

Larrie D. Ferreiro, PhD
George Mason University
Fairfax, VA 22030

Cell: (703) 965-6419
Email: lferreir@gmu.edu

AREAS OF EXPERTISE

- Systems Engineering and Complex Systems Management
- History of Engineering, Science, Technology
- Naval / Maritime Engineering, Systems and Technology
- History of the Scientific Revolution and the Industrial Age
- American, Latin American and European History

EDUCATION

Ph.D. – History of Engineering, Science and Technology Studies, Imperial College London – London, UK 2004
MSc. – Naval Architecture University College London -- London, UK 1986
BSE – Naval Architecture and Marine Engineering University of Michigan (cum laude) – Ann Arbor, MI 1980

ACADEMIC EXPERIENCE

Adjunct Professor of Systems Engineering, George Mason University, Fairfax VA (2011-present): developed and teach SYST 508 Complex Systems Engineering Management, a case-based course in live, synchronous DL and asynchronous DL modes; developed and teach SYST 202, Engineering Systems in a Complex World (cross-listed as History 202), a live case-based course on global history, with a focus on the science and technology development; teach SYST 210, Systems Design, a live course using model-based system architecture tools.

Courses developed and taught:

SYST 508 Complex Systems Engineering Management, 2012-present. Develops and broadens their understanding and appreciation of both technical and non-technical aspects of systems engineering, and exhibit leadership thinking about systems. 2012-2104 taught in live mode; 2014 taught in synchronous DL mode; 2015-present developed and taught in asynchronous DL mode

SYST 202 / HIST 202, Engineering Systems in a Complex World, 2011-present. Students use historical case studies and critical analyses to think strategically and globally about the management and execution of complex technical systems. Initiated as a Systems course in 2011, cross-listed as a History course in 2014.

Courses taught: SYST 210, Systems Design, 2014-present

Adjunct Professor of Systems Engineering and Ocean Engineering, Stevens Institute of Technology, Hoboken NJ (2012-present): developed and teach OE 660 Naval Ship Acquisition, a case-based course in asynchronous DL mode; teach SYST 625, Fundamentals of Systems Engineering, in live and synchronous DL mode, in both academic as well as executive calendar offerings; teach SYST 650, System Architecture and Design, a live course using model-based system architecture tools, in both academic as well as executive calendar offerings.

Course developed and taught: OE 660 Naval Ship Acquisition, 2015-present. Provides the student with an understanding of the management and execution of current and emerging naval ship acquisition programs.

Developed and taught in asynchronous DL mode.

Course in development: OE 661 Naval Systems Engineering. 2015-present, Provides the student with an understanding of the key concepts and challenges of systems engineering as applied to major naval ship programs. To be taught in asynchronous DL mode.

Courses taught:

SYST 625 Fundamentals of Systems Engineering, 2012-2014. Students learn roles of SE in the development and sustainment of complex systems, how to develop models and requirements

SYST 650 System Architecture and Design, 2013-present. Students learn how to decompose a complex system, develop complete architectures and specifications.

Adjunct Professor of Systems Engineering, Catholic University of America, Washington DC (2008-2015): developed and taught CMGT 580, Introduction to Systems Engineering Management, in live mode.

Course developed and taught: CMGT 580, Introduction to Systems Engineering Management, 2008-2015.

Develop the student's understanding of systems engineering management through the life cycle of a system.

Professor of Systems Engineering Management, Defense Acquisitions University (DAU), Fort Belvoir VA (2005-present): developed, manage and teach SYS 302 Systems Engineering Technical Leadership, a live case-based course; teach other case-based courses in systems engineering management, science & technology management, program management and advanced program integration. Also DAU Director of Research: administer DAU research program, direct human subjects protection plan, edit peer-reviewed *Defense Acquisition Research Journal*.

Course developed and taught: SYS 302: Systems Engineering Technical Leadership, 2005-2010. Develop understanding of systems engineering policies and processes in an acquisition program; develop and apply the attributes of effective leadership to systems management

Courses taught: SYS 203, Intermediate systems engineering management; STM 202, Intermediate science and technology program management, 2007-2010.

