

## **BIOGRAPHICAL SKETCH**

**Nikolaos I. Xiros, D.Eng.**

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### **A. PROFESSIONAL PREPARATION**

2001: Dr. Eng., Naval Architecture & Marine Engineering, National Technical University of Athens  
1995: Engineer Degree, Electrical & Computer Engineering, National Technical University of Athens

### **B. ACADEMIC/PROFESSIONAL APPOINTMENTS**

2012-present	Assoc. Prof.	Naval Arch. & Marine Eng.	University of New Orleans
2010-2011	Assoc. Prof.	Aerospace & Ocean Engr.	Virginia Tech
2007-2010	Assist. Prof.	Ocean & Mechanical Eng.	Florida Atlantic University
2007	Researcher	SeaTech Institute	Florida Atlantic University
2002-2007	Lecturer	Naval Arch. & Marine Eng.	National Technical Univ. of Athens

### **C. SELECTED PUBLICATIONS**

#### ***C.1 Publications related to proposal***

- [1] Gkikas, G.D., Xiros, N.I., Athanassoulis, G.A., Belibassakis, K.A. (2005). A Nonlinear Model for Oscillating Water Column Analysis, Design and Control. ISOPE-2006, May 28-June 2 2006, San Francisco California, USA.
- [2] Xiros, N.I., Chatjigeorgiou, I.K. (2006). Nonlinear Identification and Input-Output Representation of the Modal Dynamics of Marine Slender Structures. Journal of Offshore Mechanics & Arctic Engineering.
- [3] Xiros, N.I., Georgiou, I.T. (2006). A Combined Method for the Investigation of Coupled Bandpass-Lowpass Nonlinear Oscillators based on Hilbert Transform and Perturbation Analysis. ASME Congress 2006, November 5-10 2006, Chicago, Illinois, USA.
- [5] Lee, J.H., Xiros, N.I., Bernitsas, M.M. (2011) Virtual damper–spring-system for VIV experiments and hydrokinetic energy conversion, Ocean Engineering 38 (2011) 732–747

#### ***C.2 Other significant publications***

- [1] Xiros, N.I. (2002). Robust Control of Diesel Ship Propulsion. Springer-Verlag, London, UK.
- [2] Xiros, N.I., (2004). PID Marine Engine Speed Regulation under full load conditions for Sensitivity  $H_{\infty}$ -norm specifications against Propeller Disturbance. IMAREST Journal of Marine Engineering and Technology, No A5, pp. 3-12, 2004.
- [3] Xiros, M.I., Xiros, N.I. (2007). Remarks on wind turbine power absorption increase by including the axial force due to the radial pressure gradient in the general momentum theory. Wind Energy, Vol. 10, Issue 1, pp. 99-102.
- [4] Xiros, N.I., Logis, E., Gasparis, E., Tsolakidis, S., Kardasis, K. (2009). Theoretical and Experimental Investigation of Unmanned Boat Electric Propulsion System with PMDC Motor and Waterjet. IMAREST Journal of Marine Engineering and Technology, No A14, pp. 27-44, 2009.

- [5] Dhanak, M., Kouvaras, N., Xiros, N.I. (2010). Surface-Effect-Ship Motion in a Transforming Wave-Field. 29th American Towing Tank Conference.
- [6] Xiros, N.I., Edrington, C.S., Balathandayuthapani, S. (2010). Nonlinear Modeling of Linear Induction Machines for Analysis and Control of Novel Electric Warship Subsystems. ASNE Electric Machinery & Technology Symposium EMTS 2010.

## **D. SYNERGISTIC ACTIVITIES**

### ***D.1 Teaching***

Undergraduate and graduate courses in ocean engineering, marine engineering, electrical system design, ocean energy, control systems, prognostics, diagnostics

### ***D.2 Service to engineering & science community***

Member of the American Society of Mechanical Engineers (ASME)

Member of ASME Technical Committee for Dynamics & Control of Structures & Systems

ASME Int'l ME Congress & Expo (IMECE2011) co-organizer of Track 11-9 Reduced Order Modeling & Diagnostics for Multi-Physics Dynamical Systems

Reviewer service: NOAA Sea Grant (SBIR); IMechE Transactions – Part M: J. of Eng. for the Maritime Environment; Journal of Field Robotics; Ocean Engineering (Elsevier); Transactions on Systems, Man, and Cybernetics–Part B: Cybernetics; Journal of Marine Science and Technology (IMAREST)

Member of the SNAME (Society of Naval Architects and Marine Engineers)

Member of Technical Chamber of Greece

Professional Engineer registered in Greece

## **E. RESEARCH INTERESTS**

- Marine engineering
- Ocean engineering
- Marine electronics
- Electrical systems