



## ANTONIO CRUCELAEGUI

### ACADEMIC HISTORY

Ph.D. in Naval Architecture & Marine Engineering – Madrid UPM 1982  
Executive MBA, at the Instituto de Empresa, Madrid, 2004  
Associate Professor from 1982 in the ETSIN, currently in the Naval Construction Area

### Postgraduate training

Catalan Polytechnic Univ. "Programming, modeling & Information Systems".

Oxford (U.K.): "Information Technologies".

Ciencias de la Educación Institute (ICE): "Oral expresión techniques", "Tension Autocontrol", "Audiovisual Techniques", "Team Direction Management".

Lloyd's Register: "Quality Systems auditing".

IBM: "Method & service utilization", "Interactive Programming", "Management & implementation of the DOS for big computers", "Data Base Management & Implementation".

PRIME Computer: "System Administrator", "Data Base Information", "Medusa-CAD".

Digital Computer: Seminars about Artificial Intelligence, programming languages, networks & communications, CAD/CAM.

Computervision: "Computer Aided Designed & Manufacturing".

Intergraph (Huntsville, USA): "3 D Assisted Engineering".

Metier: "Planing & Project Control".

Fundación Empresa Pública/INI: "R&D Internacional Project Management".

Mc Cornick Place (Chicago, USA): "Advanced Manufacturing Systems", given by Arthur Andersen.

UIMenéndez Pelayo, Seminarios: "Aquaculture". 2017; "Quo Vadis Europa?" 2019

### Lessons given in the ETSIN

Previous courses "Drawings & Representation Systems", "Computer processing of graphical projections" (Doctorate), "Computer Aided Project" (Doctorate).

Nowadays:

In the Degree: "Graphic Expression", "CAD"

In the Master: "Integrated Logistic Support"

In the Renewable Energies Máster: "Project Development of an Offshore Power Plant"

### Other Lessons given

- Operative Research Software. In the Ministry of Defense
- Operating Systems DOS/OS/VM, in the Research Gabinet of the Spanish Navy
- Funded by the European Social Fund and the Ministry of Industry: Integrated Planning, supply, documentary management, process management in shipyards, Constructive Strategy, ERP implementation, Process Reingeniering, in private shipyards during 12 years.

## International Lectures

- “Programmes for the simulation of the unloading and ballasting of a supply vessel for use at Project level and/or for ship operation”. CADMO 86. International Conference on Computer Aided Design, Manufacture and operation in the Marine and Offshore industries. Washington, USA
- “Interactive Deadwork Design”. CAD\*I 2nd International Workshop. St. Edmund Hall, Oxford, U.K 1988
- “Computer aided tools for ship design”. Jakarta, Indonesia 1988
- “Project Operation & Management in Offshore Platforms”. Faculty of Naval Architecture, Galati (Rumanía) 2019
- “Risk Management during Project execution of an Offshore Renewable Plant”. University of Liège (Bélgica) 2020

## Publications

- Surfaces of hydrodynamic discontinuity. ETSIN, 1980
- Profile Theory and its hydrodynamic use. ETSIN, 1981
- “Geometry & hulls representation. CAD in hulls design. ETSIN, 1985
- “Getting the hull geometry defined with b-splines from a previous definition with parabolic sections”. ETSIN, 1986
- Programmes for the simulation of the unloading of a supply vessel for using in the project stage and for ship operation. Computational Mechanics Institute & Springer-Verlag (UK) 1986
- The Singlar System, a computerized System that integrates the treatment of information generated in the development of the ship Project. AINE, 1986
- Hulls fairing. ETSIN, 1988
- Surfaces definition and development. ETSIN, 1988
- Interactive Deadwork Design. Marine & offshore applications. Springer-Verlag, 1988
- Computer assisted Design, Engineering & Naval Construction. State of the Art. AINE, 1988
- Costs and profitability of the Information Systems in the small & medium shipyards. AINE, 2000
- The Reengineering of processes in the repairing Shipyard to implement modern management Systems. AINE, 2001
- Integrated Naval Construction Projects. ETSIN UPM, 2005
- “Process analysis prior to the development of the project conditions and corporate job conditions between shipyards, Engineering and auxiliary industries” ETSIN UPM, 2010

## Thesis

- 3D synthesis System imaging through regular tree models (octree encoding). E.S. Informática, UPM 1990
- Study and definition of an automatic system of productivity indicators for companies that organize their production with Technology Group. ETSIN, 1999
- Introduction of Propeller Flow Field in a discrete element simulation of Brash Ice. Ecole Central de Nantes (Francia) 2019
- Determination of the Ice Floe Characteristics Resulting From a Non-Typical Ice Breaking Bow Shape and Level Ice Interactions. Rostock Hochschule - University (Alemania) 2020