ENGINEERING AND PROFESSIONAL EXPERIENCE

Defense Acquisition University (DAU)
9820 Belvoir Road, Fort Belvoir, VA 22060

10/2009-present

DIRECTOR OF RESEARCH

Established and currently leads DAU Center for Defense Acquisition Research, which coordinates and produces leading-edge studies on current and future issues regarding defense system acquisition. Executive editor, *Defense Acquisition Research Journal*, the award-winning, peer-reviewed publication that presents study results to 125,000 readers globally. Initiated and organized roundtable workshop on Capitol Hill, "Twenty-five Years of Defense Acquisition Reform: Where Do We Go From Here?" which directly led to the establishment of current (2014) House and Senate panels and committees on updating defense acquisition. Member of several panels (e.g., RAND NDRI Advisory Board) that propose and review research studies carried out at DAU, affiliated universities and research centers. Organizes and conducts workshops, conferences and symposia on research topics, including multinational 2012 symposium "Limits of Competition in Defense Acquisition". Carries out research on acquisition studies, systems engineering and technology transfer that link strategic goals with tactical outcomes. Teach courses on management of science and technology, defense acquisition, and complex systems management.

VISITING FELLOW, RAND CORPORATION: 1/2013-5/2013: DAU developmental assignment at RAND NDRI and JIE offices in Washington DC. Initiated and completed study on access to DoD data for defense acquisition research, which resulted in white paper ("Access to Data for Defense Acquisition Research by Independent, Non-Commercial Organizations: Issues and Options: An Independent View", RAND NDRI White Paper). Analyst in Alternatives Study for SOCOM on undersea clandestine insertion of special operations forces, published 2014. Developed initial set of urban quality-of-life indicators for overseas client.

Defense Acquisition University (DAU)
9820 Belvoir Road, Fort Belvoir, VA 22060

12/2005-9/2009

PROFESSOR OF SYSTEMS ENGINEERING, SCIENCE AND TECHNOLOGY MANAGEMENT

Teach professional-level courses in systems engineering and management of science and technology programs at the USA's top-ranked corporate university. Teach systems engineering and science and technology management in advanced Program Management courses. Course Developer and Manager for nationally-deployed capstone course in Systems Engineering Leadership; coordinated closely with senior OSD AT&L officials to lead multidisciplinary team that created curriculum and case studies for the award-winning course. Assisted in the development of a comprehensive systems engineering curriculum for NASA's Orion/Constellation program team. Assisted in the development of a systems engineering and acquisition program curriculum for the Department of Homeland Security. Carried out studies to develop career rotation and competency management schemes options for DoD Human Capital Initiative. Assist in the development of Requirements Manager curriculum. Provide consultancy support to Department of Homeland Security on systems engineering and program management, including design and development of case studies to support R&D and engineering decision-making process; specifically selected by the US Coast Guard to lead international market study of shipbuilding in support of new Offshore Patrol Cutter program. Assisted RAND Corporation in studies of naval shipbuilding and acquisition.

Dr. Larrie D. Ferreiro
George Mason University
Fairfax, VA 22030

Page 3

Cell: (703) 965-6419
Email: lferrreir@gmu.edu

Noesis Inc.
4100 N. Fairfax Drive, Arlington, VA 22203

9/2004-12/2005

SENIOR ENGINEER

Detailed to the Office of Naval Research (ONR) as Science and Technology Manager within the PEO Ships Littoral Combat Ship Program Office. Designed and stood up the management of a comprehensive portfolio of science and technology investments for ship and mission systems at ONR and other agencies. Provided strategic guidance to acquisition review panels on technology development options for follow-on phases of program. Initiated, organized and chaired a major international conference on maritime robotic vehicles. Supervised VA Tech student summer research project in advanced-technology welding.

