

***CURRICULUM VITAE***

*(Last update: 05 August 2023)*

CURRICULUM VITAE .....	1
1) Personal information.....	2
2) Professional information.....	2
3) Current position .....	2
4) Italian National Scientific Qualification.....	2
5) Previous positions.....	2
6) Graduation and PhD .....	2
7) Attended courses.....	2
8) Attended conferences and workshops .....	3
9) Attended IMO meetings and sessions.....	4
10) Collaborations & visits (most relevant).....	5
11) Participation in research projects.....	5
12) Participation in research projects as project responsible .....	5
13) Activities of type "Conto Terzi (contract research)" .....	6
14) Most important experimental activities carried out outside University of Trieste .....	6
15) Coordination and editorial activities, chairmanships during conferences .....	7
16) Memberships of technical/scientific committees.....	7
17) Scholarships/Awards/Mobility scholarships .....	8
18) Research interests .....	9
19) Lecturer (full courses or co-teaching).....	9
20) Lectures and exercises given within courses .....	10
21) Seminars/Invited lectures (Universities).....	10
22) Supervisor/Co-Supervisor of PhD candidates/thesis.....	11
23) Supervisor of theses .....	12
24) Co-supervisor of theses.....	12
25) Other academic activities (most relevant) .....	13
26) Evaluation activities (most relevant) .....	15
27) Published papers: International Journals, Transactions.....	15
28) Publications in Books .....	18
29) Published papers: International Conferences.....	18
30) Published papers: National Conferences .....	23
31) Abstracts in Journals.....	23
32) Technical reports (most relevant) .....	23
33) Contributions to IMO (International Maritime Organization) documents .....	25
34) Talks, Invited Lectures/Keynotes, Workshops, Seminars .....	27
35) Reviewer for international journals .....	28
36) Reviewer for international conferences .....	28
37) Reviewer for book chapters .....	29
38) PhD: reviewer of thesis and/or participant to final examination board .....	29

## **1) Personal information**

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## **2) Professional information**

*Title:* Naval Architect (Ingegnere Navale), Dott. Ing., Ph.D.

*Professional qualification:* Qualified as Engineer (II session, year 2003) with registration to “albo dell’Ordine degli Ingegneri” of Trieste since 9 March 2004 (Section A – Sectors: “civile e ambientale, industriale, dell’informazione”)

## **3) Current position**

- Associate Professor (Professore Associato) at the Department of Engineering and Architecture, University of Trieste. Scientific Sector (SSD – “Settore Scientifico Disciplinare”): ING-IND/01 – Naval Architecture (Architettura Navale). Since 01 November 2018.

## **4) Italian National Scientific Qualification**

- Qualified as associate professor (“professore universitario di II fascia”) in scientific sector (“settore concorsuale”): 09/A1 – Aeronautical and aerospace engineering and naval architecture (“Ingegneria Aeronautica, Aerospaziale e Navale”). Validity period: 03 February 2014 – 03 February 2020 (Career progression from Assistant Professor to Associate Professor: 01 November 2018).

## **5) Previous positions**

- PhD candidate, Department of Naval Architecture, Ocean and Environmental Engineering, January 2003 – December 2005.
- Research Fellow at the Department of Naval Architecture and Ocean Engineering, Osaka University, Osaka, Japan, under the financial support of an 11 months (December 2005 - November 2006) post-doc scholarship (PE05052) from the Japan Society for the Promotion of Science (JSPS).
- Assistant Professor (Ricercatore confermato) at the Department of Engineering and Architecture, University of Trieste. Scientific Sector (SSD – “Settore Scientifico Disciplinare”): ING-IND/01 – Naval Architecture (Architettura Navale). Period: 15 December 2006 - 31 October 2018.

## **6) Graduation and PhD**

- Graduated in Naval Architecture and Marine Engineering (Laurea in Ingegneria Navale) on 16/10/2002 at University of Trieste with final grade 110/110 cum laude. Title of thesis: “*Rollio Parametrico in Mare Regolare e Stocastico (Parametric Rolling in Regular and Irregular Sea)*”. Supervisor: Prof. A. Francescutto, Co-Supervisor: Prof. A. Cardo.
- PhD in Naval Architecture (“Dottore di Ricerca in Ingegneria Navale e Marina”), University of Trieste, 31/03/2006 - Academic Year 2005/2006. Title of the thesis: “*Development of analytical nonlinear models for parametric roll and hydrostatic restoring variations in regular and irregular waves*” (Scientific Sector “ING-IND/01 Architettura Navale” (Naval Architecture) ). Supervisor: Prof. A. Francescutto.

## **7) Attended courses**

- “Stability of Ships”, DCAMM Ph.D.-Course / Advanced School, held at Danish Center for Applied Mathematics and Mechanics (DCAMM), Technical University of Denmark, Lyngby, 10-18 June 2002.
- Lectures series on “Ship manoeuvring”, held by Prof. K.J. Spyrou at the University of Strathclyde, Glasgow, 24-28 February 2003.
- “OPTIMISTIC – Optimization in Marine Design”, 39<sup>th</sup> WEGEMT Summer School, Technical University of Berlin, 19-23 May 2003.
- First RISC/SCIENCE Training School in Symbolic Computation”, 5-16 February 2007, Castle of Hagenberg, Austria, organised by the Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- OPENFOAM Training Course, Politecnico di Milano, Milano, Italy, 9 July 2008.

- "SCSM - Scuola di Calcolo Scientifico con Matlab - Modulo 2: Calcolo Parallelo con MATLAB in ambiente HPC e Grid (SCSM - Scientific Calculus with Matlab - Module 2: Parallel Computing with Matlab under HPC and Grid Infrastructures)", Università degli Studi di Palermo, Italy, 5-9 September 2011.
- "Analisi Dinamica con Applicazioni agli Elementi Finiti" (Dynamical Analysis with Application to Finite Elements), Consorzio TCN – Tecnologie per il Calcolo Numerico – Centro Superiore di Formazione, Bergamo, Italy, 5-7 February 2014.
- "Tras-Formazione - Capitalizzare, sviluppare, rinforzare, innovare il patrimonio delle competenze didattiche di UniTS" (Tras-Formazione – Capitalizing, developing, strengthening, innovating the wealth of teaching skills of UniTS), 12h, June-July 2022. Organized by University of Trieste and Elidea Psicologi Associati.

## 8) Attended conferences and workshops

(in the following list, participation as speaker is explicitly reported with the indication "(S)")

- 5<sup>th</sup> International Workshop on Ship Stability and Operational Safety, Trieste, 11-14 September 2001.
- International Conference on Marine Science and Technology for Environmental Sustainability (ENSUS2002), Newcastle, 16-18 December 2002.
- "Passenger Ship Safety", International Conference organized by RINA, 24-25 March 2003, with a scholarship given by BMT Limited Group.
- International Conference on Ship and Shipping Research - NAV2003, Palermo, 24-27 June 2003. (S)
- 8<sup>th</sup> International Conference on Stability of Ships and Ocean Vehicles – STAB2003, Madrid, 15-19 September 2003. (S)
- 2<sup>nd</sup> International Maritime Conference on Design for Safety, 27-30 October 2004, Sakai, Japan. (S)
- 7<sup>th</sup> International Ship Stability Workshop, 1-3 November 2004, Shanghai, China. (S)
- "High-Speed Craft: Design and Operation", International Conference organised by RINA, 17-18 November 2004, with a scholarship given by RINA.
- International RINA Conference "Fishing Vessels, Fishing Technology & Fisheries", 13-14 April 2005, Newcastle. (S)
- "SIAM Conference on Applications of Dynamical Systems" organised by the Society for Industrial and Applied Mathematics, 22-26 May 2005, Snowbird, Utah. (S)
- Spring Meeting of the Japan Society of Naval Architects and Ocean Engineers (JASNAOE), Osaka, 25-26 May 2006. (S)
- "Design & Operation of Passenger Ships", International Conference organised by RINA, 25-26 April 2007, London, UK. (S)
- IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering, Hamburg, Germany, July 23-27, 2007. (S)
- 10<sup>th</sup> International Ship Stability Workshop (ISSW2008), 23-25 March 2008, Daejeon, Republic of Korea. (S)
- Osaka Colloquium 2008, 26-29 March 2008, Osaka, Japan. (S)
- 3<sup>rd</sup> OPENFOAM Workshop, Politecnico di Milano, Milano, Italy, 10-11 July 2008
- International Workshop on Dynamic Stability Considerations in Ship Design (DSCSD Workshop), 14-15 September 2009, Iława, Poland. (S)
- 16<sup>th</sup> International Conference of Ship and Shipping Research (NAV2009), Messina (Italy), 25-27 November 2009. (S)
- 13<sup>th</sup> International Conference On Transport Science (ICTS 2010), 27<sup>th</sup> - 28<sup>th</sup> May 2010, Portoroz, Slovenia. (S)
- 2<sup>nd</sup> International Workshop on Dynamic Stability Considerations in Ship Design, 2-3 September 2010, Windsor, London, UK. (S)
- GOALDS Workshop, 8-9 September 2010, Glasgow, UK. EU-FP7 "GOAL Based Damage Stability" project, 233876. (S)
- 12<sup>th</sup> International Ship Stability Workshop (ISSW2011), 12-15 June 2011, Washington D.C., USA. (S)
- Workshop on Parametric Resonance in Dynamical Systems, 22-26 June 2011, Longyearbyen, Svalbard, Norway - Organised by the Norwegian University of Science and Technology (NTNU). (S)
- International Workshop on Risk-based Design for Maritime Safety and Marine Environment Protection, National Maritime Research Institute (NMRI) & Nippon Kaiji Kyokai (ClassNK), 11-12 October 2011, Tokyo, Japan. (S)
- 11<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2012), 23-28 September 2012, Athens, Greece. (S)
- GOALDS Final Workshop, 28 September 2012, Athens, Greece. EU-FP7 "GOAL Based Damage Stability" project, 233876.
- Qualitative Theory of Nonlinear Differential Equations 2013 (QTNDE2013), Trieste, Italy, 30 January - 01 February 2013.

- First International Conference “Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region”, 17-19 July 2013, Iquitos, Peru. (S)
- 13th International Ship Stability Workshop (ISSW2013), 23-26 September 2013, Brest, Brittany, France
- First Maritime Europe Strategy Action (MESA) Workshop, “Designing Waterborne RDI Strategies”, 5 March 2014, Bruxelles, Belgium. (S)
- Seguridad para la navegación y construcción naval, Universidad Católica Santo Toribio de Mogrovejo (USAT), 9-10 May 2014, Chiclayo, Peru. (S)
- 14<sup>th</sup> International Ship Stability Workshop (ISSW2014), 29 September – 01 October 2014, Kuala Lumpur, Malaysia.
- 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14th-19th June 2015, Glasgow, Scotland, UK. (S)
- Workshop: "Level 3 of the second generation intact stability criteria and its Operational Guidance – latest developments and outlook", 21<sup>st</sup> January 2016, International Maritime Organization, London, UK. (S)
- 15<sup>th</sup> International Ship Stability Workshop (ISSW2016), 13 – 15 June 2016, Stockholm, Sweden.
- 26<sup>th</sup> European Safety and Reliability Conference (ESREL2016), 25-29 September 2016, Glasgow, Scotland, UK. (S)
- Mini-Symposium on Ship Design, Ship Hydrodynamics & Maritime Safety, 30 September 2016, Athens, Greece.
- 16<sup>th</sup> International Ship Stability Workshop (ISSW2017), 5 – 7 June 2017, Belgrade, Serbia.
- 27<sup>th</sup> European Safety and Reliability Conference (ESREL2017), 18-22 September 2017, Portoroz, Slovenia.
- Accelerating and Parallelizing MATLAB Code on HPC infrastructure, CINECA, Caselechio di Reno, Bologna, Italy, 30 May 2018.
- 37<sup>th</sup> International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), 17-22 June 2018, Madrid, Spain. (S)
- 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018) & 7<sup>th</sup> International Maritime Conference on Design for Safety (DfS2018), 16-21 September 2018, Kobe, Japan. (S)
- “HOListic optimisation of SHIP design and operation for life cycle (HOLISHIP)” Project - Year 2 Public Workshop, 27 September 2018, Trieste, Italy.
- 17<sup>th</sup> International Ship Stability Workshop (ISSW2019), 10 – 12 June 2019, Helsinki, Finland. (S)
- Matlab EXPO 2021, 4-5 May 2021, Online
- 5th Joint ISSC/ITTC International Workshop, 1 - 3 June 2021, Organised by the Joint ISSC/ITTC Committee on Uncertainty Modelling, with the local support of CENTEC-IST, Online
- 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland, Online. (S)
- 18<sup>th</sup> International Ship Stability Workshop (ISSW2022), 12 – 14 September 2022, Gdańsk, Poland.

