ASME STUDENT SECTION ENTERPRISE COMMITTEE

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THE STUDENT SECTION ENTERPRISE COMMITTEE OF ASME

The SSEC represents ASME student members and mechanical engineering departments from around the world. We aim to share best practices on student professional development and encourage membership beyond graduation. We hold teleconferences each month to collaborate and improve the overall ASME student experience. The committee includes a student regional chair from each of the ten regions, student members at large, and mechanical engineering educators who serve as regional advisors.

The purpose of the SSEC is as follows:

• To serve as representatives for ASME student members, Mechanical Engineering Departments, and ASME.
• To develop and share best practices on student professional development through social media and the ASME.org community.
• To encourage upgrading to ASME corporate membership following graduation.
THE TEAM BEHIND STUDENT SECTION ENTERPRISE COMMITTEE 2019 - 20

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ASME Engineering Festivals™, or E-Fests, kicked off 2020 with E-Fest Asia Pacific in Rajkot, India. More than 1,600 students, educators and other guests attended the event, which was held Feb. 28-March 1 at Marwadi University.

The three-day celebration for engineering students encompassed an assortment of useful and educational sessions addressing topics ranging from professional skills development to ASME’s codes and standards activities. There were also several student competitions including the Human Powered Vehicle Challenge, the Student Design Competition, the Innovative Additive Manufacturing 3D Challenge, the Oral Competition and the Elevator Pitch Competition. Highlights on Friday, Feb. 28, included an opening lamp-lighting ceremony featuring Prof. K. K. Aggarwal, chair of the National Board of Accreditation (NBA), and Gautam Dutta, Senior Director of marketing at Siemens Digital Industries Software. Events included a special session on “Mastering the Elevator Pitch,” which included tips on how students could present their ideas successfully in short, succinct “elevator pitch” presentations, with Dilshad Sulaiman of ITER, Devendra Parmar from Sarar-3D,
2018 Engineering for Change (E4C) Fellow Harsh Vyas, and Dhruv Patel of Silver Oak University. There also was a Biomimicry Challenge Workshop, which was presented by Prashant Dhawan, co-founder of Bio-mimicry Network India.

Another highpoint of the event was the keynote session on Saturday evening, featuring a talk show style interview with Dr. Seetha Somasundaram, the renowned Program Director of India’s historic Mars Orbiter Mission (MOM) that launched in 2013. Moderated by Aaron Weinerman of ASME Global Public Affairs, the conversation covered a wide range of topics including MOM’s seemingly insurmountable challenges, the power of women in science and engineering, the importance of ASME standards, and the international significance of India becoming the first country to reach Martian orbit on the first try. Attracting an audience of approximately 1,000 attendees, Dr. Seetha’s words of determination and inspiration were balanced by on-the-ground practicality and in-the-clouds idealism.

E-Fest Asia Pacific also hosted several of the Society’s major student competitions, including the Human Powered Vehicle Challenge (HPVC). A team of students from Thakur College of Engineering and Technology placed first overall and received the $1,000 top prize at the HPVC, in which engineering students put the human-powered vehicles they designed and built to the test in men’s and women’s speed races and a two-and-half hour endurance competition. The Thakur College team also placed third in the women’s speed event and third in the endurance event.

The HPVC team that placed second overall, SCMS School of Engineering and Technology, took home the $750 second prize as well as a trophy for finishing second in the design category and a special Best Innovation Award. The team from the E-Fest’s host school, Marwadi University, finished third overall, receiving $500 as well as an additional $250 for taking top honors in the endurance race. Other winners at the HPVC in India included the team from IIT Roorkee, which placed first in the design category and received a $250 prize; National Institute of Technology, Silchar,
which finished first in the men’s speed race and received $250; and Chandigarh University, which took the $250 top prize in the women’s speed race category.

KLS Gogte Institute of Technology was the big winner in another major competition at E-Fest Asia Pacific, the Student Design Competition. For the 2020 SDC challenge “Building to the Sky,” students were tasked with designing and building a compact engineering system capable of manufacturing a tower made exclusively from standard-sized sheets of paper. In addition to the KLS Gogte Institute of Technology team, which won the $500 first prize, the top three teams at the competition were NIT Silchar, which finished second and received $300, followed by Vellore Institute of Technology, which took home the $150 third prize.

