeting scheduled for May 13th and June 10th 2020.

IV. Provide a brief statement of the purpose of the activity.
The purpose of the program is to educate and teach engineering at all age levels and stages of career development. Working closely with students in the K-12 programs, working closely with students in high school and college and working with our young professionals. Details of this program are described below in the follow up pages.

V. Provide a statement as to how this program could serve as a model activity, which could be adopted by other FES chapters.
Our plan involves engineers at all levels. We remind and encourage students how important math and science courses are in grade school for careers in engineering. Today’s engineers can volunteer in many school activities and programs to help students understand and be exposed to what we do as engineers. Similar to the Miami-Dade County School Board STEM programs, other school districts throughout the state have these programs where other FES Chapters can get involved. In addition, our activities allow for our members to also be exposed to high school students with interest in engineering. The NAF program can be found in many school districts throughout the state. Other FES chapters can provide job shadowing and internships opportunities to both high school and college students. The Roadmap to Success program can easily be planned and organized within the other Chapters that also expose college students to key leaders in our industry. Like many successful organizations, our chapters are successful through the efforts of many senior experienced engineers. We have been successful because of the dedication and commitment our members have given throughout the years. However, our leaders retire and leave and for each of our chapters to continue to succeed we must have a plan. Other chapters can develop a succession plan and identify the next generation of leaders to collaborate and learn from the chapter senior members to carry the chapter forward.

VI. Membership as of March 31, 2019
Members: 247

Membership as of March 31, 2020
Members: 244
Increase Student Engagement

a. **The Education Fund - Teach A Thon** –
The Teach-A-Thon connects business professionals to the education field by having them step into the shoes of current educators for a least one lesson. The business professionals are matched with a teacher in a grade level. All business professionals earn the title ‘Teacher Champion’ and become ambassadors for the education field. This year the Miami Chapter added this activity for our members to participate and engage with students to expose them to the field of engineering. Four of our members participated and raised funds for each of the classrooms.

b. **Kids and the Power and Work (KAPOW)** - KAPOW partners business and community volunteers with teachers and schools to help students discover new and different jobs, what it takes to do them, and how everything they are learning in school helps them prepare for their futures in the workplace, and life. As volunteers we help children make connections between classroom work and adult work, develop a greater appreciation for the value of their own work and the work of teachers and schools, and have the opportunity to practice and model teamwork, presentation skills, and positive work habits. The program includes 8 lessons and a field trip for the students at the end of the program where they can interact with professionals in a work-place environment.

c. **Future Cities** – This year the Miami Future Cities competition was held on January 18<sup>th</sup>, 2020. Miami chapter volunteers worked together with middle school teachers and students to research, design, and build cities of the future that showcased their solution to a citywide sustainability issue. This year’s theme was Clean Water. Teams had to choose a threat to their city’s water supply and design a resilient system to maintain a reliable supply of clean drinking water. Miami Chapter raised $875 towards the cost of the event. This year we had eight schools with nine teams participate with nearly 100 students present. The top schools where: 1<sup>st</sup> Place - St. Hugh Catholic School; 2<sup>nd</sup> Place - Key Point Christian Academy (7<sup>th</sup> Grade); 3<sup>rd</sup> Place - Doral Academy Preparatory
d. **Mathcounts** - FES Miami chapter is proud to have sponsored MATHCOUNTS because it inspires and rewards students for excelling in math. This year the event was held on February 1, 2020 at the Miami Dade College Kendall Campus Gym. Our chapter’s participation had a total of 41 schools and over 250 students participate. The ciphering champion was Palmetto Middle School.

![Image of Mathcounts event]

e. **Roadmap to Success** - Roadmap to Success is a program developed by attendees of the Florida Engineering Leadership Institute (FELI), Class of 2015. It provides a quick overview of five major elements needed to guide graduating and entry level engineers in setting the roadmap for a successful engineering career. The event is geared to help transition engineering professionals into community professionals and leaders within our societies, communities, and workplaces. The event includes a panel discussion with professional engineers, networking session and job fair. This year’s, 2020 panelist included Alice Bravo, P.E. Director Miami-Dade County Department of Transportation and Public Works; Anand Hardeep, P.E. Director Miami Dade County Water and Sewer Department; Daniel Iglesias, P.E. Director Transportation Development Florida Department of Transportation District 6 and Jose Gomez, P.E. South Florida CM/CEI Practice Leader at KCI Technologies, Inc. The event was scheduled for March 19, 2020. However, due to the coronavirus pandemic, this event was cancelled for the safety of our students and members.

f. **NAF - STEM Industry Advisory Board Member** – For the last two years FES Miami Chapter has participated as a member on this advisory board for Miami Dade County Schools. The STEM board supports 32 highschools in Miami Dade County that have NAF academies. The District currently holds 12 Model and 19 Distinguished Academies. These NAF Academies transform the learning environment in our high schools integrating an industry-specific curricula and work-based learning experience, ensuring our high school students are college,
career, and future ready. Specific focus areas of the STEM Board include providing workplace learning opportunities for students (Job Shadow Days) and a grant funded summer internship program for students entering their senior year of high school.

