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FLIER

LONG ISLAND SECTION

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*Note from the Chairman*

We are starting a new year. Our first two meetings will cover aerospace topics of current interest. Electric airplane development is in the news, and our October speaker will talk about the human factor in autonomous and piloted VTOL electric aircraft. NASA, SpaceX and others are working on plans for human missions to Mars. Our November presentation will discuss the involvement of JPL in NASA's plan. And speaking of NASA, have you visited the NASA website and explored? I recently received a Science Resources folder listing over 50 links to sites for students, educators, scientists, and the general public. Examples: Sea Level Change, Climate, Earth Observation, Solar System Exploration, history, Mars Trek, Moon Trek, Vesta Trek, the Ozone hole. You could spend many hours learning about science and space missions. If you are interested in science, consider attending the Intrepid Museum's Space and Science Festival this weekend or join us for a private tour of the Intrepid on September 29.

Thank you,

**Dave Paris, 516-458-8593 [davidsparis@twc.com](mailto:davidsparis@twc.com)**

**EVENTS CALENDAR**

**September 20-23, Intrepid Sea, Air and Space Museum Space and Science Festival.** See page 2.

**September 24, EJCLI Ethics Seminar.** Information and registration form on pages 5 and 6.

**September 29, AIAA Tour of the Intrepid Sea, Air and Space Museum,** See page 3 for details.

**October 4, LI Engineers Club Meeting Organized by IEEE, Edward Gellender, P.E, "Nuclear Power Technology and Issues,"** at SUNY Farmingdale, Details on page 7.

**October 11, AIAA Section Meeting, at Bethpage Public Library.** Dr. Zarrin Chua of Aurora Flight Sciences, "Designing for the Human Users of an eVTOL Aircraft System." Details on page 4.

**October 19, Second Annual Aerospace and Defense Industry Suppliers Conference.** All LI aerospace supplier companies are invited. See page 8.

**November 13, AIAA Section Meeting, at Hofstra University.** John Baker of JPL. "Human Missions to Mars." Details in next FLIER.

We are planning additional meetings for December through June of next year and welcome any suggestions. Please contact a member of the Council with your ideas

For more information:  
<https://www.intrepidmuseum.org/space-and-science-festival>

# Space & Science Festival

SEPTEMBER 20 – 23



## Astronaut All Stars

Where else in New York will you get the opportunity to meet real-life astronauts? All weekend long you will have the opportunity to hear from space travelers like Kevin Hussey, Mae Jemison, Sunita Williams, and Intrepid's Senior Space Advisor Mike Massimino.



The Museum's annual Space & Science Festival is one of New York City's largest celebrations of science and space exploration. **Check out our list of five must-see events at the festival.**

## NASA

It wouldn't be Space & Science Festival without an appearance from NASA. Explore the solar system through their virtual reality simulator, learn about the Voyager program, and hear about the agency's Exoplanet Exploration program from the folks at NASA's Jet Propulsion Laboratory.

## Space Camp

Admit it. Growing up you would have LOVED to go to Space Camp. Well, this fall you can take part in a favorite Space Camp activity: the Multi Axis Trainer. Take a spin in this simulation that feels as if you're reentering the earth's atmosphere.

## Live Performances

England's Public Service Broadcasting will be returning to the Intrepid Museum for their second Space & Science Festival performance! If you haven't experienced their performance before, prepare your senses for an audiovisual extravaganza through the band's mix of guitar-driven electronica, propulsive drumming. The album relives the story of the American and Soviet *space race* from 1957-1972.

## Flight Deck Movie - *Star Wars: The Last Jedi*

Did you miss our Summer Movie Series? Don't worry! There is still one more opportunity to enjoy a film on the flight deck. Join us as we set course for a galaxy far, far away with *Star Wars: The Last Jedi*. Admission tickets (free of charge) will be distributed first-come, first-served before the show



## AIAA Field Trip

**Saturday, September 29, 2018**

### **Tour of the Intrepid Sea, Air and Space Museum**

**Location:** Intrepid  
Pier 86, 12th Ave. & 46th Street  
Manhattan, NY 10036

**Tour starts:** 11:00 AM  
**Intrepid open:** 10:00 AM – 6 PM

**Discounted Admission:** \$21, Adults  
\$15.50, Children 5-12

**RESERVATIONS REQUIRED**  
RSVP BY Sept. 21, 2018  
to: **David Paris** at  
**davidsparis@twc.com**  
or **(516) 458-8593**

On December 1, 1941, just six days before the Japanese attack on Pearl Harbor, the keel for USS *Intrepid* was laid and its construction began. *Intrepid* was launched in 1943, survived 5 kamikaze attacks and one torpedo strike in the Pacific during World War II and then played a role in the Cold War, the Space Race (as a NASA recovery vessel) and the Vietnam War. *Intrepid* was decommissioned in 1974 and later opened as New York City's Intrepid Sea, Air & Space Museum. The complex is an educational and cultural non-profit institution with a mission to promote the awareness and understanding of history, science and service through its collections, exhibitions and programming in order to honor our heroes, educate the public and inspire our youth. The museum recently celebrated the 75th anniversary of the carrier's commissioning.

We will tour the Intrepid with Burton Dicht as our guide. Burt is the IEEE Director of Student and Academic Education Programs. The usual extra charge for a tour will not apply for us. We will see the carrier flight deck with its aircraft displays, the interior displays, the Enterprise Space Shuttle Pavilion and the USS Growler guided missile submarine. The tour will last about 2 hours. The Concorde is not included in the tour; there is an extra admission fee. You could visit it after our tour. There is no coat check, so you will have to carry everything you bring. There are restaurants on board and you may bring a lunch.

For more information about the Intrepid, go to <https://www.intrepidmuseum.org/>

Details about where to meet will be sent to everyone who signs up for the tour. We will be charged for everyone who signs up, so please honor your reservation.

**Directions: Subway:** A, C, E, N, Q, R, S, 1, 2, 3, 7 train to 42nd Street, then walk or take the M42 Bus West to Hudson River (12th Avenue). Walk North to the Intrepid Museum at 46th Street.

Or 7 train to the 34th Street - Hudson Yards station. Exit near 11th Avenue, and then walk west to 12th Avenue and North to the Intrepid Museum at 46th Street.

**Cross-town bus:** M34 (34th St.), M42 (42nd St.) or M50 (49th St.) to 12th Ave. Walk to Intrepid.

**Parking:** There is no parking facility at the Intrepid. Nearby parking (not affiliated with the Intrepid)

Park Right 670 W. 43rd Street (between 11th Avenue and West Side Highway)

PARK-IT 50-51 Operating Corp. 622-630 W 51 St or 627 W 50 St (bet. 11th Ave-West Side Hwy).

Garage Management Company 550 West 45th Street (between 10th and 11th Avenues)

Or Google NYC Discount Parking.





**AIAA Section Meeting**  
**Thursday, October 11, 2018**

**Dr. Zarrin Chua,**  
**Human Factors Engineer, Aurora Flight Sciences**

**Designing for the Human Users of an eVTOL Aircraft System**

**Location:** **Bethpage Public Library**  
**47 Powell Avenue**  
**Bethpage, NY 11714**

**RESERVATIONS REQUESTED**  
**RSVP BY Oct. 10, 2018**  
**to: [davidsparis@twc.com](mailto:davidsparis@twc.com)**  
**or 516-458-8593**

**Time:** **6:00 PM Social Time**  
**6:30 PM Pizza**  
**7:00 PM Presentation**

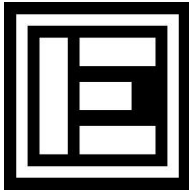
**Cost for Pizza: \$7 Members and Guests**  
**Free for Students**

Aurora Flight Sciences, an independent subsidiary of Boeing, is a leader in the development and manufacture of advanced unmanned systems and aerospace vehicles. Aurora, a member of the Uber Elevate consortium, is developing an electric Vertical Takeoff and Landing (eVTOL) aircraft to allow future passengers to fly within urban environments. The eVTOL aircraft includes eight lift rotors for vertical takeoff/landing and a cruise propeller and wing to transition to high-speed forward cruise. While initially operated with a safety pilot, the eVTOL aircraft is designed for fully autonomous operations carrying two people or cargo. The first test bed flights are scheduled to begin in 2020 in Dallas and Dubai.

In addition to the standard challenges of designing a brand-new airframe and intelligent aircraft system, this “flying taxi” concept must also consider multiple users within the eVTOL ecosystem. This talk will cover the development challenges of incorporating human factors into the design of both the physical and digital systems. It isn’t just the passenger that must be accounted for, but also the pilot, air traffic control, the community, etc., in order for Aurora’s eVTOL aircraft system to be successful.

Dr. Zarrin Chua is a Human Factors Engineer at Aurora Flight Sciences (A Boeing Company), working out of the Research & Technology Center in Cambridge, MA. Her research interests are in human-machine collaboration, applied neuroscience and ergonomics, and user interface design for aerospace systems. She received her doctorate in aerospace engineering with a focus on cognitive engineering in 2013 at the Georgia Institute of Technology. Her Masters and Bachelors are also in aerospace engineering, from Georgia Tech and Virginia Tech, respectively. She has been a research fellow at a number of institutions including ISAE-Supaero (Toulouse, France); ENAC (Toulouse, France); NASA Johnson Space Center; and the Technical University of Munich (Germany).

**Directions:** The library is west of Route 135 in Bethpage. Take Route 135 to Exit 8, then West on Powell Ave. for about 0.25 miles. The library is on the south side of the street. Park across Powell Ave., opposite the library.



## **Engineers Joint Committee of Long Island**

*Anthony Cacioppo, P.E., Chair*

*Paul Lanzillotta, P.E., Vice-Chair*

### **NETWORKING EVENING** **with DINNER and ETHICS SEMINAR**

**Monday, September 24, 2018**

**Place:** Hilton Garden Inn Melville, 1575 Round Swamp Rd.  
Plainview, NY 11803 516 -755-5552 (Front Desk)

<b>Program:</b>	<b>6:00 pm – 7:00 pm</b>	<b>Networking and Dinner</b>
	<b>7:00 pm – 9:00 pm</b>	<b>Seminar (2.0 PDH)</b>
	<b>9:00 pm – 9:30 pm</b>	<b>Cash Bar and Networking</b>

#### **Seminar:** *“Avoidance of Legal & Ethical Professional Practice Pitfalls”*

**Description:** This presentation will cover topics including: confidentiality and privilege; records of design calculations; the obligation to preserve electronically stored information; and the role of the Authority Having Jurisdiction (AHJ). We will examine the relationship of the engineer with members of the construction team and the ultimate user; explore the force of codes as opposed to published bulletins; and define the proper reaction of the engineer to a lawsuit commenced by the client in an ongoing project. We will also discuss the following hot button issues: fee splitting, “rubber stamping”, conflicts of interest, gifts, kickbacks, bribes as well as rendering opinions outside the scope of confidence. This workshop will strengthen your understanding of engineering ethics in an informative and thought-provoking manner.

**Speaker:** *Marc S. Krieg, P.E., Attorney at Law, Krieg Associates, P.C.*

This seminar is approved for the Ethics Seminar requirement by New York State.

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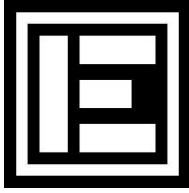
#### **MEMBER SOCIETIES**

New York State Society of Professional Engineers  
-Long Island Chapter  
American Institute of Aeronautics & Astronautics  
Institute of Industrial Engineers  
American Society of Civil Engineers  
US Merchant Marine Academy

Institute of Electrical & Electronic Engineers  
American Society of Heating Refrigeration  
& Air Conditioning Engineers  
American Society of Mechanical Engineers  
Society of Women Engineers  
Society of Manufacturing Engineers  
New York Institute of Technology – Old Westbury

Farmingdale State University  
Stony Brook University  
Hofstra University  
International Society for Automation  
American Society for Engineering Education  
American Society for Quality

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*Anthony Cacioppo, P.E., Chair*

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### **NETWORKING EVENING** **with DINNER and ETHICS SEMINAR**

**Monday, September 24, 2018**

***“Avoidance of Legal & Ethical Professional Practice Pitfalls”***

#### ***REGISTRATION FORM***

***To register, complete and submit this form and payment by September 18, 2018 to:***

***Andrew S. Haimes, P.E., 172 Sherry St, East Islip, NY 11730.***

***For questions e-mail: [ashaimes@optonline.net](mailto:ashaimes@optonline.net)***

**Fee: \$35 (includes Dinner and Seminar)**

**There is no fee for Students with valid ID**

**Make check payable to: “Engineers Joint Committee of LI”**

Name \_\_\_\_\_

Name for Badge (If Different than Above) \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

E-mail Address \_\_\_\_\_ Phone \_\_\_\_\_

**WE NOW ACCEPT CREDIT CARDS. If using a credit card, fill out above and below.**  
**You may e-mail this registration form to: [ashaimes@optonline.net](mailto:ashaimes@optonline.net)**

Credit Card Number \_\_\_\_\_ CCV Code \_\_\_\_\_

Credit Card Type ( MC, Visa, AE, Disc.) \_\_\_\_\_ Expiration Date \_\_\_\_\_

Zip Code Associated With Credit Card \_\_\_\_\_

#### **MEMBER SOCIETIES**

New York State Society of Professional Engineers  
-Long Island Chapter  
American Institute of Aeronautics & Astronautics  
Institute of Industrial Engineers  
American Society of Civil Engineers  
US Merchant Marine Academy

Institute of Electrical & Electronic Engineers  
American Society of Heating Refrigeration  
& Air Conditioning Engineers  
American Society of Mechanical Engineers  
Society of Women Engineers  
Society of Manufacturing Engineers  
New York Institute of Technology – Old Westbury

Farmingdale State University  
Stony Brook University  
Hofstra University  
International Society for Automation  
American Society for Engineering Education  
American Society for Quality

## LI Engineers Club Meeting

**October 4, 2018      11:30 AM**

at SUNY Farmingdale, 2350 Broadhollow Road, Farmingdale, NY 11735  
Lupton Hall, Room T101

### Organized by IEEE

Speaker – Edward Gellender, P.E

Topic - NUCLEAR POWER TECHNOLOGY AND ISSUES

Abstract- In the past few years, the effect of power generation on global warming has become big news. Many formerly arcane terms such as fracking, fossil fuels, renewables, plug-in hybrids, and many others are now part of everyday conversation.

Meanwhile, the perennial monster-under-the-bed that everyone loves to hate, nuclear power, has also risen, phoenix like, as historic enemies have banded together against the common foe: the level of carbon dioxide in the atmosphere, climate change, and global warming. Some avid environmentalists have even reconsidered their position on the risks of nuclear power and nuclear waste, seeing a viable carbon-free transition to the inevitable, but painstakingly slow, changeover to renewable energy.

There has been a tremendous amount of heated argument, most of it uninformed. Few understand the benefits and risks of nuclear power, certainly as compared to the alternatives. This presentation compares the detailed functioning of nuclear and fossil fuel powerplants, their benefits, and their risks. Everyone can rattle off the same list of nuclear accidents and waste disposal hysteria, but here they are dispassionately analyzed. Also, the perennial bugaboo of mass evacuations is investigated.

To attend, Respond to: [dmgrieco@optonline.net](mailto:dmgrieco@optonline.net)

 
<b>American Airpower Museum</b> 1230 New Highway, Farmingdale, New York, 11735 At the northeast corner of Republic Airport

Usually Open Thursday to Sunday 10:30 AM to 4:00 PM  
Closed Monday, Tuesday, Wednesday

**Phone: 631-293-6398**

Check website for weekend events.

<http://americanairpowermuseum.com/>

**Come to the AAM to see  
the P-51D Mustang  
acquired in 2018**



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3rd DISTRICT, NEW YORK

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(631) 923-4100-PHONE

250-02 NORTHERN BOULEVARD  
LITTLE NECK, NY 11362  
(631) 923-4100-PHONE

<http://suozzi.house.gov>

September 12, 2018

Dear Aerospace and Defense Industry Contractors:

I would like to invite you to the **2<sup>nd</sup> Annual Long Island Aerospace and Defense Industry Supply Conference at 10:00 am on October 19, 2018 at SUNY Farmingdale.**

Last December, I hosted a conference to bring Long Island's aerospace and defense industry suppliers together with representatives from national prime contractors, such as Northrop Grumman, Boeing and BAE Systems, and to hear from Deputy Assistant Secretary of Defense Eric Chewning. It was a tremendous success with over 300 participants from over 180 different companies and organizations.

We need to build on the momentum and continue to promote Long Island's aerospace and defense industry. New York's 3<sup>rd</sup> Congressional District and Long Island boast a rich history of aerospace and defense sector innovation. The industry generates an estimated \$3 billion in economic activity, and perhaps even more, for the Island.

Unlike many other prominent aerospace and defense industry clusters, Long Island cannot boast of any major "monuments" or military installations. As we clearly demonstrated last year, however, our cluster is significant and vibrant. It is critical for us to continue to promote the industry to increase awareness among prime contractors. Long Island companies provide superior products backed by quality craftsmanship and dependable delivery. It is my dream to create a finished product here on Long Island that the general public would recognize – why not a rocket to launch commercial satellites? We built the lunar module here. Let's think big.

In order to remain competitive and foster growth, we must be on the cutting edge. I have invited senior executives from the leading aerospace and defense companies, as well as government officials and industry experts, to help us better understand how our local industry can remain competitive, grow, and prepare for the new challenges ahead. We will advise you of our special guests and panelists as we get closer to the program.

It is imperative that we work together to enhance the "495 Research Corridor on Hi Tech Island" and become, once again, a region that is renowned and valued for our innovation, capabilities and high skilled workforce.

I look forward to seeing you this year and continuing the progress we have made. In the meantime, to confirm your attendance, please email Matt Geller at [Matityahu.Geller@mail.house.gov](mailto:Matityahu.Geller@mail.house.gov) or call 631-923-4104.

With kindest regards, I am

Sincerely,

Thomas R. Suozzi  
Member of Congress  
Armed Services Committee



## JUNE 16 FIELD TRIP REPORT

### Floyd Bennett Field Ryan Visitor Center and Historic Aircraft Restoration Project

The AIAA Long Island Section with participation from docents from the Cradle of Aviation Museum in Uniondale, Long Island as well as members of the Institute of Industrial and Systems Engineers went on a field trip to historic Floyd Bennett Field on Saturday June 16, 2018. Floyd Bennett Field was NYC's first municipal airport but due to lack of transportation access (which still exists) it fell out of favor but due to the onset of World War II became a very important US Naval Air Station (known as Naval Air Station New York) as well as a US Coast Guard station. Floyd Bennett Field became especially valuable in the famous Battle of the Atlantic as a base for anti-submarine warfare patrols and as a transfer station for aircraft destined by the military from the factories to the fighting fronts. It is now part of the US Department of Interior National Park Service Gateway National Recreation Area and has facilities for the NY Police department helicopter group as well as the NYC Department of Sanitation and one of the largest sports facilities in Brooklyn known as Aviator Sports. Not to be missed in historic Hanger B, is the Historic Aircraft Restoration



Facility which is an aviation museum and a volunteer restoration facility for historic aircraft to museum quality. We met at the William Fitts Ryan Visitor Center whose interior has been restored to 1930s to 1940s vintage condition and were given a guided walk of the first floor and the control tower on the third floor as well as a tunnel used originally for loading passengers onto the aircraft when it was an active airport. Following the tower tour, we went via car caravan to historic Hanger B and were given a guided tour by one of the volunteers who restore historic aircraft. Hanger B is open on Tuesdays, Thursdays and Saturdays from 9 AM to 3 PM, admission

is free and they welcome visitors to see the aircraft. Historic aircraft include a PBY Catalina under restoration, a Lockheed Vega Winnie Mae, Fairchild PT 19 trainer, a Lockheed SP 2E Neptune and a Sikorsky HH3F Pelican Search and Rescue helicopter among other aircraft. A total of 12 members and non-members attended. We had a very enjoyable time and look forward to other field trips of interest in a similar vein in the future.

Greg Homatas

For more information, visit the Ryan Visitor Center Website:

<https://www.nps.gov/gate/planyourvisit/ryan-reopen.htm>



## **Cradle of Aviation Museum**

**Charles Lindbergh Boulevard**

**Garden City, NY**

**11530**

Visit the Cradle with your children and grandchildren, explore their world-class aerospace history exhibits, talk to their knowledgeable docents, join in their events, watch a first run movie in their wide screen domed theatre, or enjoy an exciting show in the immersive, all-digital, JetBlue Sky Theater Planetarium. The Cradle currently features planetarium and Domed Theatre shows including: Dream Big: Engineering Our World; Journey to Space; Living in the Age of Airplanes; Coral Reef Adventure. Also, check the website for dates and times for the Interactive Educator-Led Space Lab Programs including: Current Night Sky; Space News & Asteroid: Mission Extreme; Countdown to Apollo. Space labs are held on Saturdays, Sundays, holidays and school breaks at noon and weekday mornings.

Usual Hours: Open 9:30-5:00, Tuesday through Sunday and Mondays that fall on holidays and school breaks.

For event details, go to: <http://www.cradleofaviation.org/> or call (516) 572-4111

### **Cradle of Aviation Museum Events**

#### **16th Annual Cradle of Aviation Museum Air and Space Gala**

Wednesday, November 7, 2018 6:00 pm

#### **Countdown to Apollo Planetarium Show**

Monday, October 1, 2018 11:00 am

#### **An Evening with Astronaut Hoot Gibson**

Thursday, October 4, 2018 7:00 pm

#### **Above and Beyond: NASA's Journey to Tomorrow - Documentary Film Screening with Director Rory Kennedy**

Thursday, October 11, 2018

#### **A Talk with Scarlin Hernandez, Spacecraft Engineer for NASA's James Webb Space Telescope - [For School Groups]**

Wednesday, October 16, 2018 10:00 am /

#### **Space: A Journey to Our Future**

- on exhibit September 2018 through August 2019

# NASA SPACE TECHNOLOGY



## RESEARCH FELLOWSHIPS 2019 CALL FOR FELLOWSHIP PROPOSALS

Discover, achieve, collaborate...

The NASA Space Technology Mission Directorate seeks to sponsor graduate student research that has significant potential to contribute NASA's goal of creating innovative new space technologies for NASA and the Nation.

The fellowship, up to \$80,000 per year, will coincide with the start of the fall 2019 term. In addition to providing a \$36,000 annual stipend, the fellowship provides support for tuition, health insurance, conference attendance, and the student's faculty advisor. The fellowship also provides support for onsite tenure at NASA Centers. Current and prospective doctoral and master's students may propose (see full eligibility requirements).

To date, NASA has awarded these prestigious fellowships nearly 500 students from 94 universities across 40 states and one U.S. territory. Fellowship recipients will collaborate with leading NASA experts in space technology to acquire a more detailed understanding of the potential end applications of their space technology efforts, and directly disseminate their research results within the NASA community and beyond.

The solicitation opened on *September 6, 2018*  
Proposals will be due by 6:00 p.m. ET on **November 01, 2018**

Proposals will be accepted via NSPIRES:  
<http://tinyurl.com/NSTRF2019>

[www.nasa.gov](http://www.nasa.gov)

U.S. citizens and permanent residents only.  
PS-00885-1012

For information about this year's NASA Space Technology Research Fellowship 2019 solicitation and instructions for submitting proposals, visit: <https://go.nasa.gov/2NMUkqF>

For additional information on the Space Technology Research Grants Program, visit:

<https://www.nasa.gov/directorates/spacetech/strg/index.html>