Other prize winners at E-Fest Asia Pacific included host school Marwadi University, which won the $250 first prize at the IAM3D™ “Unmanned Aerial Racing Cargo Vehicle” Challenge; Swapnil Umredkar from the GH Raisoni College of Engineering, the winner of the $750 top prize at the Oral Competition; and Radhika Dharmadhikari from Cummins College of Engineering for Women, Pune, who took home the $250 first prize at the Elevator Pitch Competition.

The E-Fest in India also featured two new student competitions. In the first competition, Aeromania, teams of up to five students were asked to design, fabricate and pilot a radio-controlled, propeller-type plane that could perform a set of maneuvers. Students competing in the second new event, the REboat Challenge, were tasked with designing and building a remote-controlled boat that could complete a set of exercises specifically designed to validate solar energy powered boats as a valid means of transport.
INAUGURAL *E-Fest DIGITAL* DRAWS NEARLY 1,800 REGISTRANTS

After holding a successful ASME E-Fest Asia Pacific program on-site in India earlier in the year, the coronavirus pandemic forced a change of plans for the remainder of the year’s ASME E-fests. As a result, E-Fest Digital was launched and it was a rousing success.

Nearly 1,800 total registrants including almost 1,400 engineering students from 47 countries signed up for the special event, which was held on April 25 as a replacement for the E-Fest North and E-Fest South that were cancelled due to the COVID-19 crisis.

The five-hour event, on the E-Fest YouTube channel, kicked off with opening remarks from ASME Executive Director/CEO Tom Costabile, followed by an overview of the E-Fest Digital schedule, flashback videos featuring highlights from past E-Fests, and recorded messages and greetings from ASME leadership, volunteers and staff members.

E-Fest Digital featured a variety of personal and professional development skill-building presentations, including a session on ASME opportunities for students and early career engineers given by Valentina Alayon, strategic projects specialist at ASME, and a presentation on how engineering careers can evolve over time, presented by Prof. Jeff Hanson of Texas Tech University, who is both past chair of the ASME Student Programming Committee and a leading YouTube personality with more than 80,000 followers.

The E-Fest Digital program also included technical presentations by Doug Stainbrook of Siemens PLM; Erik Larson from Altair; and Matt Walsh of Siemens; as well as three Student Leadership Training (SLT) sessions: “Creating Your Self Brand,” with Nicole Salloum of CloudX and Maya Reslan of the National Institute of Standards and
Diego in third.

Other prize winners at the E-Fest Digital event included Milwaukee School of Engineering, which took first and second place at the Student Design Competition “Building to the Sky” paper tower-building challenge; Ankish Priet from San Jose State University and Evan Fick from South Dakota State University, who both finished first in the Oral Competition; Utah Valley University, whose team took top honors in the Innovative Additive Manufacturing 3D (IAM3D™) Challenge; and the two first-prize winners of the new Elevator Pitch Competition: Manas Vyas from the LNM Institute of Information Technology in Jaipur, India, who won in the “Additive Manufacturing” elevator pitch category, and C. Lisa from the Institute of Engineering & Management, Kolkata, India, who placed first in the “COVID-19” category.

Two HPVC competitions were held for students who had registered to compete at E-Fest North and E-Fest South. The big winners at the competition for E-Fest North registrants, which consisted of each team presenting the design report for their vehicles, were Missouri University of Science and Technology in first place, California State University, Northridge, in second, and South Dakota State University in third. The top three teams at the HPVC competition for E-Fest South registrants were Missouri University of Science & Technology in first place, South Dakota State University in second and the University of San Diego in third.

In lieu of the live student competitions that would have been presented at E-Fest North and E-Fest South, students competed in virtual versions at E-Fest Digital — including the Human Powered Vehicle Challenge (HPVC), the Student Design Competition, the Oral Competition, the Innovative Additive Manufacturing 3D Challenge, and the Elevator Pitch Competition.
The session focused on different internships students can apply to since there are many fields within mechanical engineering. The session also provided tips on how one can boost his CV as well, encouraged them to get on LinkedIn which would help them make connections and find opportunities. A couple of board members also talked about their experience at Future Pipes Industries a firm located in Dubai which gave students a picture of what it is like doing an internship abroad as well as giving them an idea about the costs.