Office of Naval Research (ONR) Global
223 Old Marylebone Rd, London NW1 5TH, UK

6/2001-9/2004

LIAISON SCIENTIST / ASSOCIATE DIRECTOR FOR INTERNATIONAL PROGRAMS

Directed, coordinated and led of a wide range of international program-related issues at high levels within US Department and foreign Ministries of defense. Led development proposals for, and managed several collaborative grant programs in engineering, science and technology between U.S. and overseas researchers at universities and in national laboratories. Spearheaded and successfully led all aspects of the insertion of numerous international maritime technologies into U.S. Navy R&D programs and programs of record. Key member of the team that established the ONR Latin America office, providing initial support to conferences and liaison with host country Chile. Effectively carried out in-depth industry and country studies of R&D structures that helped shape defense science and engineering policy. Conducted surveys of international S&T developments appropriate to U.S. engineering and maritime enterprises, in order to assist in shaping policy and providing direction for new program development. Planned, prepared and chaired a transatlantic workshop on naval engineering education that directly led to a new, international naval-focused curriculum for US universities. Served as a Technical Expert in the U.S. Coast Guard delegation to the International Maritime Organization (IMO), developing international regulations on ocean transportation and port safety.

American Bureau of Shipping (ABS)
1491 Prince St. Suite 200, Alexandria, VA 22314

10/1999-5/2001

SENIOR ENGINEER

Served as Deputy Program Manager in the ABS / NAVSEA Program Office for developing Rules for Constructing Naval Vessels. Personally created and drafted major portions of Rules, now used exclusively in the Coast Guard Deepwater, Navy DDG1000 and Littoral Combat Ship programs; collaborated closely with Navy technical offices and Navy / industry ship program managers, ensuring buy-in. Effectively managed a wide range of personnel, financial and technical resources. Developed international business opportunities. Conducted engineering and plan reviews.

Office of Design and Engineering Standards, G-MSE-3 – U.S. Coast Guard Headquarters (USCG)
2100 2nd St SW, Washington, DC 20593

11/1997-9/1999

SENIOR SYSTEMS ENGINEER

Led and coordinated the development of risk-based procedures used in developing regulations on safety and marine environmental protection. Developed risk-based methods for port safety procedures in New York and Washington DC. Led a Coast Guard team in the analysis and evaluation of proposed IMO rules and policy using risk-based methods. Initiated, established and directed an effort to develop and implement qualitative risk-based business planning procedures. Accountable for evaluating foreign and domestic technology to improve marine safety and environmental protection. Provided expert assistance in the development of Coast Guard policy at IMO and at other international forums.

Design Support Department, Code 24, Naval Surface Warfare Center-Carderock Division (NSWC-CD) 8/1996-10/1997
9500 MacArthur Boulevard, West Bethesda, MD 20817

SENIOR NAVAL ARCHITECT

Served as Principal Naval Architect in the CVX Program Office, charged with performing high-level concept synthesis, design integration and systems engineering of next-generation aircraft carrier, using ASSET and various CAD tools. Developed concept studies in support of operational analysis. Developed warship design studies in support of SC 21 combatant program for potential export and DARPA proposals. Charged with evaluating joint U.S. and foreign technologies for insertion into warship programs, and coordinated international level cooperation for warship programs with allied navies.

Direction des Constructions Navales (DCN)
8 Blvd Victor, 00303 Armées, Paris, France

12/1994-7/1996

SENIOR EXCHANGE NAVAL ARCHITECT

Detailed from NAVSEA/NSWC on high-visibility exchange program to serve in the French Navy's ship design and construction directorate. Assigned as Chief of Amphibious Assault Ship Project, accountable for analyzing and developing operational and technical requirements. Oversaw, supervised and developed complete preliminary designs for 3 related classes of export amphibious warships. Assigned as Chief of Malaysia Export Patrol Corvette project; prepared and submitted a full preliminary design and technical bid package that put DCN in the preliminary short-list. Developed preliminary design packages for export warships for other Asian nations. Conducted cost and technical analyses for the HORIZON (France / UK / Italy) frigate program. Drafted design procedures manuals in French, driving towards DCN's ISO 9000 compliance as part of its privatization program. Performed in-depth analyses and provided senior-level reviews on DCN programs and the impact of national strategy on standards.

Navy International Programs Office (NIPO)
1745 Jefferson Davis Hwy, Arlington, VA 22242

10/1993-11/1994

INTERNATIONAL PROGRAMS SPECIALIST

Detailed from NAVSEA at the request of NIPO to work on international agreements. Developed and implemented Exchange Agreements for the exchange of technical information with allied navies. Managed and maintained the Navy's Scientist and Engineer Exchange Program, coordinating with Air Force and Army programs. Planned and coordinated technical reviews with U.S. and foreign Navy action officers, and assisted in drafting technology transfer MOUs.