## 9) Attended IMO meetings and sessions

- Meeting of IMO Intersessional Correspondence Group for the revision of the Intact Ship Stability Code, Trieste, February 2004
  - SLF 47 (13-17 September 2004, IMO, London, UK) as "observer" (technical member) of Italian Delegation.
  - MSC 79 (December 2004, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - Intersessional meeting of the IMO Working Group on Subdivision and Damage Stability (19-21 January 2005, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - Meeting of IMO Intersessional Correspondence Group for the revision of the Intact Ship Stability Code, Szczecin, 27 February – 2 March 2005.
  - SLF 48 (12-16 September 2005, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - Meeting of IMO Intersessional Correspondence Group on Intact Stability, Mitaka, Tokyo, 6– 8 March 2006, as member of the Japanese Delegation.
  - SLF 49 (24-28 July 2006, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - SLF 50 (30 April -4 May 2007, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - SLF 51 (14-18 July 2008, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - Coordination meeting of the Italian SLF-IMO Group in preparation of SLF52, ("Comando Generale delle Capitanerie di Porto - Ministero dei Trasporti", Roma, Italy, 18 January 2010)
  - SLF 52 (25-29 January 2010, IMO, London, UK) as "observer" (technical member) of Italian delegation.
  - SLF 53 (10-14 January 2011, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
  - SLF 54 (16-20 January 2012, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
  - SLF 55 (18-22 February 2013, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
  - SDC 1 (20-24 January 2014, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
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- SDC 2 (16-20 February 2015, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 3 (18-22 January 2016, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 4 (13-17 February 2017, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 5 (22-26 January 2018, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 6 (4-8 February 2019, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 7 (3-7 February 2020, IMO, London, UK) as "adviser" (technical member) of Italian delegation.
- SDC 8 (17-21 January 2022, IMO - Online) as "adviser" (technical member) of Italian delegation.
- SDC 9 (23-27 January 2023, IMO, London, UK) as "adviser" (technical member) of Italian delegation (participation on days 23-25 January 2023).

## **10) Collaborations & visits (most relevant)**

- 15 April 2005, Invited visit at the Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, in the framework of the European Project SAFEDOR. Topic: SP2.1 – Fast and Accurate Flooding Prediction.
- 2-6 May 2005, Invited visit at the Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, in the framework of the European Project SAFEDOR. Topic: SP2.1 – Fast and Accurate Flooding Prediction.
- 25-29 July 2005, Invited visit at the Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, in the framework of the European Project SAFEDOR. Topic: SP2.1 – Fast and Accurate Flooding Prediction.
- 21 February - 1 March 2009, Invited visit at Dept. of Naval Architecture and Ocean Engineering, Osaka University (Osaka, Japan) in the framework of the research work on the development of IMO New Generation Intact Stability Criteria and as discussor of the thesis' presentations of MSc candidates.
- 04-21 March 2012, Invited visit at Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) in the framework of collaborative researches.
- 03-27 March 2013, Invited visit at Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) in the framework of collaborative researches.
- 11-16 May 2014, Invited visit at Escuela Superior Politécnica del Litoral (ESPOL), Facultad de Ingeniería Marítima, Ciencias Biológicas, Oceánicas y Recursos Naturales (FIMCBOR), as lecturer of the seminar "Advanced Dynamics and Safety of Ships" (18h)
- 20-24 April 2015, Invited visit at Integrated Group of Engineering Research, University of Coruna, Spain, in the framework of collaborative researches and seminar lectures activities in the field of ship safety and stability.
- 23-28 June 2016, Invited visit at University of Belgrade, Faculty of Mechanical Engineering, in the framework of collaborative researches on ship stability, dynamics and safety, and to give a lecture at the Society of Naval Architects of Serbia regarding nonlinear ship dynamics and associated intact stability assessment.
- 19-24 April 2019, Invited visit at University of Belgrade, Faculty of Mechanical Engineering, in the framework of international exchange collaborations, collaborative researches on ship stability, dynamics and safety, and to give seminar lectures on the topic of SOLAS harmonized probabilistic subdivision and damage stability regulations.
- 14-22 December 2019, Invited visit at Universidad Politécnica de Madrid (UPM) - Escuela Técnica Superior de Ingenieros Navales (ETSIN), in the framework of collaborative researches.

## **11) Participation in research projects**

- European Project: "*Design, Operation and Regulation for Safety*" (SAFEDOR), 6th Framework Programme for Research and Technological Development (FP6), Project No. IP-516278. Project duration: February 2005 - January 2009. Participation as sub-contractor.
- "*Studio e validazione sperimentale di criteri alternativi di progettazione per il miglioramento della sicurezza e delle prestazioni idrodinamiche delle navi (Study and experimental validation of alternative design criteria for the improvement of ships safety and hydrodynamic performances)*", Consorzio per l'Alta Ricerca Navale (RINAVE), 01 January 2008 - 31 March 2011.
- "*Determination of Relevant Parameters for the Alternative Assessment of Intact Stability Weather Criterion On Experimental Basis*", Project HYD-III-CEH-5, supported by the European Community's Sixth Framework Programme through the grant to the budget of the Integrated Infrastructure Initiative HYDRALAB III, Contract no. 022441 (RII3). Experimental activity in 2008. Indicative duration of research activity associated with the project: December 2007-November 2009.
- European Project: "*GOAL Based Damage Stability*" (GOALDS), 7th Framework Programme Theme [FP7-SST-2008-RTD-1], Grant agreement no. 233876. Project duration: September 2009 – October 2012.

## **12) Participation in research projects as project responsible**

- "Direct intact stability assessment and operational guidance to the master in the framework of International Maritime Organization Second Generation Intact Stability Criteria: development of tools and procedures for safety

assessment with particular attention to cargo securing", Funding Scheme: "Finanziamento per la Ricerca di Ateneo – FRA 2011" (University of Trieste), Project selected on the basis of comparative evaluation with external review, Period: March 2012 - February 2014.

### **13) Activities of type "Conto Terzi (contract research)"**

- "Study on the Application to Superyachts of Proposals for Parametric Roll Level 1 Vulnerability Criteria in the Framework of the Development of IMO Second Generation Intact Stability Criteria". Activity commissioned by: SYBASS (Superyacht Builders Association). Role: responsible of the activity. Period 2011-2012.
- "Attività di supporto nel settore della progettazione navale e simulazione numerica di operazioni di messa a mare e recupero mezzi in condizioni meteomarine avverse" (*Support activity for design and numerical simulation of recovery and launching operations at sea in adverse weather conditions*). Activity commissioned by: Marina Militare Italiana (Italian Navy). Role: technical reference person of activity "A2.6 - Verifica delle variazioni di stabilità allo stato integro in mare ondosso e controllo di possibile insorgenza di rollio parametrico" (*A2.6 - Evaluation of restoring variations in waves in intact condition and checking of possible inception of parametric roll*) and participant to the activity "A2.7 - Determinazione dell'operatività del mezzo (moti verticali) sulla base di calcoli di moti nave basati su strip-theory e dati di moto ondosso di alta qualità" (*A2.7 - Determination of operational efficiency (vertical motions) on the basis of strip-theory seakeeping calculations and high-quality wave data*) for the work related to seakeeping calculations. Period: 2011-2012.
- Participation to EMSA (European Maritime Safety Agency) international project "Study assessing the acceptable and practicable risk level of passenger ships related to damage stability" (EMSA/OP/10/2013). Financed by: EMSA. Project leader: DNV-GL. Total number of partners: 16. Role: responsible person from University of Trieste. Participation to Task 3: Evaluation of risk from raking damages due to grounding. Period: 2013 - 2015.
- Research & Development activity supporting design in the field of "Intact Stability". Fincantieri SpA. Role: responsible of the activity. Period: 2015.
- International Joint Industry Project "eSAFE – enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships". Role: responsible person from University of Trieste, work package leader in the framework of the project. Period: 2017 – 2018 (14 months).
- Research project "Driving a Quantum Ship - A quantum-secured autonomous communication link for autonomous shipping: a feasibility study". Research project financed by the European Space Agency (ESA), participation through subcontract financed by PICOSATS srl. Role: participant to the project for the ship motion prediction activity. Period: 2021 – 2022.
- Research project "SGISC". Fincantieri SpA. Role: responsible of the activity. Period: May 2021 – May 2023.

### **14) Most important experimental activities carried out outside University of Trieste**

- INSEAN Towing Tank, Rome, Italy, November 2002: Experiments on parametric roll in regular and irregular sea
- Schiffbautechnische Versuchsanstalt in Wien (Vienna Model Basin), Austria, June 2003: Forced roll experiments in the framework of a collaborative research between DINMA and Fincantieri on Weather Criterion
- Schiffbautechnische Versuchsanstalt in Wien (Vienna Model Basin), Austria, November 2003: Forced roll experiments in the framework of European Project SAFENVSHIP.
- Schiffbautechnische Versuchsanstalt in Wien (Vienna Model Basin), Austria, 20-23 January 2004: Forced roll experiments in the framework of a collaborative research between DINMA and Fincantieri on Weather Criterion
- INSEAN Towing Tank, Rome, Italy, 15 May – 19 June 2004: experiments on parametric roll in regular and irregular sea, analysis of ergodicity and measurement of restoring moment in waves
- Osaka University, Japan, March 2006: experiments on the parametrically excited rolling motion of a post panamax containership in longitudinal regular waves.
- Osaka University, Japan, June 2006: experiments on the parametrically excited rolling motion of a post panamax containership in longitudinal irregular waves.
- CEHIPAR, Madrid, Spain, July/August 2008: experiments related to the project "Determination of relevant parameters for the alternative assessment of Intact Stability Weather Criterion on experimental basis" supported by the European Community's Sixth Framework Programme through the grant to the budget of the Integrated Infrastructure Initiative HYDRALAB III, Contract no. 022441 (RII3).
- CEHINAV towing tank, Madrid, Spain, December 2019: experimental tests on towing resistance in calm water and in waves for a free floating offshore wind structure. The tests were an extension of the activities carried out by Universidad Politécnica de Madrid (UPM) within the EU INTERREG ARCWIND project, coordinated by CENTEC, Instituto Superior Técnico, Lisbon, Portugal. The activity was carried out in the framework of research collaborations with the research group at Canal de Ensayos Hidrodinámicos (CEHINAV) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) - Universidad Politécnica de Madrid (UPM).

