

SNAME

Chesapeake Section

The Society of Naval Architects and Marine Engineers



The SNAME Chesapeake Section December meeting will be Thursday, January 13 2011 at the Army Navy Country Club in Arlington, VA. Our guest speaker is Dr. Larrie Ferreiro. He will be giving a presentation on *The Connection between Ship Hydrodynamics and Aircraft Aerodynamics Through the mid-20th Century, in Theory and Experiment*.

Please make reservations or cancellations by **COB Monday, Jan 10**, on the [Section's Events Meetings page](#) (when available) or by email to snamecsmeetings@gmail.com. When making a reservation please indicate your membership status, dinner selection, and whether or not you are a foreign national.

ABSTRACT: The Connection between Ship Hydrodynamics and Aircraft Aerodynamics Through the mid-20th Century, in Theory and Experiment.

As early as 1784, sharp-eyed engineers and scientists noted striking similarities between the dynamics of seagoing vessels and aerial vehicles. By the early 20th century, as the airplane and the dirigible were undergoing a remarkable evolution, many of the same scientists working on the problems of aircraft aerodynamics were applying their newfound knowledge to the problems of ship hydrodynamics, and vice-versa. Several key researchers in aerodynamics began their career as naval architects (David A. Taylor, William F. Durand and Jerome C. Hunsaker) and carried out their experiments in ship model basins. Meanwhile, theoretical and experimental results for rigid airships and fixed-wing aircraft developed by Ludwig Prandtl, Theodore von Kármán, Max M. Munk and Hilda M. Lyon were employed in the hydrodynamic development of surface ships and submarines. This paper examines how the ideas, concepts and data from each discipline influenced the other, and explores the processes by which that knowledge was transferred between disciplines.



AUTHOR BIO: DR. LARRIE FERREIRO

Dr. Ferreiro is the Director of Research at DAU. He oversees the DAU research portfolio, including editorship of the *Defense Acquisition Research Journal*. He was previously Professor of Systems Engineering and Science and Technology Management, and continues to teach in those areas as well as consulting for DoD and DHS agencies.

Dr. Ferreiro has over 30 years experience in Navy, Coast Guard and civilian maritime engineering, research, development and acquisition. He was a liaison scientist and program manager for the Office of Naval Research (ONR), first in the ONR Europe, London office as associate director for international programs, and then as science and technology manager for the Littoral Combat Ship (LCS). Prior to that, he was program manager at the American Bureau of Shipping for the development of classification rules for the design and construction of naval vessels, which are now being used in the LCS, DDG 1000 and Coast Guard Deepwater programs.

Dr. Ferreiro was a senior naval architect on various US Navy warship design programs, including DDG 51, LPD 17 and CVN 21. He served as an exchange naval architect with the French navy's engineering bureau in Paris, designing amphibious ships, frigates and patrol craft. He was a systems engineer for the US Coast Guard, developing risk-based procedures for regulations and business planning; he later served as a technical expert on the Coast Guard delegation to the International Maritime Organization.

Dr. Ferreiro received his Master's degree in naval architecture from the University College London program for British naval constructors, and his PhD in the History of Science, Technology and Engineering from Imperial College London. He currently teaches systems engineering management at the Catholic University of America. He has consulted with several media outlets on historical and technical subjects, including the forensic analysis of RMS *Titanic*. His award-winning book on the history of naval architecture, *Ships and Science*, was published by MIT Press in 2007. His new book on the history of an 18th-century scientific expedition, *Measure of the Earth*, will be published under Basic Books in 2011. He is a contributor to the *Oxford Encyclopedia of Maritime History* and the upcoming *Maritime Strategy and Global Order*, and has written numerous articles in international publications on systems engineering management, naval and maritime history, and naval architecture.

AGENDA

1730 - 1800, Check-in with cash bar
1800, Dinner and presentation

DINNER SELECTION:

Choice of: Parmesan Chicken with sun dried tomato-caper cream sauce or Vegetarian dish

*served with house salad, saffron rice, fresh vegetables, bread rolls, coffee, hot tea, and water *

	At Door	Paypal
ASNE/SNAME Members Above 35 Yrs	\$33	\$30
ASNE/SNAME Members 35 Yrs and Below	\$28	\$25
Visitors	\$35	\$32
Students	No Fee	

Cash or checks payable to "SNAME Chesapeake" will be collected at the door

LOCATION

Army Navy Country Club
Williamsburg Room
1700 Army Navy Drive
Arlington, VA 22202

Please help to announce this meeting by passing it around your office email list or posting the flyer on a bulletin board.

Thank you!