Naval Sea Systems Command, Preliminary Design Division (NAVSEA 03D)
2531 Jefferson Davis Hwy, Arlington, VA 22242

7/1982-9/1993

SENIOR NAVAL ARCHITECT

Performed and managed a wide range of functions and responsibilities throughout this broad assignment. Served as Design Integration Manager for Affordability-Through-Commonality. Led development of system engineering efforts, assisted in coordination and managed grants for a major R&D program to create modular shipboard systems and improve manufacturing methods that are now employed on LPD-17 class ships. Served as Lead Project Naval Architect in the LPD-17 Program Office, developing preliminary designs and executing technical assessments for the U.S. Navy's newest amphibious ship. Served as Principal Naval Architect for the corvette, frigate and destroyer programs (incl. DDG 51 Flt III); as well as the Naval Architect for commercial-ship conversions, mine warfare and MSC vessels. Served as Assistant Project Officer for Data Exchange Agreements, managing daily liaison activities with various allied navies, including participation in senior-level briefings and international technical conferences. Initiated and served as Program Technical Director for Offboard Command Casualty Launch, accountable for initiating development of project concept; directing technical and operational analyses, and leading development and managing R&D grants for survivable remote missile launch capability. Hand-picked to attend British Naval Constructor's MSc course at University College London, 1985-1986. In addition, performed comparative analyses of US and foreign naval warship architecture, early-stage design of surface warships, viability studies for new ships and modernizations and developed computer-aided design tools.

Naval Sea Systems Command (NAVSEA 05)
2531 Jefferson Davis Hwy, Arlington, VA 22242

8/1980-6/1982

ENGINEER-IN-TRAINING

Rotational period through NAVSEA, as well as Long Beach Naval Shipyard, renovating the battleship *New Jersey*, and SUPSHIP Seattle, supervising construction of FFG 7 and LSD 41 class.

RESEARCH EXPERIENCE

Director of Research, DAU, 2005-present

- Executive Editor *Defense Acquisition Research Journal*, 2010-present. World's premier research journal devoted to defense acquisition policy research. Received APEX award 2015
- Develop and implement a Human Subject Protection Plan for research in compliance with DoD Directive 3216.02 and 32 CFR 219, 2014-2015
- Initiated and coordinated GMU White Paper "Big Data and Predictive Analytics as a Third Offset Strategy" in response to the DoD Long Range Research and Development Plan (LRRDP) Request for Information Solicitation Number: HQ0034-15-RFI-1, March 2015
- Initiated and organized research program between RAND, GMU and the Department of Transportation, leading to symposium held at Transportation Research Board Annual Meeting, January 2015: "Past As Prologue: What History Tells Us About the High Tech Future of Transportation and Transportation"
- Initiated and led Congressional Research Service / DAU symposium on Capitol Hill, "Defense Acquisition Reform: Where Do We Go From Here?" Results of seminar led directly to the National Defense Authorization Acts 2015-2107 provisions for defense acquisition reform
- Initiated and led research conference at DAU, "The Limits of Competition in Defense Acquisition", September 2012. Published proceedings in 2014
- Grant evaluation committee for Naval Postgraduate School Broad Agency Announcement on Acquisition Research Program, 2010-present
- Steering committee for RAND National Defense Research Institute (NDRI), 2010-present
- RAND NDRI peer review: Conduct peer review and evaluation of RAND research in systems acquisition and management, 2005-present. Examples: *Why Has the Cost of Navy Ships Risen?* (2006), *Are Ships Different?* (2011), *Issues with Access to Acquisition Data and Information* (2015)
- MITRE Corporation: Conduct peer review and evaluation of MITRE research in acquisition systems, 2011-present
- Human Capital Initiative, 2008-2010. Researched and wrote white papers on engineering leadership in the UK, France and European Union, to develop new competency models and criteria for DoD engineering and technology workforce

RAND Corporation, Visiting Fellow, 2013

- Initiated and completed study on access to DoD data for defense acquisition research, which resulted in white paper "Access to Data for Defense Acquisition Research by Independent, Non-Commercial Organizations: Issues and Options: An Independent View", RAND NDRI White Paper, 2013.
- Analyst in Alternatives Study for Special Operations Command (SOCOM) on undersea clandestine insertion of special operations forces. Report published 2014
- Justice, Infrastructure and Environment: Developed initial set of urban quality-of-life indicators for overseas client.