## **15) Coordination and editorial activities, chairmanships during conferences**

- March/May 2005 – Coordinator of the Splinter Group on the development of experimental guidelines for the alternative assessment of Weather Criterion in the framework of the revision of the IMO Intact Stability Code as per decision of the Intact Stability Correspondence Group taken during the Szczecin Meeting (February/March 2005).
- Co-Organizer of the Session 4 “Probabilistic Assessment of Intact Stability” at the “10th International Ship Stability Workshop”, 23-25 March 2008, Daejeon, Republic of Korea
- Interim coordinator of the international Stability R&D Committee (period: 2011-2012)
- Chairman of the international Stability R&D Committee (period: July 2012-June 2015)
- Co-Organizer of the Session “Risk-Based Assessment of Ship Stability (Intact & Damage)” at the “13th International Ship Stability Workshop”, 23-26 September 2013, in Brest (France)
- Editor, together with Alberto Francescutto and Manuel Arcenio Urcia Larios, of the Proceedings of the First International Conference “Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region”, 17-19 July 2013, Iquitos, Peru.
- Co-Organizer of the workshop “Ship Stability and Safety through Operational Measures” which was held at the 12th International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 June 2015, Glasgow, Scotland, UK
- Chairman of session “Safety & Security (2)” at the 16th International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport, 21-24 September 2015, Pula, Croatia
- Co-Organizer of the Session “Operational Aspects” at the “15th International Ship Stability Workshop”, 12-15 June 2016, Stockholm, Sweden
- Co-Organizer of the Session “Stability and safety of inland and river-sea ships” at the “16th International Ship Stability Workshop”, 5-7 June 2017, Belgrade, Serbia
- Member of Editorial Board of the journal “International Shipbuilding Progress” (period: since November 2017)
- Chairman of session “12-2-2 Floater Dynamics and Hydrodynamics - 2” at 37th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), 17-22 June 2018, Madrid, Spain
- Chairman of “S&D 5: Probability (3)”: joint session of 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018) & 7<sup>th</sup> International Maritime Conference on Design for Safety (DfS2018), 16-21 September 2018, Kobe, Japan
- Co-Organizer of the Session “Presentation and discussion of outcomes from eSAFE - enhanced Stability After a Flooding Event - A joint industry project on Damage Stability for Cruise Ships”, at 17th International Ship Stability Workshop, 10-12 June 2019, Helsinki, Finland
- Deputy Editor for “Journal of Marine Science and Technology” (period: since June 2020)
- Member of Editorial Board of “Brodogradnja” (period: since September 2021)
- Member of Associate Board of “Journal of Marine Science and Application (JMSA)” (period: since November 2021)
- Co-Organizer of the Session “Stability and safety of special vessels”, 18th International Ship Stability Workshop (ISSW 2022), 12-14 September 2022, Gdansk, Poland
- Member of the Advisory Board of book series “Progress in Marine Science and Technology” (IOS Press). Period: since 2022.
- Co-Organizer of the Session “Stability and safety of special vessels”, 19th International Ship Stability Workshop (ISSW 2023), to be held on 11-13 September 2023, Istanbul, Turkey

## **16) Memberships of technical/scientific committees**

- February 2006-February 2007: Member of the Japanese SCAPE Committee (Strategic Research Committee on Estimation Methods of Capsizing Risk for the IMO New Generation Stability) created by the Japan Society of Naval Architects and Ocean Engineers (JASNAOE)
- Member of the international “Stability R&D Committee” (2011- March 2016)
- Member of the scientific committee of "Joint 19th International Conference on HYDrodynamics in Ship Design and 4th International Symposium on Ship MANoeuvring - HYDMAN2012", 19th - 21st September 2012, Hawa, Poland
- Member of the scientific committee of the First International Conference “Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region”, 17-19 July 2013, Iquitos, Peru
- Member of the scientific committee of the "16th International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport", 21-24 September 2015, Pula, Croatia
- Member of the international technical committee of the "RINA International Conference on Ship & Offshore Technology (ICSOT) – India 2015 – ‘Coastal and Inland Shipping’ “, 10-11 December 2015, Kharapur, India
- Member of the “STAB International Standing Committee”. Since June 2015.

- Member of the international technical committee of the "RINA International Conference on Ship & Offshore Technology (ICSOT) – India 2017 – ‘Innovations in Ocean Structures’ ", 7-8 December 2017, Kharagpur, India
- Member of the scientific committee of the “International Conference on Ships and Offshore Structures (ICSOS 2018)”, 17-19 September 2018 in Gothenborg, Sweden.
- Member of “gruppo di lavoro permanente sulla sicurezza della navigazione” (permanent working group on safety of navigation) established by “Comando Generale del Corpo delle Capitanerie di Porto” (Italian Coast Guard Headquarters), “Ministero delle Infrastrutture e dei Trasporti” (Ministry of Infrastructures and Transport) / “Ministero delle infrastrutture e della mobilità sostenibili” (Ministry of sustainable infrastructures and mobility), Italy. Period: since April 2018.
- Member of the scientific committee of the “International Conference on Ships and Offshore Structures (ICSOS 2019)”, 4-8 November 2019 onboard ship Carnival Liberty.
- Member of the international technical committee of the "6<sup>th</sup> International Conference on Ship & Offshore Technology (ICSOT – India 2019) – ‘Dynamics of Ocean Structures’ ", organized by The Royal Institution of Naval Architects (RINA-UK) and by the Department of Ocean Engineering and Naval Architecture at Indian Institute of Technology Kharagpur, 7-8 November 2019, Kharagpur, India
- Member of the scientific committee of the conference “Sustainable and Safe Passenger Ships 2020”, organised by the Hellenic Institute of Marine Technology in cooperation with the Royal Institution of Naval Architects, 4<sup>th</sup> March 2020, Piraeus, Greece.
- Member of the scientific committee of the “International Conference on Ships and Offshore Structures (ICSOS 2020)”, 1-3 September 2020, online, organized by University of Strathclyde, Glasgow, UK.
- Member of the scientific committee of the “International Conference on Ships and Offshore Structures (ICSOS 2021)”, 6-8 September 2021, online, organized by Hamburg University of Technology, Germany.
- Member of Technical Programme Committee of the “6<sup>th</sup> International Conference on Maritime Technology and Engineering (MARTECH 2022)”, 24-26 May 2022, Lisbon, Portugal & online.
- Member of the scientific committee of the “International Conference on Ships and Offshore Structures (ICSOS 2022)”, 17-18 October 2022, online, organized by Norwegian University of Science and Technology, Norway.

## **17) Scholarships/Awards/Mobility scholarships**

- PhD scholarship funded by University of Trieste in the frame of the XVIII Doctoral Course at the University of Trieste. One year: 2003.
- PhD scholarship funded by INSEAN (Istituto Nazionale per Studi ed Esperienze di Architettura Navale - Roma) in the frame of the XVIII Doctoral Course at the University of Trieste. Two years: 2004-2005.
- Awarded by "Japan Society for the Promotion of Science (JSPS)" of an 11 months fellowship for conducting research in Japan in collaboration with the University of Osaka, starting on December 2005. Subject of the research: "Analysis of nonlinear parametric roll motion by means of a physically sound and modular approach with a view towards the development of new Performance Based Criteria for Intact Ship Stability in the framework of the long-term approach as requested by the International Maritime Organization".
- Awarded by the Research Institute for Symbolic Computation (Johannes Kepler University, Linz, Austria) of a grant for the participation to the “First RISC/SCIENCE Training School In Symbolic Computation”, 5-16 February 2007, Castle of Hagenberg, Austria. Grant funded by the European Commission Framework 6 Programme for Integrated Infrastructures Initiatives under the project SCIENCE.
- Awarded in 2008 by the Royal Institution of Naval Architects of the “Samuel Baxter Prize” for the paper “*Safety and Operability of Fishing Vessels in Beam and Longitudinal Waves*”, which was adjudged to be the best paper on a safety related topic by an author under the age of 30, published in the 2007 Transactions.
- ERASMUS/LLP Mobility Programme Teaching Staff A.Y. 2011/12: financial support for a 6-days (05/03/2012-10/03/2012) teaching period at Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)
- ERASMUS/LLP Mobility Programme Teaching Staff A.Y. 2012/13: financial support for a 5(+2)-days (04/03/2013 - 09/03/2013) teaching period at Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)
- ERASMUS+ Mobility Programme Teaching Staff A.Y. 2017/18: financial support for a 5(+2)-days (23/04/2018 - 27/04/2018) teaching period at University of Belgrade – Faculty of Mechanical Engineering – Department of Naval Architecture
- ERASMUS+ Mobility Programme Teaching Staff A.Y. 2019/20: financial support for a 5(+2)-days (09/12/2019 - 13/12/2019) teaching period at Universidad Politécnica de Madrid (UPM) - Departamento de Arquitectura, Construcción y Sistemas Oceanicos y Navales (DACSON) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)

**18) Research interests**

- Ship safety
- Parametric rolling
- Intact ship stability
- Subdivision and damaged ship stability
- Effects of nonlinear modelling of ship motions
- Nonlinear dynamics
- Stochastic processes
- Uncertainty analysis
- Probabilistic approaches in naval architecture
- Sloshing
- Evacuation
- Manoeuvrability

**19) Lecturer (full courses or co-teaching)**

- Academic Year 2007/08 – University of Trieste – Faculty of Engineering – Course: “*Laboratorio di Progetto delle Navi (Ship Design Laboratory)*” (6 CFU) – Laurea Triennale in Ingegneria Navale (BSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2008/09 – University of Trieste – Faculty of Engineering – Course: “*Laboratorio di Progetto delle Navi (Ship Design Laboratory)*” (6 CFU) – Laurea Triennale in Ingegneria Navale (BSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2009/10 – University of Trieste – Faculty of Engineering – Course: “*Laboratorio di Progetto delle Navi (Ship Design Laboratory)*” (6 CFU) – Laurea Triennale in Ingegneria Navale (BSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2011/12 – University of Trieste – Faculty of Engineering – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2011/12 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – 75h course: “*Fundamentos de Proyectos Navales*” (Basic Ship Design) – In English. In the framework of a collaboration between University of Trieste and USAT.
  - Academic Year 2012/13 – University of Trieste – Faculty of Engineering / Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2013/14 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2014/15 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2015/16 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2015/16 – University of Trieste – Department of Engineering and Architecture – Course: “*Laboratorio di strumenti informatici per l'ingegneria navale e offshore (IT Tools Laboratory for Naval Architecture, Marine and Offshore Engineering)*” (Course in co-teaching: total 3 CFU – Lectures given for 1 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2016/17 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2016/17 – University of Trieste – Department of Engineering and Architecture – Course: “*Laboratorio di strumenti informatici per l'ingegneria navale e offshore (IT Tools Laboratory for Naval Architecture, Marine and Offshore Engineering)*” (Course in co-teaching: total 3 CFU – Lectures given for 1 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2017/18 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
  - Academic Year 2017/18 – University of Trieste – Department of Engineering and Architecture – Course: “*Manovrabilità delle Navi (Ship Manoeuvrability)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
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- Academic Year 2018/19 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2018/19 – University of Trieste – Department of Engineering and Architecture – Course: “*Manovrabilità delle Navi (Ship Manoeuvrability)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2019/20 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2019/20 – University of Trieste – Department of Engineering and Architecture – Course: “*Manovrabilità delle Navi (Ship Manoeuvrability)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2020/21 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2020/21 – University of Trieste – Department of Engineering and Architecture – Course: “*Manovrabilità delle Navi (Ship Manoeuvrability)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2021/22 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2021/22 – University of Trieste – Department of Engineering and Architecture – Course: “*Manovrabilità delle Navi (Ship Manoeuvrability)*” (6 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2022/23 – University of Trieste – Department of Engineering and Architecture – Course: “*Statica della Nave (Ship Buoyancy and Stability)*” (9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2022/23 – University of Trieste – Department of Engineering and Architecture – Course: “*Strumenti Informatici per l’Ingegneria Navale (Software Tools for Naval Architecture and Marine Engineering)*” (3 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2022/23 – University of Trieste – Department of Engineering and Architecture – Course: “*Meccanica Computazionale per l’Ingegneria Navale (Computational Mechanics for Naval Architecture and Marine Engineering)*” (2 CFU – Full course: 9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)
- Academic Year 2022/23 – University of Trieste – Department of Engineering and Architecture – Course: “*Tenuta della Nave al Mare (Ship Behaviour at Sea)*” (1 CFU – Full course: 9 CFU) – Laurea Magistrale in Ingegneria Navale (MSc Degree in Naval Architecture & Marine Engineering)

## **20) Lectures and exercises given within courses**

- Academic Year 2006/07 – University of Trieste – Faculty of Engineering – Course: “*Manovrabilità delle Navi (Ship Manoeuvring)*”
- Academic Year 2006/07 – University of Trieste – Faculty of Engineering – Course: “*Statica della Nave (Ship Buoyancy and Stability)*”
- Academic Year 2006/07 – University of Trieste – Faculty of Engineering – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*”
- Academic Year 2007/08 – University of Trieste – Faculty of Engineering – Course: “*Manovrabilità delle Navi (Ship Manoeuvring)*”
- Academic Year 2007/08 – University of Trieste – Faculty of Engineering – Course: “*Statica della Nave II (Ship Buoyancy and Stability II)*”
- Academic Year 2007/08 – University of Trieste – Faculty of Engineering – Course: “*Geometria dei galleggianti (Theory of Floating Bodies)*”
- Academic Year 2013/14 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – 30h lectures in the framework of the course: “*Geometria de Elementos Flotantes*” (Theory of Floating Bodies) – In English. In the framework of a collaboration between University of Trieste and USAT.

