Society for the Advancement of Material and Process Engineering

SAMPE
Los Angeles Chapter
News and Information

January
2021

California State University at Northridge Showcase
By The
SAMPE-CSUN Student Chapter

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Date:

1-26-20 (Tuesday)

Time:

6:00 PM PST

Reservations:

Not needed – just go to the presentation.

Join Presentation at:

https://us02web.zoom.us/j/87560055575?pwd=QzRzS1ZhUnpRaGVlc0h4RlhvbE5HQT09

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Meet the CSUN Team

Christoph Schaal, Ph.D. (pictured above) is the advisor to the SAMPE -CSUN Student Chapter. He is also the Assistant Professor of Mechanical Engineering and Director of the Ultrasonics and Applied Mechanics Laboratory. Plus Dr. Schaal is the Director of the Keck Composites Laboratory. In addition, he is the DAAD Research Ambassador.

Jennifer Hernandez (pictured lower left) is President of the SAMPE-CSUN Strudent Chapter. She says “I am currently a senior pursuing a Mechanical Engineering bachelor’s degree. Although design and manufacturing processes have been my focus, composites have opened my eyes to a new world. Being a founder and president of the club at CSUN has allowed me to introduce members to theoretical and practical aspects of composites.

Jeffrey Astorga (pictured above) heads Public Relations of the SAMPE-CSUN Strudent Chapter. He says “I am pursuing a Mechanical Engineering degree while also self-studying motorsport aerodynamics and composites. My short-term mission is to become Aerodynamics and Composites Lead for CSUN’s Formula SAE team; my long-term mission is to one day become a Formula 1 aerodynamicist at Scuderia Ferrari. I am extremely interested in composites since they are intertwined very closely with aerodynamic package mfg. and performance, and they can be employed in many other areas of the car to lightweight for better performance. The more I learn, the more I realize I don’t know, and therefore I am always striving to remain humble and network with those more knowledgeable than myself to help me reach my goals--I hope that via the Composites Club I can help others reach their goals as well.

Welcome to Jacaranda Hall Where Innovative Engineering Programs Starts

One of the projects developed at CSUN is a **Insect-Inspired Robot to Assist First Responders.** A team of California State University, Northridge students specializing in a variety of disciplines created an insect-inspired robot that can aid first responders in navigating dangerous topography and collapsed structures, reducing the risk to rescue personnel.

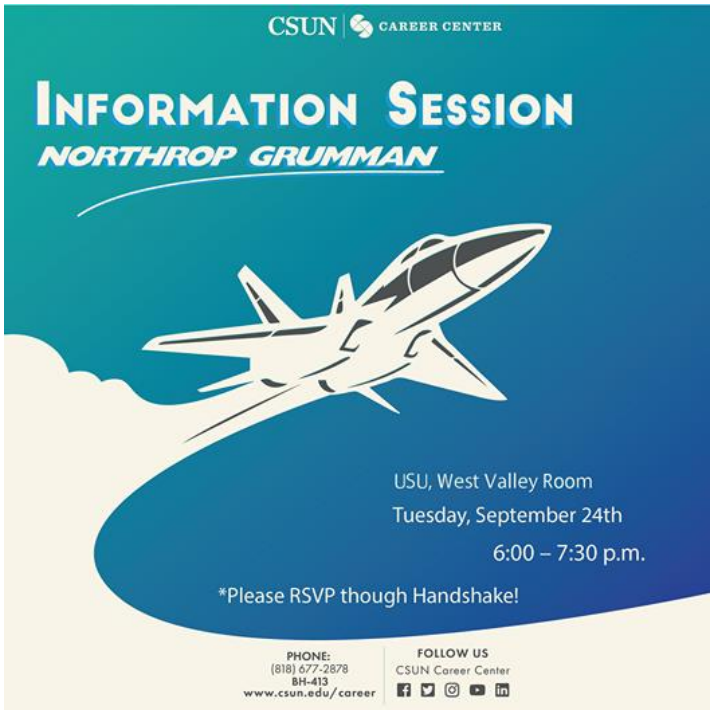
A multi-legged walking robot, ARDENT (Arthropod Robot for Dynamic Environments and Terrains) is designed to assist search-and-rescue teams in precarious terrain — like many of the areas around Northridge in 1994 after the earthquake that devastated the campus and much of the Los Angeles area. Its main purpose, Mills said, is to protect first responders and minimize the loss of human life in the process of saving others.

CSUN has many advanced programs. The presentation will show interesting activities such as

- Showcased Projects
- Award Wall
- Tau Beta Pi Bent

In particular is CSUN's programs with Aeronautics

In case you are wondering were Northrop Grumman recruits some of their employees, they go to the California State University at Northridge to find new recruits.



In addition, CSUN has a complete composites program ranging from design to fabrication. That is the reason that is one of the reasons that Autodesk awarded CSUN a $1 million gift to support the creation of a Center for Integrated Design and Advanced Manufacturing at the university.