Noesis Inc, Senior Engineer, 2004-2005

- Detailed to the Office of Naval Research (ONR) as Science and Technology Manager within the PEO Ships Littoral Combat Ship Program Office
- Managed portfolio of science and technology investments for ship and mission systems at ONR and other agencies
- Provided strategic guidance to acquisition review panels on technology development options for follow-on phases of program.
- Supervised VA Tech student summer research project in advanced-technology welding.

ONR Global Liaison Scientist, 2001-2004

- Led collaborative grant programs in engineering, science and technology between U.S. and overseas researchers at universities and in national laboratories
- Helped establish the ONR Latin America office, providing initial support to conferences and liaison with host country Chile.
- Carried out in-depth industry and country studies of R&D structures that helped shape US Navy defense science and engineering policy.

Senior Naval Architect, Naval Sea Systems Command and Naval Surface Warfare Center

- Carried out R&D on ship stabilization devices that led to US Patent No. 5,488,919; "Canted Rudder System for Pitch, Roll and Steering Control" (1996)
- Managed grants for a major R&D program to create modular shipboard systems and improve manufacturing methods that are now employed on LPD-17 class ships (1993)
- Led development and managing R&D grants for survivable remote missile launch capability (1988-1990).

PHD THESIS ADVISORY COMMITTEES

Sean Tzeng (2015), Volgenau School of Engineering, George Mason University. Thesis title: *Management towards Success – Defense Business System Acquisition Probability of Success Model*

José María Sánchez Carrión (2010), Tribunal de Tesis Doctoral, Universidad Politécnica de Madrid. Thesis title: *Los Ingenieros de Marina. Motores de la Renovación y Tecnificación de la Construcción Naval Española (1770-1827). Su Organización, Academia y Realizaciones (Naval Engineers: Engines of renovation and technical professionalization of Spanish naval construction, 1770-1782: Its organization, education and projects).*

AWARDS

Office of Secretary of Defense Acquisition, Technology and Logistics Award for Excellence in Systems Engineering, 2007
DAU Award for Excellence in Systems Engineering, 2007
U.S. Navy Superior and Outstanding Performance Awards – continuously awarded 1985-1997 & 2002-2004
U.S. Coast Guard Parthenon – 1998

PROFESSIONAL SOCIETIES

Society of Naval Architects and Marine Engineers (SNAME), 1977
Royal Institution of Naval Architects (RINA), 1985
American Society of Naval Engineers (ASNE), 1986
International Council of Systems Engineer (INCOSE), 2005

LICENSURE

Professional Engineer, State of Virginia	1989
Chartered Engineer, Engineering Council of Great Britain	1987
European Engineer, European Federation of National Engineering Associations	1990
DoD Acquisition Professional Community, DAWIA Level III in Systems Planning, R&D, Engineering	1993
DoD Acquisition Professional Community, DAWIA Level III in Science and Technology	2006

PATENTS

US Patent No. 5,488,919; "Canted Rudder System for Pitch, Roll and Steering Control", 1996
(Integrated system for stabilizing the motions of surface ships, for use in naval vessels and high-speed ferries)

PUBLICATIONS

Books:

- *Brothers at Arms: American Independence and the Men of France and Spain Who Saved It.* Alfred A. Knopf, 2016
(Pulitzer Prize in History finalist, 2017)
- *Measure of the Earth: The Enlightenment Expedition that Reshaped Our World.* New York: Basic Books, 2011
(Physics World Top 10 books of 2011)
- *Ships and Science: The Birth of Naval Architecture in the Scientific Revolution, 1600-1800.* Cambridge: MIT Press, 2007
(North American Society for Oceanic History award, best science and technology book, 2007)
- *Technology of the Ships of Trafalgar* (editor). Madrid: UPM, 2006
- *Bridging the Seas: The Rise of Naval Architecture in the Industrial Age, 1800-2000.* In process