## **21) Seminars/Invited lectures (Universities)**

- A.Y. 2011/12 – Universidad Politécnica de Madrid (UPM) – Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – 12h course/seminar lectures on

subject: *"IMO intact stability rules and nonlinear ship dynamics: an ongoing convergence"* (in the framework of an Erasmus Teaching Staff Mobility)

- A.Y. 2012/13 – Universidad Politécnica de Madrid (UPM) – Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – 12h course/seminar lectures on subject: *"IMO intact stability rules and nonlinear ship dynamics: an ongoing convergence"* (in the framework of an Erasmus Teaching Staff Mobility)
- A.Y. 2013/14 – Virginia Tech (USA) – Invited seminar lecture (2h) in the framework of the course "AOE 5334 - Advanced Ship Dynamics" – Subject of the lecture: *"What can we get from 1-DOF nonlinear roll modelling in case of multihulls?"* (lecture through teleconference)
- A.Y. 2013/14 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – 6h seminar lectures on subject: *"Research activities and tools for students of Naval Architecture"*
- A.Y. 2013/14 – Escuela Superior Politécnica del Litoral (ESPOL), Facultad de Ingeniería Marítima, Ciencias Biológicas, Oceánicas y Recursos Naturales (FIMCBOR) – 18h course/seminar lectures with subject: *"Advanced Dynamics and Safety of Ships"*
- A.Y. 2013/14 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Invited seminar lecture (2h) in the framework of the course "Ship Buoyancy and Stability II" ("Пловност И Стабилитет Брода 2") – Subject of the lecture: *"Possibly dangerous ship dynamics in waves: real experience, mathematical modelling and regulatory countermeasures"* (lecture through teleconference)
- A.Y. 2014/15 – University of A Coruña – Spain – Invited seminar lecture (2h) in the framework of the courses "Hydrostatics and Stability" and "Hydrostatics and Hydrodynamics" – Subject of the lecture: *"Looking at some nonlinear dynamic stability phenomena in waves in the framework of development of intact stability regulations for ship design and ship-specific operational guidance"*
- A.Y. 2014/15 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Invited seminar lecture (2h) in the framework of the course "Ship Buoyancy and Stability II" ("Пловност И Стабилитет Брода 2") – Subject of the lecture: *"Possibly dangerous ship dynamics in waves: real experience, mathematical modelling and regulatory countermeasures"* (lecture through teleconference)
- A.Y. 2017/18 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – 10h course/seminar lectures on the subject: *"Probabilistic damaged ship stability assessment"* (in the framework of an Erasmus+ Teaching Staff Mobility)
- A.Y. 2018/19 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Invited seminar lecture (5h) on the subject: *"SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations"* (24 April 2019)
- A.Y. 2019/20 – Universidad Politécnica de Madrid (UPM) – Departamento de Arquitectura, Construcción y Sistemas Oceanicos y Navales (DACSON) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – 9h course/seminar lectures on subject: *"SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations"* (in the framework of an Erasmus Teaching Staff Mobility)
- A.Y. 2019/20 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Invited seminar lecture (2h) in the framework of the course "Ship Buoyancy and Stability II" – Subject of the lecture: *"An Introduction to SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations"* (lecture through teleconference – 29 April 2020)
- A.Y. 2020/21 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Invited seminar lecture (2h) in the framework of the course "Ship Buoyancy and Stability II" – Subject of the lecture: *"An Introduction to SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations"* (lecture through teleconference – 24 March 2021)

## 22) Supervisor/Co-Supervisor of PhD candidates/thesis

1. PhD Candidate: Marco Sinibaldi. University of Trieste. Topic: safety and dynamics in ship towing operations, "Ciclo XXVII" (Cycle XXVII). Period: January 2012-September 2013. PhD scholarship funded by MIUR. Academic Supervisor.
2. Elkin Mauricio Botia-Vera, 2015, "Experimental and Statistical Investigation of Canonical Problems in Sloshing", PhD thesis, Universidad Politécnica de Madrid (UPM) ("International PhD" Mention and Cum Laude grade). PhD program on Ocean and Marine Engineering, 08D2. PhD obtained after defence on 01 September 2015. Role: Co-supervisor. Supervisor: Prof. Antonio Souto-Iglesias (UPM). This thesis was granted the prize of 2014-2015 best PhD thesis from its program.
3. Fabio Fucile, 2017, "Deterministic sea wave and ship motion forecasting: from remote wave sensing to prediction error assessment", PhD Thesis, University of Trieste, XXIX Cycle, Academic Year 2015/16.

Period: January 2014 – May 2017. PhD scholarship funded by CNR-INSEAN (Rome). Research activity in collaboration with CNR-INSEAN (Dr. Claudio Lugni). Role: Supervisor. Co-Supervisor: Dr. Claudio Lugni (CNR-INSEAN). PhD obtained after defence on 25 May 2017.

4. Gabriele Montecchiari, 2018, “Evacuation dynamics in the maritime field: modelling, simulation and real-time human participation”, PhD Thesis, University of Trieste, XXX Cycle, Academic Year 2016/17. Period: November 2014-March 2018. PhD scholarship funded by MIUR. Role: Supervisor. Co-supervisor: Prof. Paolo Gallina (UNITS). PhD obtained after defence on 16 March 2018.

### 23) Supervisor of theses

- Laurea Triennale (first level, 3 years, BSc):
  1. Murgo, G., “*Studio dell’effetto dei ‘Second Generation Intact Stability Criteria’ per una nave portacontainer (Study of the effect of ‘Second Generation Intact stability Criteria’ for a containership )*” (In Italian), University of Trieste, Academic Year 2013-2014.
- Laurea Magistrale (second level, 2 years, MSc):
  1. Sasdelli, M., “*IMO Second Generation Intact Stability Criteria: A Case Study on Parametric Roll Assessment for a Containership*” (In English), University of Trieste, Academic Year 2014-2015.
  2. Marra, A.M.Y.E., “*Modellazione ed analisi della dinamica di una turbina eolica galleggiante (Modelling and analysis of the dynamics a floating offshore wind turbine)*” (In Italian), University of Trieste, Academic Year 2015-2016.
  3. Todde, A.E., “*Modifica delle forme di carena di una nave da crociera per il miglioramento della stabilità (Hull form modification of a cruise vessel for the improvement of ship stability)*” (In Italian), University of Trieste, Academic Year 2015-2016.
  4. Dalle Vedove, F., “*Time domain simulation study of the operability of a ship equipped with an anti-rolling tank by means of a simplified procedure based on non-linear retardation functions*” (in English), University of Trieste, Academic Year 2015-2016.
  5. Salmaso, M., “*Analisi della dinamica di surf-riding e wave-blocking (Analysis of surf-riding and wave-blocking dynamics)*” (in Italian), University of Trieste, Academic Year 2017-2018.
  6. Savio, A., “*Analisi di alcuni problemi idrodinamici in campo navale tramite lo sviluppo di un codice di simulazione FEM (Analysis of some naval architecture hydrodynamic problems through the development of a FEM simulation code)*” (in Italian), University of Trieste, Academic Year 2018-19.
  7. Gardenal, A., “*Analisi della dinamica di rollio durante la manovra di evoluzione (Analysis of roll dynamics during turning circle manoeuvre)*” (in Italian), University of Trieste, Academic Year 2019-20.
  8. Jasa, J., “*Manoeuvring simulations of inland vessels and assessment of wind effects under navigational constraints*” (in English), University of Trieste, Academic Year 2021-2022.
  9. Ambrosio, A., “*Miglioramento della stima del periodo di rollio per navi da crociera e impatto sui requisiti di stabilità a nave integra (Improvement of roll period estimation for cruise ships and impact on intact stability requirements)*” (in Italian), University of Trieste, Academic Year 2021-2022.
  10. Montanaro, V., “*Experiments on small models with an application related to onboard estimation of GM from roll period*” (in English), University of Trieste, Academic Year 2021-2022.

### 24) Co-supervisor of theses

- Laurea quinquennale vecchio ordinamento (full 5 years cycle):
  1. Truja, V., “*Studio dello smorzamento di rollio nell’ambito di un miglioramento della Normativa di Stabilità a nave Intera (Study of the roll damping in the framework of an improvement of the present Intact Stability Rules)*” (In Italian), University of Trieste, Academic Year 2001-2002.
  2. Passarella, V., “*Studio sperimentale del rollio parametrico di una fregata in risonanza armonica e sub-armonica (Experimental study of harmonic and sub-harmonic parametric roll for a frigate)*” (In Italian), University of Trieste, Academic Year 2002-2003.
  3. Dreossi, M., “*Analisi critica di un metodo semi-empirico per la previsione dello smorzamento del moto di rollio (Critical analysis of a semi-empirical method for roll damping prediction)*” (in Italian), University of Trieste, Academic Year 2004-2005.
  4. Nicolosi, R.G., “*Sviluppo di un codice di manovrabilità 4-DOF ed effetto, sulle manovre standard, dell’incertezza nelle derivate idrodinamiche (Development of a 4-DOF maneuvering code and influence of the derivatives’ uncertainty on the standard maneuvers)*” (In Italian), University of Trieste, Academic Year 2005-2006.

5. Turchetto, A., "*Caratterizzazione della manovrabilità di una nave attraverso l'utilizzo degli indici di manovrabilità (Characterisation of maneuvering ability of a ship by means of maneuvering indices)*" (In Italian), University of Trieste, Academic Year 2008-2009.
- Laurea Triennale (first level, 3 years, BSc):
    1. Birsa, M., "*Lo sviluppo dei nuovi criteri di stabilità a nave integra (The Development of New Intact Ship Stability Criteria)*" (In Italian), University of Trieste, Academic Year 2003-2004.
    2. Biselli, G., "*Studio della stabilità di un piccolo peschereccio in mare longitudinale (Study of the stability of a small fishing vessel in longitudinal sea)*" (In Italian), University of Trieste, Academic Year 2004-2005.
    3. Sinibaldi, M., "*Studio del rollio parametrico di un trimarano in mare longitudinale (Study of parametric rolling for a trimaran in longitudinal waves)*" (In Italian), University of Trieste, Academic Year 2006-2007.
    4. Dall'Aglio, G., "*Studio dello smorzamento del moto di rollio di un trimarano in funzione della velocità di avanzo (Study of roll damping for a trimaran as a function of the speed of advance)*" (In Italian), University of Trieste, Academic Year 2006-2007.
    5. Boaro, L., "*Ottimizzazione del posizionamento degli outriggers di un trimarano in relazione alla stabilità sull'onda (Optimization of outriggers' position for a trimaran vessel with respect to stability in waves)*", (In Italian), University of Trieste, Academic Year 2008-2009.
    6. Burattini, D., "*Studio delle prestazioni idrodinamiche di uno yacht (Study of hydrodynamic performances of a yacht)*" (In Italian), University of Trieste, Academic Year 2009-2010.
    7. Lamacchia, L., "*Studio di resistenza e stabilità allo stato integro per un piccolo traghetto passeggeri (Study on resistance and intact stability for a small passenger ferry)*" (In Italian), University of Trieste, Academic Year 2009-2010.
    8. Scalera, L., "*Bouncing water device*" (In Italian), University of Trieste, Academic Year 2011-2012.
  - Laurea Specialistica/Magistrale (second level, 2 years, MSc):
    1. Sidari, M., "*Il problema del racking: sviluppo di una procedura per la verifica a fatica basata sul calcolo diretto dei moti nave (The problem of racking: development of a procedure for fatigue assessment based on direct evaluation of ship motions)*" (In Italian), University of Trieste, Academic Year 2006-2007.
    2. Fucile, F., "*Analisi del rollio parametrico per carene di forme atipiche (Analysis of parametric roll for ships with unusual hull forms)*" (In Italian), University of Trieste, Academic Year 2007-2008.
    3. Vidali, C., "*Effetto dell'incertezza sulle derivate idrodinamiche sulla valutazione della manovrabilità di una nave (Effect of derivatives' uncertainty on ship manoeuvrability assessment)*" (In Italian), University of Trieste, Academic Year 2007-2008.
    4. Vettor, R., "*Sviluppo di una metodologia di nowcasting del moto ondoso finalizzata all'operatività di mezzi offshore (Development of wave elevation nowcasting methodology for the operability of offshore units)*" (In Italian), University of Trieste, Academic Year 2009-2010.
    5. Dall'Aglio, G., "*Simulazione del moto di rollio in presenza di casse passive anti-rollio (Simulation of roll motion with passive anti-rolling tanks)*" (In Italian), University of Trieste, Academic Year 2009-2010.
    6. Sinibaldi, M., "*Dinamica non lineare di rollio in mare al traverso: un confronto tra due modellazioni 1-DOF (Nonlinear roll dynamics in beam waves: a comparison between two 1-DOF modelling)*" (In Italian), University of Trieste, Academic Year 2010-2011.
    7. Mocnik, F., "*Analisi idrodinamica dell'operatività di una nave oceanografica per il Mar Mediterraneo (Hydrodynamic analysis of operational effectiveness for an oceanographic vessel)*" (In Italian), University of Trieste, Academic Year 2010-2011.
    8. Brocco, E., "*La risposta strutturale a carichi dinamici di uno stack di container (Structural response of a stack of containers to dynamic loads)*" (In Italian), University of Trieste, Academic Year 2011-2012
  - Students not from University of Trieste:
    1. Tzamtzis, S., "*Development and testing of a procedure for the alternative assessment of Weather Criterion on experimental basis*" (In English), University of Trieste and National Technical University of Athens (SOCRATES Student), Academic Year 2003-2004.
    2. Medina Manuel, A., "*Estimation of hydrodynamic coefficients through forced oscillations and decay tests for heave plates of floating wind turbines*" (In English), Universidad Politecnica de Madrid (UPM), Escuela Tecnica Superior de Ingenieros Navales (ETSIN), 2022.

