By Corinne D’Ambrosio

On Tuesday, March 8, 2015 the SCCAVS sponsored a pizza dinner at UC Irvine for a forward-thinking presentation by the HyperXite team on the future of land travel.

Who is HyperXite? Founded in 2015, this team of diverse individuals is based at the University of California, Irvine. HyperXite (HX) is focused on solving previously unexplored engineering challenges, concentrating on building transportation of the future by designing the pod for the HyperLoop.

The Hyperloop will provide unprecedented travel times between major cities (at speeds up to 760 mph) through the most efficient transit system ever proposed. The system is based on high speed travel of an aerodynamic pod riding on an air cushion travelling in a tube held at a reduced air pressure of approximately one millibar (100 Pa) of pressure.

Because their pod will operate at reduced air pressure, they will have to design and build a vacuum chamber to test it.

The Hyperloop is a concept first proposed by Elon Musk and SpaceX in 2013, to develop and build the next generation of transportation that is safer, cheaper, faster and more energy efficient than cars, planes, boats and trains.

The event on March 8th was an opportunity for SCCAVS members and friends to learn more about this exciting project, and also for our community of vacuum experts to provide valuable input to the HyperXite team.

Not only did a lively discussion ensue after the presentation, but the SCCAVS community offered training, equipment, and test space free of charge to the HyperXite team. GNB will donate a large vacuum pump for their test chamber, Helium Leak Testing offered use of their large 8’ test chamber, and the Chapter teamed with Dr. Tim Gessert, from AVS National to offer a one-day “crash course” on the fundamentals of vacuum technology.

There is innovation in the way that HX has optimized the suspension, levitation, and braking systems while taking advantage of existing technologies. HX has gone through many design changes to reduce drag, lift and minimize mass to maximize speed.

In January 2016, Texas A&M University hosted the SpaceX Hyperloop Pod Design Competition. UCI’s HyperXite team placed in the TOP FIVE, and will be moving on to the next stage of the competition, which will culminate at the HyperLoop test track in Hawthorne, CA in the Summer of 2016.

The SCCAVS is proud to be a sponsor of the HyperXite team and urges you to visit their website and contact them if you are interested in becoming a sponsor, as well. Sponsorship starts at just $1000.

www.hyperxite.com

HyperXite is a diverse group from UCI representing Mechanical Engineering, Materials Science, Aerospace Engineering, et al.
Los Angeles Science & Engineering Fair 2016

By Jim Garner

The SCCAVS is an annual special awards judge at the Los Angeles Science & Engineering Fair held in Pasadena. The fair is the oldest and largest event of its kind in the western U.S. This year the 66th Annual fair brought together almost 900 student participants from private and public schools throughout the county during its March 17-19, 2016 run at the Pasadena Convention Center.

The Los Angeles County Science & Engineering Fair provides a yearly setting for middle and high school students to show off their investigatory skills and creativity to compete for medals, special awards and scholarships. Students not only receive recognition for their projects but the Science Fair nurtures student interest in various scientific and engineering fields. This year’s sponsor was local aerospace company, SpaceX of Hawthorne, CA.

Jim Garner, President of MacroVantage and SCCAVS Secretary, served as the Special Awards Judge for 2016. (continued on page 4)
Chapter Activities

HyperXite Field Trip Pics (Cont’d from page 1)

We’re on the web! www.sccavs.org

Upcoming Events

ICMCTF ’16
Town & Country Hotel
San Diego, CA
April 25-29, 2016
http://www2.avs.org/conferences/icmctf/

SVC TechCon 2016
Indiana Convention Center
Indianapolis, IN
May 9-13 2016
www.svc.org

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Southern California Chapter
Chapter Announcements

LASEF Winners (Cont’d from page 2)

The following winners were selected and will receive certificates of achievement and award checks from the Chapter:

1st Prize: Yurui Jeffery Zhang (Grade 12) and Jack Sun (Grade 11) for “an Investigation of Thin-Film Ni, Co, Fe Oxide Electrochemical Catalysts for Evolution of Oxygen.” They electrodeposited various mixes of the three elements and measured the water hydrolyzation rate to determine which was most efficient. Their scientific methodology was impeccable. They attend the Ribet Academy.

2nd Prize: Katya Garcia (Grade 12) for “Development of Ultrasonic Transducers Using Piezoelectric Materials.” This involved depositing 30 layers on a small substrate (by spin coating) and then dicing it. She made 1 mm² devices with exceptionally high bandwidths of >100 MHz. Her project was engineering oriented and in our area of interest. She attends Francisco Bravo Medical Magnet High School.

Next year’s fair will be held May 23-25, 2017.
2016 SCCAVS Equipment Exhibition, Short Course Program, and Student Poster Session —DATES ANNOUNCED—

This annual event will once again be held at The Holiday Inn Hotel & Convention Center - Buena Park (7000 Beach Blvd., Buena Park, CA 90620) on Monday, October 3rd – Wed October 5th, 2016.

Monday, October 3—Wednesday, October 5, 2015
Short Course Program
8:00AM—5:00PM

Tuesday, October 4, 2015
Equipment Exhibition & Student Poster Session
12:00—6:00PM

EXHIBITORS!!! Booth Registration is OPEN. Booth cost is $525, and includes skirted table, 2 chairs, and lunch for up to two (2) booth staff. Additional sponsorship opportunities are available at the $100 and $500 levels.

Please visit http://www.sccavs.org/symposium2016.html for more information and Exhibit registration.
April 2016

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We're on the web! www.sccavs.org