Book Chapters:

- *Maritime Strategy and Global Order.* Washington DC: Georgetown University Press, 2016
- *Compendium of ship hydrodynamics: Practical tools and applications.* Les Presses de l'ENSTA, 2016
- *Contemporary Ideas on Ship Stability and Capsizing in Waves.* New York: Springer, 2011
- *Oxford Encyclopedia of Maritime History.* New York: Oxford University Press, 2007
- *Why has the Cost of Navy Ships Risen?* (contributing researcher). Santa Monica: RAND, 2006
- *A Half-Century of Maritime Technology 1943-1993* (contributing researcher). New York: Society of Naval Architects and Marine Engineers (SNAME), 1993
- *USS Monitor: Final Archaeological Report.* Newport News: Mariner's Museum, in process
- Oceanides Maritime Encyclopedia, in process

Articles and Symposia in Engineering, Science and Technology Studies:

- "Horatio Nelson Never Wrote "A Ship's a Fool to Fight a Fort"; It Was Jackie Fisher Who Invented the Attribution". *The Journal of Military History* 80/3 pp. 855-856, July 2016
- "Contested Waterlines: The Wave-Line Theory and 19th-Century Naval Architecture", *Technology and Culture* 57/2 pp. 414-444, April 2016
- "The Hidden Contributions of the Netherlands to Naval Architecture". *On Higher Seas: Scheepsbouwkundig Gezelschap William Froude, Jaarboek 2014-2015*, Technical University of Delft, pp. 18-19
- "The Wave-Line Theory", (*mt*) *Marine Technology*, SNAME June 2014, pp. 72-73
- "Breve Historia de la Universidad de Adquisición de la Defensa (Brief History of the Defense Acquisition University)", *Revista General de Marina* (Madrid) pp. 19-27, Jan/Feb 2014
- "The mutual influence of aircraft aerodynamics and ship hydrodynamics in theory and experiment", *Archive for the History of the Exact Sciences* 68, pp. 241-263, 2014
- "Teach the 'Why' of Engineering: Historical analysis is essential for leadership", *American Society for Engineering Education PRISM* 23/1 p. 72, September 2013
- "French Shipbuilding in Spain and the Attempt to Create a Unified Bourbon Fleet, 1765-1805", *US Naval Academy 2013 McMullen Naval History Symposium*, Annapolis, September 2013.
- "The Scientific and Management Revolution in Shipbuilding on the Two Clydes, 1880-1900", *Nautical Research Journal* 58/2 pp. 105-128, 2013