g. **STEM Mega Conference** – FES Miami was excited to participate again in this industry sponsored conference. The conference would feature special speakers, break out sessions, plus internship interviews with industry professionals for students. Approximately 1,400 high school students attend. Students are provided opportunities for internships in the field of engineering. This year FES was scheduled to lead two breakout sessions with key speakers; **Albert Sosa** (Vice President at HNTB), **Javier Rodriguez** (Executive Director of the Miami Dade Expressway Authority), **Elia Nunez** (Assistant Director of Transit Miami Dade Department of Transit and Public Works) and **Maria Perdomo** (Work Program Manager, Miami Dade Department of Transit and Public Works) The event was scheduled for April 21, 2020. However, due to the coronavirus pandemic, the Miami Dade County School Board decided to cancel this event for the safety of the students and others involved.

h. **Golf Tournament** – Every year Miami hosts the Annual Student Development and Scholarship Golf Tournament. This event helps raise over $9,000 for high school and college student scholarships. This year our event was scheduled for May 22, 2020. However, due to the coronavirus pandemic, we decided to postpone this event for the safety of our students and members.

**Increase Chapter Membership**

a. **Increase FES Social Media Footprint** – We updated and reorganized our website this year to help us provide our members with up-to-date chapter information and registration links to upcoming events/activities. For the first time, our chapter created and maintained monthly social media accounts through Instagram, and LinkedIn. Through these accounts we promoted our events, recognized our chapter accomplishments, and encouraged participation in our upcoming events. To date, we have gained over 180 followers on Instagram and 648 followers on LinkedIn.

b. **Young Member Social** – We established a Membership Develop Committee and started our year off with our first Young Member Social. We held the event on September 26, 2019 to promote and engage our college and young members to participate. This event was supported and sponsored by some of our local engineering firms. The event was a hit and we plan on having additional ones to continue providing a venue for our young members to network with our local industry.

c. **Chapter Luncheons** - During our boards Strategic Planning Meeting we identified 6 months in the year where we would host luncheons to showcase prominent figures in the engineering field as speakers. These are great opportunities to encourage non-members to attend and become members. The luncheons encourage interaction between our members, company leaders and agency leaders. The Chapter welcomed **Mrs. Alice Bravo**, Miami-Dade
County Department of Transportation and Public Works Director, Mr. Hardeep Anand, Deputy Director of Miami-Dade Water and Sewer Department and Mrs. Gretchen M. Cassini, J.D. Assistant County Administrator for Broward County to participate. The luncheons were well attended by members and non-members alike and attendance typically ranged from 80 to 100 guests consistently.

Our chapter also had two additional luncheons planned for March and April. In support of Women in the engineering industry, we organized a panel discussion with the theme “Women Changing the Engineering Landscape”. The panelists included: Wendy Conforme, P.E. Chief Operations Officer at Miami Tunnel, Isa Nunez, P.E, MBA Vice President of Facilities Design and Construction Division Jackson Health System and Marisela Aranguiz Assistant Director at Miami-Dade Water and Sewer Department. For the April luncheon we had Mr. Marc Gambrill, Chief Development Officer at Broward County Aviation Department, scheduled as our keynote speaker. However, due to the coronavirus pandemic, we decided to postpone these two events for the safety of that of our students and members.

We created a master list of event participants through the registration list for each of our events. Our events are always well attended, by both members and non-members. When we compiled the list and compared it to our chapter membership list, we were able to quickly identify almost 100 participants that were not FES members. This afforded us the opportunity to reach out (via email) to each participant and encourage them to become members. We were able to complete this in early March.

Develop a Succession Plan
We developed a succession plan with four simple steps:
✓ Identify key activities that must continue year to year
✓ Identify key members that show leadership acumen.
✓ Train leaders
✓ Recognize and retain leaders

We paired the identified key members with our current leaders so they can plan the activity, learn, and develop a relationship with everyone involved in that activity. This is plan with a process that will take several years to implement. This year we were fortunate to have members eager and interested in taking on these new roles and working closely with our leaders. A breakdown of the preliminary plan is shown below:
We accomplish the things we do throughout the year because of the continuous support from our sponsors. We have many firms that have members super dedicated and committed to our chapter. This allows us to raise and complete these activities.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>LEADER (S)</th>
<th>FUTURE LEADERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAPOW</td>
<td>Marie Elsie Dowell and Elia Nunez</td>
<td>Shriram Ramaratnam</td>
</tr>
<tr>
<td>FUTURE CITIES</td>
<td>Dave Clarke and Jose Acosta</td>
<td>Shari Ramirez</td>
</tr>
<tr>
<td>MATHCOUNTS</td>
<td>Lin Li, Jeff Easley and Tommy Ruiz</td>
<td>Elia Nunez, Juan Prieto and Saksham Gupta</td>
</tr>
<tr>
<td>STUDENT SCHOLARSHIPS</td>
<td>Steve Goldstein</td>
<td>Joanne Prince</td>
</tr>
<tr>
<td>GOLF TOURNAMENT</td>
<td>Jeff Easley</td>
<td>Elia Nunez and Juan Prieto</td>
</tr>
<tr>
<td>ROADMAP TO SUCCESS</td>
<td>Marie Elsie Dowell</td>
<td>Sybille Bayard and Andrew Pierce</td>
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</tbody>
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We appreciate the support of our sponsors: