

IHS 50th Anniversary Conference and Celebration

Update for Week of 8 November 2020

1. No changes in program or schedule

2. Sessions this week:

Tuesday 10 November

4 p.m. Zurich, 10 a.m. Washington, 7 a.m. Seattle/LA, 2 a.m. Sydney (11 Nov.)

Speaker: Gustav Hasselskog — Candela Seven, the World's First Electric Hydrofoil

Speaker: Harry Larsen — Active Ride Control for Hydrofoils

Thursday 12 November

7 p.m. Washington, 6 p.m. St. Louis, 4 p.m. Seattle/LA, 11 a.m. Sydney (13 Nov.)

Speakers: Richard Stedd, Carl Weiscopf, Eliot James — Panel discussion on U.S. Navy hydrofoil operation and preservation

These sessions will be conducted on Zoom. Use this link for all sessions:

<https://us02web.zoom.us/j/3157231248?pwd=TExBMnIrVE9MRG5PU29KVHkrYIRnZz09>

If it does not open automatically, use

Meeting ID: 315 723 1248

Password: r09YST.)

Speaker: Gustav Hasselskog

Position: Founder and CEO

Presentation: Candela Seven, the World's First Electric Hydrofoil

Candela Seven is the world's first electric hydrofoil in serial production. Gustav Hasselskog details the journey from garage startup to becoming one of the world's biggest electric boat builders – and why hydrofoils are the only way forward for electric boats.

Gustav Hasselskog is the founder and CEO of Candela Speed Boat. He's a mechanical engineer with a background as CEO of several big Swedish companies. After spending a long summer boating in the Swedish archipelago, he founded Candela in 2014 out of frustration over the inefficiency of planing motorboat hulls and their inability to go far and fast on electric power. After five years of R&D, Candela launched the Candela Seven, the world's first electric hydrofoil.



Speaker: Harry Larsen

Position: Retired. Formerly Business Planning Manager of Boeing Marine Systems, a division of The Boeing Company

Presentation Title: Active Ride Control for Hydrofoils

The presentation surveys the range of design choices to achieve foilborne stability of hydrofoil craft, from the surface piercing, through the mechanical feedback, to the electronic feedback state space approach. Examples Volga, Foiler, Rave, Moth, Candela and his own designs are used to illustrate the stabilization methods.



Harry Larsen graduated from the University of Washington with a BA in mathematics. His 35 year career at The Boeing Company was largely involved with building and operating economic simulators of programs and projects. Most of them produced both first- and second-moment forecasts. In the later years, with the advances in computing, they were typically Monte Carlo systems. Harry's interest in hydrofoils was spurred by Kalman Filter's duality of control and estimation. A hydrofoil hobby, while fostering his mathematical background, also fit well with his family's boat building assets. During his 10 years in Boeing Marine Systems (BMS) he built and operated the closed loop system that produced the quarterly Financial Project Cost Reports (financial forecasts) for both the direct and overhead costs of the Jetfoil program and of

BMS. During the last few years at BMS he served as its Business Planning Manager. Harry has had several papers published, notably one on bidding, in the Journal of Missiles and Space (No. 1 1996) of the People's Republic of China.

Panel Discussion on USN Hydrofoil Operation and Preservation

Richard Stedd was the second Commanding Officer of USS Tucumcari, PGH 2, on her Vietnam deployment and subsequently in Europe.

Carl Weiscof was the commissioning Commanding Officer of USS Aries, PHM 5, fifth ship of the Pegasus class of Harpoon missile equipped patrol hydrofoils.

Eliot James developed an interest in hydrofoils at a young age that later led him to co-found the USS Aries Hydrofoil Museum to collect and preserve hydrofoils that would otherwise probably be lost.

These men had a significant range and depth of experiences operating, maintaining, supporting and now preserving these unique and highly capable small ships. In their videos and this panel discussion they are preserving a first-person record that is still relevant in discussions about acquiring and operating new hydrofoils (even commercial ones).

The audience is encouraged to watch Richard Stedd's pre-recorded presentation at <https://www.youtube.com/watch?v=0MgA8EGHIjo> and Eliot James's at <https://www.youtube.com/watch?v=RIhwvKUIHco> beforehand as they will not be shown during the panel discussion in order to maximize the time available for the panelists to field questions from the audience.



Richard E. Stedd entered U.S. Navy Officer Candidate School in June 1965 after graduation from John Carroll University and was commissioned as an Ensign in February 1966. Following several early ship assignments he reported to Boat Support Unit One, Naval Special Warfare, in Coronado, California, as Officer-in-Charge of USS Tucumcari, PGH 2. After a period of exercises and then ship modifications, Lt. Stedd took command of Tucumcari and in August 1969 deployed to Vietnam for operational evaluation under combat conditions. Upon her return to the US in March 1970 Tucumcari's homeport was changed to Little Creek, Virginia, the East Coast home of Naval Special

Warfare.

In March 1971, Lt. Stedd took Tucumcari to Europe to demonstrate hydrofoil operations for the NATO navies and promote their use by NATO. On 17 September 1971, after 33 months aboard and over 752 foilborne hours, Lt. Stedd's Tucumcari tour came to an end, and for that service he was awarded the Navy Commendation Medal.

In civilian life Richard Stedd was a real estate broker and subsequently an attorney in the San Diego area until his retirement.

Captain Carl Weiscopf USN (ret) graduated from the United States Naval Academy in 1970 and completed a 30-year Navy career followed by fifteen years as a defense contractor. He served aboard and commanded a variety of ships including surface combatants and amphibious assault ships. As a LCDR he was the commissioning Commanding Officer of USS Aries, PHM 5, and sailed the ship from Bremerton, Washington to Key West, FL followed by operations in the Caribbean. He later served in a number of major shoreside positions and while on active duty earned masters degrees in Computer Systems Management from the Naval Postgraduate School and Human Resource Management from Chapman University.



After retiring he worked five years for Raytheon as a project manager and business analyst, then in 2005 joined Zeiders Enterprises where he served as the contract manager, program director and operations support manager. He retired from Zeiders in 2015



Eliot S. James completed a BS in Industrial Engineering and Technology from Western Illinois University in 1986 and was an engineer with various companies until starting Custom Composites Company in 1990. CCCo manufactured composite tools and production parts for the aerospace, heavy truck, RV, and marine industries. After selling CCCo in 2007 he served as president or chief operating officer of larger manufacturing companies and then in 2016 founded Prairie Hill Manufacturing of Missouri.

He and partners Bill and Bob Meinhardt purchased ex-USS Hercules, PHM 2, from US Navy surplus in 1996 and subsequently traded her (with Charleston Shipbuilders Inc.) for ex-USS Aries, PHM 5, which was the most complete of all the PHMs and the only one to retain her foils. Included in that deal was the ability to refit Aries in the recently closed Charleston Naval Shipyard alongside the other scrapped PHMs, which made it possible to save many specialized PHM hydrofoil parts that would otherwise have been lost. They were kept as spares that would have been impossible to replicate economically.