- "L'Aube des Sciences Navales (The Dawn of Naval Science)" *DCN Research*, 1/1 pp. 6-10, June, 2013.
- "Development and Tactical Advantages of Copper Sheathing of French, British and Spanish ships", *International Colloquium on the Navies of the American War of Independence*, Paris, Society of the Cincinnati, February 2013
- "The French Model Basin Experiments of 1775-1778", (*mt*) *Marine Technology*, SNAME July 2012, pp. 77-78
- "The Radical Theory of Evolution That Explains Democrats and Republicans", *The Atlantic*, June 2012
- "Measure of the Earth: Navigation, Science and the War of Jenkins's Ear", *Sea History* 137 pp. 18-21, Winter 2011-2012
- "Paul Hoste, Premier Théoricien de la Tactique Navale et de l'Architecture Navale (Paul Hoste, First Theoretician of Naval Tactics and of Naval Architecture)", *Neptunia* 262, 2012 pp. 6-13
- "Paul Hoste et Les Premiers Développements de l'Architecture Navale (Paul Hoste and the First Developments of Naval Architecture, 1685-1700)", *Bulletin de l'Association Technique Maritimes et Aéronautiques*, 2012 (**ATMA Best Paper 2012**)
- "The Social History of the Bulbous Bow", *Technology and Culture* 52/2 pp. 335-359, April 2011
- "Pierre Bouguer and the Solid of Least Resistance", *Revue d'Histoire des Sciences* 63-1 pp. 49-76, June 2010; Congrès de la Société Française d'Histoire des Sciences et des Techniques, September 2008
- "The Aristotelian Heritage in Early Naval Architecture, from the Venice Arsenal to the French Navy, 1500-1700", *Theoria* 25/2 no. 68 pp. 227-241, May 2010; Max Planck Institute Preprint No. 371, Berlin: MPI 2009
- "Shipbuilders to the World: Evolution and Revolution in Spanish and Chilean Shipbuilding from the Cold War to the 21st Century: A Study in International Technology Transfer in the Naval Industries", *International Journal of Naval History* 8/3, 2010; US Naval Academy Naval History Symposium, September 2009
- "Bernard Renau d'Elissagaray", *Neptunia* 255 pp. 32-46, September 2009
- "Mahan and the "English Club" of Lima, Peru: The Genesis of *The Influence of Sea Power upon History*," *The Journal of Military History* 72/3 pp. 901-906, July 2008
- "Using Historical Lessons-Learned in the Systems Engineering Process", IDP 257, International Council of Systems Engineering (INCOSE) International Symposium, June 2008
- "A Biographical Sketch of John Willis Griffiths from Primary and Archival Sources", *Nautical Research Journal* 52/4 pp. 221-228, 2007
- "Spies Versus Prize: Technology Transfer Between Navies in the Age of Trafalgar" *Mariner's Mirror* 93/1 pp. 16-27, 2007
- "Goodall in America: The Exchange Engineer as Vector in International Technology Transfer", *Comparative Technology Transfer and Society*, 4/2 pp. 172-195, August 2006
- "Historical roots of the theory of hydrostatic stability of ships", in *Proceedings of the 8th International Conference on the Stability of Ships and Ocean Vehicles*, Madrid: ETSIN, 2003; Max Planck Institute Preprint No. 237, Berlin: MPI 2003.
- "Bridging the Gap between Science and Technology Studies and R&D Program Management", *The Institute for Prospective Technological Studies (IPTS) Report*, 73 pp. 1-10, April 2003
- Bouguer en el Perú: Cómo la ingeniería naval bajó desde la montaña (Bouguer in Peru: How naval architecture came down from the mountain)*. Booklet. Madrid: Fundación Jorge Juan, 2003
- "Bouguer au Pérou : Comment l'architecture navale est descendue des montagnes (Bouguer in Peru: How naval architecture came down from the mountains)", in *Un scientifique au XVIIIe siècle : Pierre Bouguer* pp. 101-149. Vannes : Institut Culturel de Bretagne, 2002
- "David W. Taylor and his Legacy", *ABS Surveyor*, September 2000 p. 11
- "Genius and Engineering: Naval Constructors in France, Britain and the United States", *Naval Engineers Journal* 110/6, pp. 99-132, 1998; *Transactions RINA* 141pp. 160-191 1999; *Bulletin de l'Association Technique Maritimes et Aéronautiques*, 98 pp. 281-335, 1999
- "Organizational Trust in Naval Ship Design Bureaus", *Acquisition Review Quarterly*, pp. 285-296, Summer 1998
- "Loss of the *Suffren* and the Sinking of the *Gaulois*", *Warship International* 33/3 pp. 227-229, 1996

Technical Articles and Reports in Defense Acquisition, Naval Architecture & Systems Engineering:

- "Undersea Clandestine Insertion of Special Operations Forces: Analysis of Alternatives", RAND NDRI Report, 2014.
- "Defense Business System Acquisition Probability of Success: Information Technology Project Management Bayesian Network": Council of Engineering Systems Universities (CESUN) 4th International Engineering Systems Symposium, Hoboken NJ, 2014
- "Access to Data for Defense Acquisition Research by Independent, Non-Commercial Organizations: Issues and Options: An Independent View", RAND NDRI White Paper, 2013.
- "Adaptation of Commercial Structural Criteria to Military Needs", Ship Structures Committee Report 432, 2003
- "Damage Control Training on Large Passenger Vessels", *Learning from Marine Incidents II*, RINA, 2002
- "Building the Rules: The ABS Perspective on Naval Classification Rules", *RINA Warship Symposium: International Symposium on Future Surface Warships*, RINA 2001

- "Paradigm Shifts in Regulating Ships", *International Cruise and Ferry Review*, Autumn / Winter 1998 pp 89-91
- "Designing and Buying Warships: France, Britain and the United States", *Proceedings of the US Naval Institute* 123/3 pp. 57-60, March 1997
- "The CVX Program", *RINA Warship Conference: Air Power at Sea*, RINA 1997
- "La Parité de Pouvoir d'Achat Pour Comparer Entre Eux les Programmes d'Armements (Using Purchasing Power Parity to Compare Armaments Programs)", *L'Armement, Revue de la Délégation Générale de l'Armement*, 58 pp. 114-117, July/August 1997
- "Comparison of French and US Amphibious Ships: TCD *Foudre* and LSD 41", *Naval Engineers Journal* 107/3 pp. 167-184, ASNE 1995
- "Pitch Stabilization for Surface Combatants", *Naval Engineers Journal* 106/4, pp. 174-191, ASNE 1994
- "Comparative Study of US and UK Frigate Design", *Transactions of the Society of Naval Architects and Marine Engineers (SNAME)* 99 pp. 147-175, 1991 (**Received SNAME's Linnard Prize for best paper in 1991**); also in *Transactions of RINA* 136 Part A pp. 1-55, 1994
- "The Effects of Confined Water Operations on Ship Performance", *Naval Engineers Journal* 104/6 pp.69-83, ASNE 1992
- "Offboard Command Casualty Launch", *RINA NAVTEC Symposium on Ships and Weapons*, RINA 1990
- "Design Study for a SWATH ASW Frigate", *RINA Symposium on Antisubmarine Warfare*, RINA 1987
- "A Systematic Approach to Crew Cabin Design", SNAME Southeast Section paper, 1980

Book reviews

- John Busch, *Steam Coffin: Captain Moses Rogers and the Steamship Savannah Break the Barrier* (New Haven: Hodos Historica, 2010). In *British Journal for the History of Science* 44/4, pp. 605-606, Dec. 2011
- Gregory Volato, *Ship* (London: Reaktion Books, 2011). In *Technology and Culture* 52/3 pp. 818-819, Oct. 2011
- Horst Nowacki and Wolfgang Lefèvre (eds.), *Creating Shapes in Civil and Naval Architecture* (Max Planck Institute for the History of Science Preprint 338, 2007). In *International Journal of Nautical Archeology*. 38/1 pp. 174-176, 2009
- Alex Roland, et al. *The Way of the Ship* (Hoboken: Wiley, 2008) In *Naval History* 22/4 pp. 68-70, 2008
- Christian Dedet, *Les fleurs d'acier du Mikado* (Paris: Flammarion, 1993). In *International Journal of Naval History* 2/2, 2003
- Rodney Carlisle, *Powder and Propellants: Energetic materials at Indian Head, Maryland 1890-2001* Second Edition (Denton: University of North Texas Press, 2002). In *International Journal of Naval History* 2/2, 2003
- Mary Mills, *Greenwich Marsh: The 300 Years before the Dome* (London: Wright, 1999). In *The Journal Of The Society For Industrial Archeology* 26/2 p. 93, 2000
- Eric Rieth, *Concevoir et construire les navires: de la trière au picoteux : Technologies, Idéologies, Pratiques: Revue d'anthropologie des connaissances* 13/1 (1998). In *Technology and Culture* 40/3 pp. 690-692, 1999

MEDIA EXPERIENCE

- History Channel/H2: Historical consultant and on-screen presenter, "Ancient Impossible" (2014)
- Walt Disney Studios: Historical and technical consultant, *20,000 Leagues under the Sea* project (2012-2013)
- BBC: Chief Historical Consultant and on-screen presenter, *Voyages of Discovery* series (2006)
- History Channel: Historical consultant, "Search for the *Alligator*" (2005)
- History Channel: Historical consultant and on-screen presenter, "Engineering Catastrophes: *Torrey Canyon*" (2005)
- Discovery Channel: Historical consultant and on-screen presenter, "Answers from the Abyss: The *Titanic*" (1999)

LANGUAGE PROFICIENCIES

- French: fluent (City of Paris Certificate of French Proficiency Level III), read, write and present at professional level
- Spanish: fluent (Defense Language Institute Proficiency Test 3/3/3), read, write and present at professional level
- Italian: Read and understand