## 25) **Other academic activities (most relevant)**

- Period March 2007, I Level Master "Navy Tech" (organised by the University of Trieste, Fincantieri SpA and Regione Autonoma Friuli Venezia Giulia): lecturer of the subject "Basic ideas on screw propellers".
- Period 2006-2008 I Level Master "Navy Tech" (organised by the University of Trieste, Fincantieri SpA and Regione Autonoma Friuli Venezia Giulia): academic tutor during the whole duration of the Master.

- Member of the Board of the "Scuola di Dottorato in Scienze dell'Ingegneria - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral School in Engineering Sciences - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXVII (cycle start year: 2011).
  - Member of the Board of the "Scuola di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral School in Engineering and Architecture - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXVIII (cycle start year: 2012).
  - Member of the Board of the "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Engineering and Architecture - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXIX (cycle start year: 2013).
  - Member of the Board of the "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Engineering and Architecture - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXX (cycle start year: 2014).
  - ERASMUS+ Exchange Coordinator for the Department of Engineering and Architecture for the agreement between Università degli Studi di Trieste (I TRIESTE01) and Universidad Politécnica de Madrid (E MADRID05). Since 2014.
  - Member of the Board of the "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Engineering and Architecture - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXI (cycle start year: 2015).
  - ERASMUS+ Exchange Coordinator for the Department of Engineering and Architecture for the agreement between Università degli Studi di Trieste (I TRIESTE01) and Universidade da Coruna (E LACORU01). Since 2015.
  - Entitled to co-supervise PhD candidates within the “PhD program on Ocean and Marine Engineering, 08D2, Universidad Politécnica de Madrid (UPM), Spain” (2015-2020).
  - Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXII (cycle start year: 2016).
  - Member of “Gruppo di Assicurazione della Qualità (Quality Assurance Group)” of “Corso di Laurea in Ingegneria Navale e del Corso di Laurea Magistrale in Ingegneria Navale (BSc and MSc Degrees in Naval Architecture and Marine Engineering)”, Department of Engineering and Architecture, University of Trieste. Period: A.Y. 2017/18 – January 2023.
  - Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle(s): XXXIII (cycle start year: 2017).
  - ERASMUS+ Exchange Coordinator for the Department of Engineering and Architecture for the agreement between Università degli Studi di Trieste (I TRIESTE01) and University of Strathclyde (UK GLASGOW02). Period: 2017-2021.
  - ERASMUS+ Exchange Coordinator for the Department of Engineering and Architecture for the agreement between Università degli Studi di Trieste (I TRIESTE01) and Universidad of Belgrade. Action: KA107. Period: 2017-2019.
  - Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXIV (cycle start year: 2018).
  - Member of “Giunta di Dipartimento” (Executive Board) of Department of Engineering and Architecture – University of Trieste. Period: November 2018 – October 2021.
  - Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXV (cycle start year: 2019).
  - Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXVI (cycle start year: 2020).
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- Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXVII (cycle start year: 2021).
- Member of the Board of the "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione" (Doctoral Programme in Industrial and Information Engineering - Curriculum of Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXVIII (cycle start year: 2022).
- Member of the Board of the "Dottorato Industriale in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, dell'Energia e della Produzione" (Industrial PhD in Industrial and Information Engineering – Curriculum: Mechanical Engineering, Naval Architecture, Energy and Production), University of Trieste, Doctoral Cycle: XXXIX (cycle start year: 2023).

## 26) Evaluation activities (most relevant)

- First opponent member of the committee for evaluation of Dominik Andreas Breu's PhD thesis, public defence and trial lecture, Department of Engineering Cybernetics, Norwegian University of Science and Technology, Trondheim, Norway, 2013.
- Member of the Entry Examination Board of "Corso di Dottorato in Ingegneria e Architettura" (Doctoral Programme in Engineering and Architecture), University of Trieste, XXIX Cycle (2013).
- Member of the evaluation board for the evaluation of research projects submitted within the FRA 2013 funding scheme, Department of Engineering and Architecture, University of Trieste, 2013.
- Member of the committee for the evaluation of Francisco Mata Álvarez-Santullano's PhD thesis and public defence, Escuela Técnica Superior de Ingenieros Navales, Universidad Politécnica de Madrid, Madrid, Spain, 2014.
- Member of the committee for the evaluation of Nicola Petacco's PhD thesis and public defence, XXXI cycle, "Science and Technology for Electrical Engineering, Naval Architecture, Complex Systems for Mobility" (Curriculum: Naval Architecture), University of Genova, Italy, 2019
- Member of the evaluation committee for a position of "Ricercatore a Tempo Determinato (Tipo A)" (Fixed-term research assistant – Type A), Sector "09/A1 (Ingegneria aeronautica, aerospaziale e navale)" (09/A1 – Aeronautical and aerospace engineering and naval architecture), Scientific sector "ING-IND/01 (Architettura Navale)" (ING-IND/01 – Naval Architecture), University of Genova, Italy, 2019.
- External examiner in the examination committee of Kristian Bertheussen Karoliuss's PhD thesis and defence, Maritime Safety Research Centre (MSRC), Department of Naval architecture, Ocean and Marine engineering, University of Strathclyde, Glasgow, Scotland, UK, 2019.
- Member of "Comité de Suivi Individuel (CSI)" (Individual Follow-up Committee) of PhD candidate Théo Descamps, LHEEA - Centrale Nantes. Period: 2020 - 2022.
- Member of the committee for the evaluation of Vivien Luthy's PhD thesis and public defence, École nationale supérieure d'arts et métiers (ENSAM), France, 2023.
- Member of "Comité de Suivi Individuel (CSI)" (Individual Follow-up Committee) of PhD candidate Claire Monin, LHEEA - Centrale Nantes. Period: 2022 - ongoing.

## 27) Published papers: International Journals, Transactions

1. Francescutto, A., Bulian, G., Lugni, C., "Nonlinear and Stochastic Aspects of Parametric Rolling Modelling", Marine Technology, Vol 41, No. 2, April 2004, pp 74-81.
2. Bulian, G., "Estimation of nonlinear roll decay parameters using an analytical approximate solution of the decay time history", International Shipbuilding Progress, Vol.51, No. 1, 2004, pp. 5-32.
3. Bulian, G., Francescutto, A., Lugni, C., "On the Nonlinear Modeling of Parametric Rolling in Regular and Irregular Waves", International Shipbuilding Progress, Vol. 51, No. 2/3, 2004, pp. 173-203.
4. Bulian, G., "Approximate Analytical Response Curve for a Parametrically Excited Highly Nonlinear 1-DOF System with an Application to Ship Roll Motion Prediction", Nonlinear Analysis: Real World Applications, Vol. 5, No. 4, September 2004, pp. 725-748, doi:10.1016/j.nonrwa.2004.03.002
5. Bulian, G., Francescutto, A., "A simplified modular approach for the prediction of the roll motion due to the combined action of wind and waves", Journal of Engineering for the Maritime Environment, Vol. 218, no. M3, August 2004, pp. 189-212, doi:10.1243/1475090041737958
6. Bulian, G., "Nonlinear parametric rolling in regular waves - a general procedure for the analytical approximation of the GZ curve and its use in time domain simulations", Ocean Engineering, Vol 32, No. 3-4, March 2005, pp. 309-330, doi:10.1016/j.oceaneng.2004.08.008
7. Bulian, G., Francescutto, A., "Some considerations on the probability distributions for the damage length and damage penetration based on a re-analysis of recorded ship collisions data", International Shipbuilding Progress, Vol. 52, No. 4, 2005, pp. 325-356.

8. Bulian, G., "Nonlinear Parametric Rolling in Regular Waves - An Approximate Analytical Solution for the Response Curve in the Region of First Parametric Resonance", *Journal of Ship Research*, Vol. 50, No. 3, September 2006, pp. 239-249.
9. McCue, L., Alford, L., Belknap, W., Bulian, G., Delorme, L., Francescutto, A., Lugni, C., Troesch, A., Vakakis, A., "An overview of the minisymposium on 'Extreme Ship Dynamics' presented at the 2005 SIAM Conference on Application of Dynamical Systems", *Marine Technology*, Vol. 43, No. 1, January 2006, pp. 55-61.
10. Bulian, G., Francescutto, A., Lugni, C., "Theoretical, numerical and experimental study on the problem of ergodicity and 'practical ergodicity' with an application to parametric roll in longitudinal long crested irregular sea", *Ocean Engineering*, Vol. 33, 2006, pp. 1007-1043, doi:10.1016/j.oceaneng.2005.09.004
11. Bulian, G., Francescutto, A., "Safety and Operability of Fishing Vessels in Beam and Longitudinal Waves", *Transactions of the Royal Institution of Naval Architects Part B: International Journal of Small Craft Technology*, Vol. 148 (2), 2006, pp. 1-16.
12. McCue, L.S., Bulian, G., "A numerical feasibility study of a parametric roll advance warning system", *Journal of Offshore Mechanics and Arctic Engineering (JOMAE)*, Vol. 129, Issue 3, August 2007, pp. 165-175.
13. Bulian, G., Francescutto, A., "On the Effect of Stochastic Variations of Restoring Moment in Long-Crested Irregular Longitudinal Sea", *International Shipbuilding Progress - Special issue: Selected Papers from the 9th International Conference on Stability of Ships and Ocean Vehicles (STAB 2006)*, Vol. 54, No. 4, 2007, pp. 227-248.
14. Bulian, G., Francescutto, A., Zotti, I., "Stability and Roll Motion of Fast Multihull Vessels in Beam Waves", *Ships and Offshore Structures*, Vol. 3, No. 3, 2008, pp. 215-228, doi:10.1080/17445300801990913.
15. Bulian, G., "Time-based damaged ship survivability: A quasi-static equivalent method", *International Shipbuilding Progress*, Vol.55, No. 3, 2008, pp. 183-226, doi:10.3233/ISP-2008-0047
16. Iqbal, K.S., Bulian, G., Hasegawa, K., Karim, M.M., Awal, Z.I., "A rational analysis of intact stability hazards involving small inland passenger ferries in Bangladesh", *Journal of Marine Science and Technology*, Vol. 13, No. 3, 2008, pp. 270-281, doi:10.1007/s00773-008-0016-3
17. Iqbal, K.S., Bulian, G., Hasegawa, K., Karim, M.M., Awal, Z.I., "Possible remedies for intact stability hazards involving contemporary small inland passenger ferries in Bangladesh", *Journal of Marine Science and Technology*, Vol. 13, No. 3, 2008, pp. 282-290, doi:10.1007/s00773-008-0023-4
18. Bulian, G., "On an Improved Grim Effective Wave", *Ocean Engineering*, Vol. 35, Nos. 17-18, 2008, pp. 1811-1825, doi:10.1016/j.oceaneng.2008.08.016
19. Bulian, G., Francescutto, A., Umeda, N., Hashimoto, H., "Qualitative and quantitative characteristics of parametric ship rolling in random waves in the light of physical model experiments", *Ocean Engineering*, Vol. 35, Nos. 17-18, 2008, pp. 1661-1675, doi:10.1016/j.oceaneng.2008.09.002
20. Bulian, G., Francescutto, A., "Experimental results and numerical simulations on strongly non-linear rolling of multihulls in moderate beam seas", *Proceedings of the Institution of Mechanical Engineers - Part M - Journal of Engineering for the Maritime Environment*, Vol. 223, 2009, pp. 189-210, doi:10.1243/14750902JEME126
21. Francescutto, A., Bulian, G., Urcia Larios, M., Arroyo Ulloa, M., "Stability and dynamical effects of water on deck on the survivability of small fishing vessels", *Ship Science and Technology / Ciencia & Tecnología de Buques*, Vol. 1, No.5, July 2009, pp. 73-82
22. Bulian, G., Souto-Iglesias, A., Delorme, L., Botia-Vera, E., "Smoothed particle hydrodynamics (SPH) simulation of a tuned liquid damper (TLD) with angular motion", *Journal of Hydraulic Research*, Vol. 48, Extra Issue, 2010, pp. 28-39, doi:10.1080/00221686.2010.9641243 (originally doi:10.3826/jhr.2010.0001)
23. Sadat-Hosseini, H., Stern, F., Olivieri, A., Campana, E. F., Hashimoto, H., Umeda, N., Bulian, G., Francescutto, A., "Head-Waves Parametric Rolling of a Surface Combatant", *Ocean Engineering*, Vol. 37, Issue 10, July 2010, pp. 859-878, doi:10.1016/j.oceaneng.2010.02.010
24. Bulian, G., "Checking vulnerability to pure loss of stability in long crested following waves: A probabilistic approach", *Ocean Engineering*, Vol. 37, Issues 11-12, August 2010, pp. 1007-1026, doi:10.1016/j.oceaneng.2010.03.013
25. Bulian G., Francescutto, A., "Effect of roll modelling in beam waves under multi-frequency excitation", *Ocean Engineering*, Vol. 38, Issue 13, September 2011, pp. 1448–1463, doi:10.1016/j.oceaneng.2011.07.004
26. Bulian, G., Francescutto, A., Fucile, F., "Study of trimaran stability in longitudinal waves", *Ships and Offshore Structures*, Vol.6, No.4, 2011, pp. 265-271, doi:10.1080/17445302.2010.507494
27. Peters, W., Belenky, V., Bassler, C., Spyrou, K., Umeda, N., Bulian, G., Altmayer, B., "The Second Generation Intact Stability Criteria: An Overview of Development", *Transactions of The Society of Naval Architects and Marine Engineers (SNAME)*, Vol. 119 (2011), 2012, pp. 225-264
28. Bulian, G., Francescutto, A., "Second Generation Intact Stability Criteria: on the validation of codes for direct stability assessment in the framework of an example application", *Polish Maritime Research*, No.4/2013, 2013, pp. 52-61, doi:10.2478/pomr-2013-0041

29. Bulian, G., Botia-Vera, E., Souto-Iglesias, A., “*Experimental sloshing pressure impacts in ensemble domain: Transient and stationary statistical characteristics*”, *Physics of Fluids* (1994-present), Vol. 26, 2014, 032102, doi:10.1063/1.4866315
30. Sinibaldi, M., Bulian, G., “*Towing simulation in wind through a nonlinear 4-DOF model: Bifurcation analysis and occurrence of fishtailing*”, *Ocean Engineering*, Vol. 88, 15 September 2014, pp. 366-392, doi: 10.1016/j.oceaneng.2014.06.007
31. Souto-Iglesias, A., Bulian, G., Botia-Vera, E., “*A set of canonical problems in sloshing. Part 2: influence of tank width on impact pressure statistics in regular forced angular motion*”, *Ocean Engineering*, Vol. 105, 1 September 2015, pp. 136-159, doi: 10.1016/j.oceaneng.2015.06.016
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33. Cercos-Pita, J.L., Bulian, G., Pérez-Rojas, L., Francescutto, A., “*Coupled simulation of nonlinear ship motions and a free surface tanks*”, *Ocean Engineering* (Virtual Special Issue: “Stability and Safety of Ships and Ocean Vehicles”), Vol. 120, 2016, pp. 281-288, doi: 10.1016/j.oceaneng.2016.03.015
34. Bulian, G., Lindroth, D., Ruponen, P., Zaraphonitis, G., “*Probabilistic assessment of damaged ship survivability in case of grounding: development and testing of a direct non-zonal approach*”, *Ocean Engineering* (Virtual Special Issue: “Stability and Safety of Ships and Ocean Vehicles”), Vol. 120, 2016, pp. 331-338, doi: 10.1016/j.oceaneng.2016.02.018
35. Bačkalov, I., Bulian, G., Rosén, A., Shigunov, V., Themelis, N., “*Improvement of ship stability and safety in intact condition through operational measures: challenges and opportunities*”, *Ocean Engineering* (Virtual Special Issue: “Stability and Safety of Ships and Ocean Vehicles”), Vol. 120, 2016, pp. 353-361, doi: 10.1016/j.oceaneng.2016.02.011
36. Gallina, P., Bulian, G., Mosetti, G., “*Water bouncing robots: a first step toward large-scale water running robots*”, *Robotica*, Vol. 34, Issue 07, 2016, pp. 1659-1676, doi: 10.1017/S0263574714002495
37. Chai, W., Naess, A., Leira, B. J., Bulian, G., “*Efficient Monte Carlo simulation and Grim effective wave model for predicting the extreme response of a vessel rolling in random head seas*”, *Ocean Engineering*, Vol. 123, 2016, pp. 191-203, doi:10.1016/j.oceaneng.2016.07.025
38. Montecchiari, G., Bulian, G., Gallina, P., “*Towards real-time human participation in virtual evacuation through a validated simulation tool*”, *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*, Volume 232, Issue 5, 2018, pp. 476-490, doi:10.1177/1748006X17705046
39. Míguez González, M., Bulian, G., “*Influence of ship dynamics modelling on the prediction of fishing vessels roll response in beam and longitudinal waves*”, *Ocean Engineering*, Vol. 148, 2018, pp. 312-330, doi: 10.1016/j.oceaneng.2017.11.032
40. Bulian, G., Cercos-Pita, J.L., “*Co-simulation of ship motions and sloshing in tanks*”, *Ocean Engineering*, Vol. 152, 2018, pp. 353-376, doi: 10.1016/j.oceaneng.2018.01.028
41. Oliva-Remola, A., Bulian, G., Pérez-Rojas, L., “*Estimation of damping through internally excited roll tests*”, *Ocean Engineering*, Vol. 160, 2018, pp. 490-506, doi: 10.1016/j.oceaneng.2018.04.052
42. Fucile, F., Bulian, G., Lugni, C., “*A probabilistic approach for the quantification of prediction error in deterministic phase-resolved wave forecasting*”, *Ocean Engineering*, Vol. 163, 2018, pp. 718-736, doi: 10.1016/j.oceaneng.2018.04.079
43. Bulian, G., Cardinale, M., Francescutto, A., Zaraphonitis, G., “*Complementing SOLAS damage ship stability framework with a probabilistic description for the extent of collision damage below the waterline*”, *Ocean Engineering* (Special Issue: “Stability of Ships and Ocean Vehicles 2018”), Vol. 186, 2019, Article Number 106073, pp. 1-11, doi: 10.1016/j.oceaneng.2019.05.055
44. Rudaković, S., Bulian, G., Bačkalov, I., “*Effective wave slope coefficient of river-sea ships*”, *Ocean Engineering*, Vol. 192, 2019, Article Number 106427, pp. 1-16, doi: 10.1016/j.oceaneng.2019.106427
45. Bulian, G., Cardinale, M., Dafermos, G., Lindroth, D., Ruponen, P., Zaraphonitis, G., “*Probabilistic assessment of damaged survivability of passenger ships in case of grounding or contact*”, *Ocean Engineering*, Vol. 218, 2020, Article Number 107396, pp. 1-27, <https://doi.org/10.1016/j.oceaneng.2020.107396>
46. Mas-Soler, J., Uzunoglu, E., Bulian, G., Guedes Soares, C., Souto-Iglesias, A., “*An experimental study on transporting a free-float capable tension leg platform for a 10 MW wind turbine in waves*”, *Renewable Energy*, Vol. 179, 2021, pp. 2158-2173, <https://doi.org/10.1016/j.renene.2021.08.009>
47. Montecchiari, G., Bulian, G., Gallina, P., “*Ship evacuation simulation using a game engine: modelling, testing and validation*”, *International Shipbuilding Progress*, Vol. 68, 2021, pp. 129-189, <https://doi.org/10.3233/ISP-210017>
48. Medina-Manuel, A., Botia-Vera, E., Saettone, S., Calderon-Sanchez, J., Bulian, G., Souto-Iglesias, A., “*Hydrodynamic coefficients from forced and decay heave motion tests of a scaled model of a column of a floating wind turbine equipped with a heave plate*”, *Ocean Engineering*, Vol. 252, 2022, Article Number 110985, pp. 1-18, <https://doi.org/10.1016/j.oceaneng.2022.110985>

49. Bulian, G., Orlandi, A., “*Effect of environmental data uncertainty in the framework of second generation intact stability criteria*”, Ocean Engineering, Vol. 253, 2022, Article Number 111253, pp. 1-23, <https://doi.org/10.1016/j.oceaneng.2022.111253>
50. Bulian, G., Francescutto, A., “*Level 1 vulnerability criterion for the dead ship condition: A practical methodology for embedding operational limitations*”, Ocean Engineering, Vol. 272, 2023, Article Number 113868, pp. 1-12, <https://doi.org/10.1016/j.oceaneng.2023.113868>
51. Piller, M., Bulian, G., Stival, C.A., “*Assessment of infection probability indices for airborne diseases in confined spaces: combination of CFD and analytical modelling*”, to appear on Journal of Building Performance Simulation, available online 14 July 2023, <https://doi.org/10.1080/19401493.2023.2232341>