A representative from Beirut AI gave an introductory Python workshop for mechanical and mechatronics engineering students. The workshop covered the basics of coding in python, how powerful this programming language is, and how it can be utilized. This workshop was one of our most demanded events because it is highly demanded in any workplace nowadays, and it will be followed by a series of advanced workshops in collaboration with Beirut AI.
ASME-RHU field trip to the Lebanese Army Air Force in Beirut Airbase. A practical demonstration of the working principles of turbo-jet engine used in military aircrafts and their diagnostics was presented to our members during the visit. The students were accompanied the RHU Mechanical Engineering Assistant Prof. Dr. Iyad Faisal.

ASME-NDU organized a seminar about electric vehicles batteries on February 21, given by Dr. Najib Metni, Chairperson of the mechanical engineering department at NDU. The seminar covered an overview of Electric Vehicles and a presentation on battery types, components, specifications, charging modes and converters.
ASME-UOB held its annual gathering on February 25, 2020. Usually held in the Fall semester, the gathering was pushed to February due to unexpected circumstances. Around 50 students and doctors of the Mechanical Engineering Department attended the gathering. First was a quick presentation of future plans, which was followed by a Q & A exchange where students and doctors gave suggestions on how to better improve ASME and what events they were looking forward to. The presentation was followed by an Egg Drop competition. 15 teams of 3 competed to drop the egg from a height of 2 floors while hitting a set target. The gathering was a big success with several 1st year students offering their help as volunteers for future events.

ASME-UOB held its 2nd annual LaTex workshop on February 18, 2020. Delivered by Dr. Macole Sabat, this workshop served as a continuation of last year’s workshop. Students were introduced to advanced features of LaTex and gained a deeper understanding on how to use it efficiently when working on reports, and other official documents. Students who attended also received certificates at the end of the workshop.
The ASME RHU Student Section held its first workshop for the Spring 2020 semester which was conducted by the RHU Mechanical and Mechatronics Engineering Department Engineer Mr. Anas Al Shaghouri, entitled 3D and 2D Modeling and Assembly in SOLIDWORKS. The workshop extended for 3 consecutive weeks.

ASME-NDU organized an Arduino workshop on February 1st for the mechanical engineering students at NDU. 37 students attended the two-day workshop where they learned the basic structure of Arduino and worked on several projects including an obstacle avoidance robot using an Arduino starter kit that they took with them at the end.
The members of ASME STUDENT SECTION, Mepco Schlenk Engineering College visited Government Higher Secondary School, Thiyagarajapuram village on 18/12/19. The head mistress (HM) of the school welcomed us. Around 16 students’ members, and one faculty member (Mr. S Senthil Murugan, Assistant professor (AP) and Student Section Advisor) were attended the visit. The main objective of the visit was to give exposure and to promote the school students towards innovation and to help them be familiar with the fundamentals of science.

The ASME Students Section of SCT College of Engineering, Trivandrum hosted an Automotive Expedition this year, during 21st and 23rd of February 2020. This included the showcase of Exotic cars and Superbikes which were modified or stock. This event was insightful for understanding the various technological advancements made by the automotive industry in the past decade, which was highlighted during the showcase of Superbikes.
The ASME SCTCE had conducted “Go-Kraft”, a 4-day program on Go Kart prototype development and testing. The participants were taught about the various processes involved in prototype development starting from designing the model, fabricating, assembling, and testing of the model.

Professor Dipankar Sanyal of Jadavpur University for enlightened the students by delivering a Technical Talk on Mechatronics. The technical talk was inspiring and covered the basics of the field which helped student to get a better understanding.
An HPVC induction class was conducted for the students of TKM College of engineering, Kollam. The induction class was conducted by team SATVAN, the HPVC team of Federal Institute of Science and Technology. The induction class began with team captain’s introduction to the team and the vehicle.

The topics covered in the session were design, fabrication, aerodynamics, braking, transmission, analysis and testing.

The event required participants to prepare hovercrafts which are judged according to their speed and manoeuvrability. Here we also come up with new ideas to design the path of hovercrafts every year and also try to make better guidelines for the event so that competition gets better and hovercrafts become more robust and they get better payload carrying capacity.
P SRINIVASAN helped us understand the current growth rate of various energy sectors in India and also gave insights about the major driving sectors of the future and also helped us understand the economics behind it. It was very helpful for the students pursuing a course on renewable energy offered by the institute and was well appreciated by faculty members who attended this event.
Held Ten Web Seminars since May 19, dealing with topics such as generative design, 3D mechanical design, mechanical engineering applications in different areas of the industry, 3D printing, among others.