## **R&D Projects financed by Public Administrations**

- Design and Modeling of Behavior Prediction System and Integral Control for Distributed Solar Energy Facilities Greenergy Renovables 2010
- Tank wastewater treatment (train transport) TASIO
- Feasibility study prior to the development of corporate working conditions between yards and Auxiliary Industry. Astilleros Balenciaga, Construcciones Navales Freire, Metalships & Docks 2009
- Definition, development and implementation of new telematic & TIC processes for the simultaneous management of engineering and production of shipyards and auxiliary industries. Astilleros Balenciaga, Construcciones Navales Freire, Metalships & Docks 2010

## **Current positions in the ETSIN**

- Deputy Director for New Technologies & Institutional Relationships
- Director of the MAERM Master on Marine Renewable Energies Harnessing
- Director of the joint Master degree with University of Liege, named "Advanced Ship Design & Offshore Renewable Energies"
- Member of the Master Manager Committee of the ERASMUS MUNDUS SHIP+ Consortium
- President of the Tribunal for the Naval Architecture Grade
- Director of the Navantia University-Business Chair
- Patron of the Marqués de Suances Foundation
- Member of the Pymar, Clúster Marítimo and Soermar University-Business Chairs
- Coordinator in the first course of the Grade Title

## **PROFESSIONAL EXPERIENCE**

### ***90-2015 EUROLINK CONSULTORES***

Founder and Director. Linked with the Politechnic University Foundation Projects. Naval Engineering Company with Consultancy Services in Management and IT for clients in the public industrial and renewable energies sectors, and with a high specialisation in the Naval Sector.

Projects I have managed:

- Auditing and Strategy definition in 18 shipyards. 3 viability Plans.
- Design and implementation of Quality Assurance Systems.
- Design, development and implementation of organizational systems, production, Planning and Control, Constructive Strategies, and Group Technology in shipyards.
- Design, development & implementation of a sectorial ERP that is still in use today after 20 years.
- Process Reengineering.
- Design and implementation of expert systems to hold the experience of the professionals.
- Design, development & implementation of engineering systems that work simultaneously in the preliminary stages of the Ship Project.
- Fleet Maintenance Systems.
- Design and development for the Navy of a software system for the calculation of the reliability of electromechanic systems and components in the Ship Logistic Support.

### ***89-90 CTA Auditores***

Manager of the Systems and Organization Division. Company auditing and consultancy of medium companies in the service and industrial sectors. Specialized in the Design, development and implementation of management systems.

### **81-89 E.N.BAZAN – (NAVANTIA)**

Structure & Planning Engineer

Systems Analysis Chief of Dept. in the R&D Direction

Computer Systems Design & implementation to help ship Project Dept.

Participation in the NATO NFR-90 Frigate Project in Hamburg

IT Company Systems execution and Planning

Member of the Spanish Group in the ESPRIT Project to develop a neutral data base to interchange data at an european context

Representative of the Spanish Ministry of Defence to establish cooperation agreements in Computer Aided Ship Design & Shipbuilding with the Chinese government (1988)

Speaker at the Spanish Technical Conference in Jakarta as representative of the INI during the Spanish President's visit to Indonesia (1988)

Tutor of different ETSIN Scholars within the Public Business Foundation Program & the Educational Cooperation Program.

### **80-81 Spanish Navy**

Sistems analyst in the Navy Data Processing Centre.

### **77-78 Astilleros Españoles Group**

Projects and Research Dept. Investigation on lifting line theory for propellers (scholarship of the Ministry of Education for Group Research)

## **OTHER MERITS & ACTIVITIES**

- “Piedad y Letras” award (Calasancian Order)
- “A Ibérica” medal awarded by the Spanish Home Office to the best academic performance
- Exemption, granted by University Council, from the requirements on application for Professorship
- Secretary of the Technical Committee of the Naval Architects and Marine Engineers College (86-90)
- “Gregorio López Bravo” award in Naval Engineering (1992) “Project, Development & implementation of an integrated Production Planning & control System in a medium size shipyard”
- 3 First prizes in Engineering Techniques Sessions.
- Author of 16 published works on Business Organisation and Management, Engineering and Computer-assisted Projects
- Member of the American Society of Naval Architects and Marine Engineers (ASNE) 1986
- Coordinator and technological partner in the sino-spanish Project in the Xentai area (China) to build a luxury yachts shipyard with chinese capital & labor force and with spanish know-how, management team and yachts projects 2013-14
- Certified Evaluator for R&D Projects by Innovamar
- Evaluator of the Chilean Project for CORFO – “Development of an AIP-CCD Amphibian Unit to be installed in the U209 submarine of the Chilean Navy”. 2014
- Asked by the Peruvian Navy to perform an audit to the SIMA-Callao shipyard. 2015
- Actual Member of the following commisions of the Spanish Institute of the Engineers:
  - R&D / University, Education & Business / Digital Society / Defense / Business Management / Maritime Affairs