## 28) Publications in Books

1. Bulian, G., Francescutto, A., “*Large Amplitude Rolling and Strongly Nonlinear Behaviour of Multihull Ships in Moderate Beam Waves*” in "IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering - Proceedings of the IUTAM Symposium held in Hamburg, Germany, July 23-26, 2007", IUTAM Book Series, Vol. 8, Edwin Kreuzer (Ed.), Springer, 326 p. (pp. 25-36), 2008, ISBN: 978-1-4020-8629-8 (Print) 978-1-4020-8630-4 (Online), DOI: 10.1007/978-1-4020-8630-4\_3
2. Francescutto, A., Bresciani, F., Bulian, G., “*Stabilità statica e dinamica di imbarcazioni multiscafo (Static and dynamic stability of multihull vessels)*”, (in Italian) in "Navigare il Futuro, a cura di Franco Grossi - The Future Boat & Yacht 2008 Venice Convention", GTC Editor (Udine, Italy), 142 pp. (pp. 51-64), 2008, ISBN: 978-88-900567-6-2
3. Bulian, G., Francescutto, A., Fucile, F., “*La stabilità dei trimarani in mare longitudinale per un trasporto veloce sicuro e sostenibile (The stability of trimaran vessels in longitudinal seas for a safe and sustainable fast transportation)*”, (in Italian) in "L'orizzonte sostenibile tra mare e cielo, a cura di Franco Grossi - The Future Boat & Yacht 2009 Venice Convention", GTC Editor (Udine, Italy), 146 pp. (pp. 38-49), 2009, ISBN: 978-88-900567-5-4
4. Bassler, C.C., Belenky, V., Bulian, G., Francescutto, A., Spyrou, K., Umeda, N., “*Review of Available Methods for Application to Second Level Vulnerability Criteria*”, in "Contemporary Ideas on Ship Stability and Capsizing in Waves", Fluid Mechanics and Its Applications, Springer, 2011, Volume 96, Part 1, pp. 3-23, ISBN: 978-94-007-1481-6 e-ISBN: 978-94-007-1482-3 ISSN: 0926-5112, DOI: 10.1007/978-94-007-1482-3\_1
5. Pérez-Rojas, L., Botia-Vera, E., Cercos-Pita, J.L., Souto-Iglesias, A., Bulian, G., Delorme, L., “*A combined Experimental and SPH Approach to Sloshing and Ship Roll Motions*”, in "Contemporary Ideas on Ship Stability and Capsizing in Waves", Fluid Mechanics and Its Applications, Springer, 2011, Volume 96, Part 10, pp. 735-749, ISBN: 978-94-007-1481-6 e-ISBN: 978-94-007-1482-3 ISSN: 0926-5112, DOI: 10.1007/978-94-007-1482-3\_42
6. Bulian, G., Francescutto, A., “*Trimaran Vessels and Parametric Roll*”, Chapter 4 in "Parametric Resonance in Dynamical Systems", Thor I. Fossen and Henk Nijmeijer Editors, Springer, 2012, pp. 63-89, ISBN 978-1-4614-1042-3, e-ISBN 978-1-4614-1043-0, DOI:10.1007/978-1-4614-1043-0
7. Bulian, G., Cardinale, M., Dafermos, G., Eliopoulou, E., Francescutto, A., Hamann, R., Lindroth, D., Luhmann, H., Ruponen, P., Zaraphonitis, G., “*A Framework for Probabilistic Damage Stability Assessment of Passenger Ships Considering Collision, Grounding and Contact Accidents*”. In: Spyrou, K.J., Belenky, V.L., Katayama, T., Bačkalov, I., Francescutto, A. (eds) Contemporary Ideas on Ship Stability – From Dynamics to Criteria. Fluid Mechanics and Its Applications, vol 134, 2023, pp. 565-587. Springer, Cham. [https://doi.org/10.1007/978-3-031-16329-6\\_34](https://doi.org/10.1007/978-3-031-16329-6_34)
8. Míguez González, M., Bulian, G., Santiago Caamaño, L., Allegue García, S., Díaz Casás, V., “*Real-Time Estimation of Natural Roll Frequency for the Stability Guidance of Fishing Vessels*”. In: Spyrou, K.J., Belenky, V.L., Katayama, T., Bačkalov, I., Francescutto, A. (eds) Contemporary Ideas on Ship Stability – From Dynamics to Criteria. Fluid Mechanics and Its Applications, vol 134, 2023, pp. 367-383. Springer, Cham. [https://doi.org/10.1007/978-3-031-16329-6\\_22](https://doi.org/10.1007/978-3-031-16329-6_22)

## 29) Published papers: International Conferences

1. Francescutto, A., Bulian, G., “*Nonlinear and Stochastic Aspects of Parametric Rolling Modelling*”, Proc. 6<sup>th</sup> International Workshop on Ship Stability, Webb Institute, New York, 13-16 October 2002.
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5. Francescutto, A., Bulian, G., “*Analisi Critica della Normativa di Compartimentazione e Stabilità a Nave Allagata e Studio di una Possibile Modifica per le Grandi Navi Passeggeri (Codice CRREIA011)*” (A critical analysis of the damage stability regulation and evaluation of a possible modification for Large Passenger Ships (Code CRREIA011)), Università degli Studi di Trieste, 2004.

6. Bulian, G., "*Comparisons between forces and moments using direct hydrostatic calculations and Grim's effective wave concept in longitudinal long crested irregular waves*", Technical Report - JSPS Fellowship PE05052, Dept. of Naval Architecture and Ocean Engineering, Osaka University, 2006.
7. Bulian, G., "*Some Statistical Properties of the Improved Grim's Effective Wave*", Technical Report - JSPS Fellowship PE05052, Dept. of Naval Architecture and Ocean Engineering, Osaka University, 2006.
8. Bulian, G., "*Experimental investigation on parametric roll in longitudinal regular waves for a partially restrained post-panamax containership*", Technical Report - JSPS Fellowship PE05052, Dept. of Naval Architecture and Ocean Engineering, Osaka University, 2006.
9. Bulian, G., "*Experimental investigation on parametric roll in longitudinal irregular waves for a partially restrained post-panamax containership*", Technical Report - JSPS Fellowship PE05052, Dept. of Naval Architecture and Ocean Engineering, Osaka University, 2006.
10. Bulian, G., "*Sensitivity analysis and error propagation in linear and linearized systems with application to ship roll and manoeuvring*", Technical Report - JSPS Fellowship PE05052, Dept. of Naval Architecture and Ocean Engineering, Osaka University, 2006.
11. Bulian, G., Francescutto, A., "*Water Ingress/Egress, Multiple Decks, Survival Time and Evacuation: some Ideas on a Possible Extension of the SEM Approach (Code CRIESA001/00001)*", (In the framework of SAFEDOR-SP2.1), Dept. DINMA, University of Trieste, 2006.
12. Bulian, G., Francescutto, A., "*Probabilistic Assessment of Intact Stability (Code CRIESA001/00002)*", (In the framework of SAFEDOR-SP2.3), Dept. DINMA, University of Trieste, 2006.
13. Bulian, G., Francescutto, A., "*Application of Simplified Analytical Models for Intact Stability Assessment to a Large Passenger Ship (Code CRIESA001/00003)*", (In the framework of SAFEDOR-SP6.1), Dept. DINMA, University of Trieste, 2006.
14. Bulian, G., Francescutto, A., Maccari, A., "*Water Ingress/Egress, Multiple Decks, Survival Time and Evacuation: some Ideas on a Possible Extension of the SEM Approach – Extended and revised version*", Quaderno di Dipartimento n° 45, Dept. DINMA, University of Trieste, August 2007.
15. Bulian, G., Francescutto, A., Maccari, A., "*Possible simplified mathematical models for roll motion in the development of performance-based intact stability criteria – Extended and revised version*", Quaderno di Dipartimento n° 46, Dept. DINMA, University of Trieste, January 2008.
16. Bulian, G., Francescutto, A., "*SAFEDOR benchmark on parametric roll - Brief description of the simulation methodology employed in the code SHIXDOF under development at DINMA*", Internal Technical Report, Department DINMA, University of Trieste, Trieste, Italy, 2008.
17. Bulian, G., Francescutto, A., Fucile, F., "*Determination of Relevant Parameters for the Alternative Assessment of Intact Stability Weather Criterion On Experimental Basis*", EU-funded Project HYD-III-CEH-5 (Integrated Infrastructure Initiative HYDRALAB III, Contract no. 022441 (RII3)), Department DINMA, University of Trieste, Trieste, Italy, 22 November 2009
18. Bulian, G., Francescutto, A., "*Exploratory data analysis of ship-ship collision data from the updated GOALDS database*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2010
19. Bulian, G., Francescutto, A., "*Exploratory data analysis of grounding data from the updated GOALDS database and assessment of requirements and assumptions in SOLAS Ch. II-1 Part B-2 Regulation 9*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2010
20. Bulian, G., Francescutto, A., "*Probabilistic modelling of grounding damage characteristics*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2010
21. Bulian, G., Francescutto, A., "*Probability of flooding due to grounding damage using a p-factor formulation*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2010
22. Bulian G., "*Study on the Application to Superyachts of Proposals for Parametric Roll Level 1 Vulnerability Criteria in the Framework of the Development of IMO Second Generation Intact Stability Criteria*", Technical Report for the Superyacht Builders Association (SYBAss), Year: 2011
23. Bulian, G., Francescutto, A., "*Extended tables for the assessment of requirements and assumptions in SOLAS Ch. II-1 Part B-2 Regulation 9*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2011
24. Bulian, G., Francescutto, A., "*Bottom damages: possible ways to reduce the occurrence and/or influence of non-contact cases in view of practical applications*", EU-funded Project GOALDS (GOAL based Damage Stability) - Grant Agreement 233876, Year: 2012
25. Zaraphonitis, G., Bulian, G., Lindroth, D., Papanikolaou, A., Francescutto, A., Ruponen, P., Olufsen, O., "*Evaluation of risk from raking damages due to grounding – Interim Report*", Project "EMSA 3 - A Study assessing the acceptable and practicable risk level of passenger ships related to damage stability" - EMSA/OP/10/2013 - European Maritime Safety Agency, 2014
26. Zaraphonitis, G., Bulian, G., Lindroth, D., Hamann, R., Luhmann, H., Cardinale, M., Routi, A.-L., Bertin, R., Harper, G., Papanikolaou, A., Francescutto, A., Ruponen, P., Olufsen, O., "*Evaluation of risk from*

- raking damages due to grounding – Final Report*”, Project “EMSA 3 - A Study assessing the acceptable and practicable risk level of passenger ships related to damage stability” - EMSA/OP/10/2013 - European Maritime Safety Agency, 2015
27. Zaraphonitis, G., Bulian, G., Hamman, R., Eliopoulou, E., Cardinale, M., Luhmann, H., “*eSAFE Deliverable D2.2.1 - Description of Methodology*”, Joint Industry Project “eSAFE - enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships”, 29 March 2017 (Revision No. 2), 43p.
  28. Bulian, G., Zaraphonitis, G., Francescutto, A., Ruponen, P., “*eSAFE Deliverable D2.1.1 - Description of geometrical and probabilistic model for collision damage*”, Joint Industry Project “eSAFE - enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships”, 03 May 2017 (Revision No. 1), 70p.
  29. Lindroth, D., Bulian, G., Dafermos, G., Zaraphonitis, G., Cardinale, M., Luhmann, H., Ruponen, P., “*eSAFE Deliverable D2.3.1 – Final report of ‘WP2.3 – Development of a software tool for the application of the combined methodology’*”, Joint Industry Project “eSAFE - enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships”, 09 August 2017 (Revision No. 1), 65p.
  30. Luhmann, H., Olufsen, O., Atzampos, G., Bulian, G., “*eSAFE Deliverable D4.3.1 – Summary report*”, Joint Industry Project “eSAFE - enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships”, 24 October 2018 (Revision No. 4), 113p.
  31. Luhmann, H., Bulian, G., Vassalos, D., Olufsen, O., Seglem, I., Pöttgen, J., “*eSAFE Deliverable D4.3.2 – Executive Summary*”, Joint Industry Project “eSAFE - enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships”, 24 October 2018 (Revision No. 3), 25p.

### **33) Contributions to IMO (International Maritime Organization) documents**

1. SLF47/6/7, “*Preliminary results of the SAFENVSHIP Project – Experimental evaluation of the relevant factors for the calculation of the roll angle  $\vartheta_1$* ”, Submitted by Italy (2004).
2. SLF47/6/8, “*Guidelines for model testing of intact stability – Experimental approach to evaluate the relevant factors for the calculation of the roll angle  $\vartheta_1$* ”, Submitted by Italy (2004).
3. SLF47/6/16, “*Proposal on revision of the weather criterion*”, Submitted by Italy and Japan (2004).
4. SLF47/6/18, “*Proposal of Guidelines for a standard model test procedure to determine the steady wind heeling lever*”, Submitted by Italy and Japan (2004).
5. MSC80/3, “*Consideration of the draft revised SOLAS chapter II-1 parts A,B and B-1*”, Submitted by Italy (2005).
6. MSC80/3/2, “*Proposed amendments to the draft revised SOLAS chapter II-1 parts A, B and B-1*”, Submitted by Italy (2005).
7. SLF48/4/6, “*A modular methodology for the estimation of the ship roll safety under the action of stochastic wind and waves*”, Submitted by Italy, 10 June 2005.
8. SLF48/4/12, “*On the development of performance-based criteria for ship stability in longitudinal waves*”, Submitted by Italy, 11 July 2005.
9. SLF50/4/5, “*OSV Criterion vs. ‘Criteria regarding righting lever curve properties’ - Calculation examples of limiting GM curves*”, Submitted by Italy, 22 February 2007.
10. SLF50/4/12, “*Comments on the development of new generation intact stability criteria*”, Submitted by Italy, 9 March 2007.
11. Annex 1, “*Proposal of vulnerability criterion for dead ship condition*”, submitted by Italy, in SLF52/INF.2, “*Information collected by the intersessional Correspondence Group on Intact Stability*”, Submitted by Japan, 23 October 2009.
12. Annex 3, “*Higher level dynamic stability assessment for dead ship condition*”, submitted by the Delegation of Italy, in SLF52/INF.2, “*Information collected by the intersessional Correspondence Group on Intact Stability*”, Submitted by Japan, 23 October 2009.
13. SLF53/3/9, “*Comments on documents SLF 53/3/1 and SLF 53/INF.10*”, Submitted by Italy, 19 November 2010
14. SLF53/INF.10-Annex 1, “*Proposal Concerning a Level 1 Vulnerability Criterion for Parametric Roll*”, Submitted by Italy, (SLF53/INF.10 submitted by Japan, 9 November 2010), London, UK
15. SLF53/INF.10-Annex 1, “*Comments on the Document Submitted by Germany*”, Submitted by Italy, (SLF53/INF.10 submitted by Japan, 9 November 2010), London, UK
16. SLF54/INF.12-Annex 20, “*Comments on Japan's Submission for Draft Level 2 and 3 Criteria on Stability under Dead Ship Condition*”, Submitted by Italy, (SLF54/INF.12 submitted by Japan, 11 November 2011), London, UK