CSUN Hass Lab

The Hass Lab at CSUN as fully functional fabrication equipment such as

- Haas CNC Machines
- Composites Equipment
- Engine Dyno
- Large Workspace

The CSUN fabrication equipment was used to support such programs as the CSUN's Matador Motorsports that built their 2018-2019 Formula Society of Automotive Engineers (FSAE) compliant vehicle in preparation for competition. The team is comprised of six divisions: chassis, engine, controls, drivetrain, suspension and aerodynamics. The project is two semesters long and is developed from scratch every year as a final project for senior mechanical engineer majors.

CSUN Keck Laboratory

The Keck Composites Lab facilitates a place for a composites fabrication, and where students can come to make composite components for their research projects. The lab allows students to learn many fundamental hands-on skills relating to creating their own molds, laying up composite parts, and post-cure processing (machining, drilling, and cutting). Students can do wet and prepreg layups with the use of a vacuum pump, oven and/or autoclave.

Equipment in the Keck Laboratory are:

- Autoclave
- CNC Router
- Table
- Composite Related Material
- Mill/Drill Press

COMPOSITE RESEARCH PROJECTS

Composite research programs include:

- ○ UAML COMPOSITES PROJECTS (PAST AND CURRENT)
- ○ PRESENT POSSIBLE FUTURE PROJECTS HERE

SENIOR DESIGN PROJECTS

Senior design projects include:

- ○ AERONAUTICS TEAM (SAE AERO)
- ○ HUMAN POWERED VEHICLE
- ○ FORMULA SAE
- ○ SMART PROSTHETICS

COMPOSITES CLUB

- o SAFETY WORKSHOP
  - ● Dr. Schaal lecturing
  - ● Composites Tech & Dr. Schaal in Keck Lab
- o BOARD MEMBERS/ ADVISOR
  - ● Gathered around discussing plans for the semester
- o MEET THE CLUBS
  - ● Tabling at event (Speaking with students)

SUCCESS STORY FROM CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE

AlphaSTAR appoints Amir Mobayen, a CSUN Graduate, as its CEO

AlphaSTAR Corporation, Irvine, California, USA, has appointed Amir Mobayen as its CEO, effective January 4, 2021. Mobayen has been a key member of AlphaSTAR's Board of Advisors since 2012 and brings over twenty years of experience in generating new business and accelerating sustained profitable growth in the competitive technology marketplace.

Mobayen has previously held executive leadership positions in sales, marketing, and other operating roles during his professional career in North America, EMEA and Asia within public and private equity-owned companies. He was most recently the president of Smartrac Technology's RFID division which was acquired by Avery Dennison in 2020.

Additionally, Mobayen was formerly the vice president and General Manager of the Arrow Electronics' Intelligent Systems business in EMEA. Prior to Arrow Electronics, Amir held executive positions at MSC Software Corporation and Avent Electronics. He holds a BS in Mechanical Engineering from California State University, Northridge.

"Amir is an exceptional leader," stated Dr Frank Abdi. "His track record in the transformation and growth of multiple technology businesses in North America, EMEA, and Asia, will position AlphaSTAR for continued growth."

"Pushing the envelope of cutting-edge technology has always been the backbone of AlphaSTAR," Abdi continued. "I am personally thrilled to be welcoming a hands-on business leader that values the importance of scientific excellence and is passionate about sharing our simulation capabilities with more of the industry."

Schedule of Upcoming Events

Event	Presented From	Date
Aerospace and Composite Engineering and Fabrication	CSUN Northridge, CA	January 26, 2021
Airbus	Stade, Germany	February 23, 2021
The Composite Factory of the Future	The SME Viewpoint	March 23, 2021
Composite Advancements	USC Los Angeles, CA	April 27, 2021
MP3	Arospace Corporation El Segundo, CA	November 2, 2021

Irene Epstein Scholarship

The Irene Epstein Memorial Scholarship Awards were initiated in 1996 shortly after the death of Irene Epstein, to honor her volunteer efforts on behalf of the Society for the Advancement of Material and Process Engineering (SAMPE), and to recognize her strong desire to assist financially-needy, academically-deserving students at Fairfax High School (Los Angeles) to attend college to study engineering, science, mathematics, or medicine.

The Irene Epstein Memorial Scholarship Awards program was initially funded by contributions from The Aerospace Corporation and SAMPE. It is also supported by the Air Force Space Systems Manufacturing Problem Prevention Program (MP3).

The program is administered by Dr. Howard A. Katzman, Senior Scientist at The Aerospace Corporation, and Education Chairman of the Los Angeles Chapter of SAMPE.

Many individuals and companies have generously contributed to help the fund grow so the amount of the scholarship awards has increased five-fold since it started. In addition, a special Book Awards was introduced three years ago to help selected students in the purchase of their college textbooks. If you would like to make a donation or learn more about the scholarship, please contact Dr. Howard A. Katzman at 310-336-5860 or e-mail him at Howard.A.Katzman@aero.org.

Thank you all for your sponsorship and support of SAMPE – LA!!!

Our list of sponsors is growing!!! Sponsors get monthly exposure in our mailing to over 500 members and associates of the local chapters of SAMPE. Sponsors also get a link to their corporate webpage via the SAMPE Los Angeles Chapter website.

For information on being a sponsor, please contact:
Howard A. Katzman
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SAMPE-Los Angeles Sponsors

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