Visit to Red Baldaerramo Company despite all the difficulties caused by the pandemic and with all the appropriate security measures, in order to establish relationships with companies.
We started our activities with a series of webinars highlighting a specific topic, the goal in this activity was made an impact on interested students so that they could interact with the speaker and have basic knowledge to continue researching on that topic.

**ER1ST VIRTUAL CONGRESS**
**ASME UCSM**

By ASME Universidad Catolica de Santa Maria Student Section

“AND WHAT WILL I BECOME? ENGINEER”

A congress dedicated to students and graduates who are beginning or are about to begin their professional lives, which had the objective of guiding you to solve your doubts with the participation of expert speakers on the subject.
This Student Section organized a series of Webinars focused on the practice of the profession. This series of virtual seminars was called: Me at work. Graduates of this university shared their experience and shed light on where they could get to work?

In these talks, professionals from different fields shared their experience practicing as engineers. The fields in which these professionals work ranged from Oil and gas, mining, maintenance of heavy machinery, work in hydroelectric plants, among others.

ASME ESPOL organized a series of certifiable virtual courses on technical subjects applicable to engineering. Such as pipes, Office program management, pressure vessels, and ASME standards courses. The courses were periodic, lasting at least 20 hours with certified professionals to teach them.
Cycle of Webinars called: Thursday of FIME Engineering supported by ASME WIE UNAC and ASME UNAC, in this cycle we will have new applications of engineering, the best speakers will come in their specialties and they are compared with the attendees the experiences in the different industries and the technological advances which they use and much more.

Dr. Ricardo shared with us his experience on a couple of works done at Los Alamos on “Shock-driven instabilities” and “Traumatic Brain Injury.” Topics such as turbulence, the importance of knowledge of basic science in engineering and optical methods for development were discussed, with which he has studied the effects of the brain after explosions in the field of war.

Attendees had the opportunity to ask questions and interact with the professor and it was an excellent opportunity to be motivated to continue doing science and engineering.
The ASME Colombia student sections have come together to present the First Series of ASME Colombia Webinars. In this, the Colombian School of Engineering Julio Garavito, the National University of Colombia Headquarters Bogotá and Medellín, the Fundación Universidad de América, the Universidad de los Andes, the Universidad Tecnológica de Bolívar and the Universidad del Norte joined.

The webinars were held every two weeks

Organization of three webinars on essential aspects for an engineer such as Programming, Excel and AutoCAD.
On Tuesday, June 23rd, the International Women in Engineering Day was celebrated. We decided to create this celebration, representing the ASME Student Regional - SRT Caribbean & Latin America working together with ASME (The American Society of Mechanical Engineers) for developing a great program for our community. Latin America had the First International Women in Engineering Panel, where some outstanding women were present (Sara Rengifo, Iryna Fedchenko, Fernanda Arboleda, Valentina Alayon, Gabriela Paulina Zumba, Patricia Rodriguez, Evelyn Lucero, Itzel García and Gemma Iruegas).

Virtual activity in which student sections from different countries share the good practices they have in their universities and have some time for networking.

Well. The universities started to close because of the Coronavirus disease in late March, so in one of the meetings I had with the representatives of countries they were worried because the student section chairs were starting to wonder what kind of activities could be done, so we proposed a virtual activity in which student sections from different countries could share their good practice, share their highlighted activities, share their experience in ASME and also we could do some networking.
Online conferences on topics related to engineering and ASME, aimed to target universities and the general public.

An activity we started in the previous managements was web seminars. In the past year we had an average of thirty attendants, this year we have doubled and even tripled in every webinar the number of attendants having a total of more than six hundred attendants in eight webinars, all these people are from more than fourteen different countries, countries with student sections Bolivia, Colombia, Ecuador, Guatemala, El Salvador, Perú and countries without student sections but with universities with the possibility of creating one as Angola, Argentina, Chile, Costa Rica, Jamaica, Puerto Rico, and most of the webinars have been organized in cooperation with companies as COINAV S. A., Altair, EnginZone and Fabrilab.
STUDENT SECTION ENTERPRISE COMMITTEE 2020 - 21

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