17. SLF54/INF.12-Annex 14, "*Study on the Application to Superyachts of Proposals for Parametric Roll Level 1 Vulnerability Criteria in the Framework of the Development of IMO Second Generation Intact Stability Criteria*", Submitted by SYBAss, (SLF54/INF.12 submitted by Japan, 11 November 2011), London, UK
18. SLF55/INF.15-Annex 1, "*Selection of reference environmental conditions for vulnerability criteria for parametric roll and pure loss of stability*", Submitted by Italy, (SLF55/INF.15 submitted by Japan, 14 December 2012), London, UK
19. SLF55/INF.15-Annex 18, "*Comments on recent developments in the correspondence group and on Proposal of Revision of Updated Draft Vulnerability Criteria of Levels 1 and 2 for the Failure Modes of Pure Loss of Stability and Parametric Roll – by Japan*", Submitted by Italy, (SLF55/INF.15 submitted by Japan, 14 December 2012), London, UK
20. SLF55/3/7, "*Comments on present status of development of second generation intact stability criteria*", Submitted by Italy, 2 January 2013, London, UK
21. SLF55/3/11, "*Comparison study of draft level 2 vulnerability criteria for stability under dead ship condition*", Submitted by Italy and Japan, 4 January 2013, London, UK
22. SDC1/INF.6, "*Vulnerability assessment for dead-ship stability failure mode*", Submitted by Italy and Japan, 15 November 2013, London, UK
23. SDC1/INF.8-Annex 16, "*Proposed amendments to Part B of the 2008 IS Code to assess the vulnerability of ships to the dead ship stability failure mode*", Submitted by Italy and Japan, (SDC1/INF.8 submitted by Japan, 15 November 2013), London, UK
24. SDC1/INF.8-Annex 19, "*Reply to 'Comments on the draft criteria of broaching and dead ship – Submitted by China'*", Submitted by Italy and Japan, (SDC1/INF.8 submitted by Japan, 15 November 2013), London, UK
25. SDC1/INF.8-Annex 28, "*Calculations of restoring and stability in waves for parametric roll and pure loss, level 1 & level 2 vulnerability criteria: pressure under undisturbed wave profile*", Submitted by Italy, (SDC1/INF.8 submitted by Japan, 15 November 2013), London, UK
26. SDC1/5/6, "*Weighting factors for wave cases in vulnerability assessment criteria for parametric roll and pure loss of stability*", Submitted by Italy, 29 November 2013, London, UK
27. SDC2/INF.10-Annex 3, "*Comments on Annex 2*", Submitted by Italy, (SDC2/INF.10 submitted by Japan, 12 December 2014), London, UK
28. SDC3/6/7, "*Notes on operational limitations and operational guidance*", Submitted by Germany, Italy and Sweden, 13 November 2015, London, UK
29. SDC3/INF.15, "*Material relevant to Operational Guidance and Operational Limitations*", Submitted by Germany, Italy and Sweden, 13 November 2015, London, UK
30. SDC3/INF.10-Annex 1, "*Proposed amendments to part B of the 2008 IS Code to assess the vulnerability of ships to the dead ship stability failure mode*", Submitted by Italy, (SDC3/INF.10 submitted by Japan, 13 November 2015), London, UK
31. SDC3/INF.10-Annex 19, "*Draft Explanatory Notes on the vulnerability of ships to the dead ship stability failure mode*", Submitted by Italy, (SDC3/INF.10 submitted by Japan, 13 November 2015), London, UK
32. SDC6/INF.3-Annex 12, "*Comments on Intact Stability Correspondence Group Report (Part 1)*", Submitted by Italy, (SDC6/INF.3 submitted by Japan, 30 November 2018), London, UK
33. Document "*Comments to the draft restructured 'Interim Guidelines on Second Generation Intact Stability Criteria' circulated on 3<sup>rd</sup> June 2019*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 17<sup>th</sup> July 2019
34. Document "*Comments on Draft MSC Circular Front Page, Preamble and Introduction*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 29<sup>th</sup> August 2019
35. Document "*Comments to consolidated draft 'Interim Guidelines on Second Generation Intact Stability Criteria' circulated on 2<sup>nd</sup> September 2019*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 12<sup>th</sup> September 2019
36. Document "*Comments on Revised Draft of Preamble and Introduction circulated on 17<sup>th</sup> September 2019*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 27<sup>th</sup> September 2019
37. Document "*Comments on third draft Interim Guidelines on Second Generation Intact Stability Criteria*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 14<sup>th</sup> October 2019
38. Document "*Comments on draft text of Explanatory Notes circulated on 2 June 2020*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 31<sup>st</sup> July 2020
39. Document "*Comments on the proposed draft definition of ships with an extended low weather deck*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 29 August 2020
40. Document "*Comments related to the second round of submissions and the revised draft Explanatory Notes circulated on 14 September 2020*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 14 October 2020
41. Document "*Comments related to submissions and revised draft Explanatory Notes circulated on 31 October 2020*", Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 12 December 2020

42. Document “*Comments on draft Explanatory Notes circulated on 15 January 2021*”, Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 09 April 2021
43. Document “*Comments on the fifth round version of draft Explanatory Notes to the Interim Guidelines on Second Generation Intact Stability Criteria*”, Submitted by Italy and Japan to the IMO/SDC Correspondence Group on Intact Stability on 15 June 2021
44. Document “*Comments on a proposal of modification of §3.5.3.2.1-Part B of draft Explanatory Notes*”, Submitted by Italy to the IMO/SDC Correspondence Group on Intact Stability on 07 September 2021

### 34) **Talks, Invited Lectures/Keynotes, Workshops, Seminars**

1. Bulian, G., Francescutto, A., Lugni, C., "*On the Practical Ergodicity of Parametric Rolling*", Presentation given at the Mini-Symposium on Extreme Ship Dynamics (MS97) of SIAM (Society for Industrial and Applied Mathematics) conference on Application of Dynamical Systems, May 2005, Snowbird, Utah.
2. Bulian, G., "*Some ideas on a simplified 1(.5)-DOF analytical nonlinear model for parametric rolling in longitudinal irregular long crested waves*", Invited Lecture at Osaka Prefecture University, 2 July 2006.
3. Bulian, G., Francescutto, A., "*Large Amplitude Rolling and Strongly Nonlinear Behaviour of Multihull Ships in Moderate Beam Waves*", Lecture presentation given at the IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering, Hamburg, Germany, July 23-27, 2007
4. Bulian, G., Francescutto, A., "*The response of the Duffing oscillator for different bandwidths of the Gaussian excitation*", Lecture presentation given at the 6th Osaka Colloquium on Seakeeping and Stability of Ships, 26-29 March 2008, Osaka, Japan.
5. Bulian, G., Francescutto, A., Fucile, F., "*Nonlinear rolling of multihulls in beam and longitudinal regular waves*", Invited Lecture at Osaka University, 27 February 2009
6. Bulian, G., Francescutto, A., "*New Generation Intact Stability Criteria: looking into the future*", Presented at the Cooperative Research Ships (CRS) Open Meeting 2010, 17-18 June 2010, FINCANTIERI Trieste, Monfalcone, Italy (Presented by A. Francescutto)
7. Bulian, G., Francescutto, A., Fucile, F., "*Nonlinear rolling of multi-hulls: experiments and simplified dynamical modelling*", Presented at the Cooperative Research Ships (CRS) Open Meeting 2010, 17-18 June 2010, FINCANTIERI Trieste, Monfalcone, Italy
8. Bulian, G., Francescutto, A., "*Key features of first level vulnerability criteria for dynamic phenomena associated to variations of restoring in waves*", 2<sup>nd</sup> International Workshop on Dynamic Stability Considerations in Ship Design, 2-3 September 2010, Windsor, London, UK
9. Bulian, G., Francescutto, A., "*Statistical analysis of damage characteristics and assessment of SOLAS assumptions - Tasks 3.1 & 3.2*", GOALDS Workshop, 8-9 September 2010, Glasgow, UK.
10. Bulian, G., Francescutto, A., "*Trimaran Vessels and Parametric Roll*", Invited presentation at Workshop on Parametric Resonance in Dynamical Systems, 22-26 June 2011, Longyearbyen, Svalbard, Norway - Organised by the Norwegian University of Science and Technology (NTNU)
11. Bulian, G., Francescutto, A., "*A probabilistic approach to grounding damages: development, issues and prospects*", Invited presentation for the International Workshop on Risk-based Design for Maritime Safety and Marine Environment Protection, National Maritime Research Institute (NMRI) & Nippon Kaiji Kyokai (ClassNK), 11-12 October 2011, Tokyo, Japan
12. Bulian, G., van Hooren, C., "*2nd Generation Intact Stability Requirements*", Invited presentation for the SYBAss Technical Seminar 2011: “Forthcoming IMO legislation”, 16 November 2011, Amsterdam, The Netherlands
13. Bulian, G., Francescutto, A., "*Dangerous Phenomena in Adverse Weather and Sea Conditions: when Stability Criteria Need to be Supplemented by Recommendations to the Master*”, COSMEMOS Workshop – Innovation in meteorology for maritime navigation, 23 October 2013, Livorno, Italy (Presented by A. Francescutto)
14. Bačkalov, I., Biot, M., Bresciani, F., Brocco, E., Bulian, G., Francescutto, A., Fucile, F., Hofman, M., Huss, M., Kalajdžić, M., Kutteneuler, J., Lugni, C., Maksić, I., Mccue, L., Moro, L., Ovegård, E., Palmquist, M., Rosén, A., Saldovieri, F., Serafino, F., Skoglund, L., Söder, C.-J., "*Ship Safety & Intact Stability: from Design to Operation*”, Presented at First Maritime Europe Strategy Action (MESA) Workshop, “Designing Waterborne RDI Strategies”, 5 March 2014, Bruxelles, Belgium
15. Bulian, G., "*Getting to know some potentially dangerous dynamic stability phenomena in waves and the idea of ‘Second Generation Intact Stability Criteria’*”, Seguridad para la navegación y construcción naval, Universidad Católica Santo Toribio de Mogrovejo (USAT), 9-10 May 2014, Chiclayo, Peru
16. Bačkalov, I., Bulian, G., Cichowicz, J., Eliopoulou, E., Konovessis, D., Leguen, J.-F., Rosén, A., Themelis, N., "*Ship Stability, Dynamics and Safety: Status and Perspectives*”, Invited keynote paper presentation at 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 June 2015, Glasgow, Scotland, UK

17. Cercos-Pita, J.L., Souto-Iglesias, A., Bulian, G., Bouscasse, B., Colagrossi, A., Colom, J., Servan, B., Garcia-Espinosa, J., "*Coupling between sloshing and ship motions with emphasis on wave-breaking*", 16th International Workshop on Trends In Numerical and Physical Modeling for Industrial Multiphase Flows, Cargèse, Corsica, September 14th–18th, 2015 (presented by A. Souto-Iglesias)
18. Botia-Vera, E.M., Souto-Iglesias, A., Bulian, G., "*Sensitivity analysis of ISOPE benchmark C15 case (SDOF roll) regarding motion spectrum characteristics*", 16th International Workshop on Trends In Numerical and Physical Modeling for Industrial Multiphase Flows, Cargèse, Corsica, September 14th–18th, 2015 (presented by A. Souto-Iglesias)
19. Bulian, G., "*Some notes and comments on Direct Stability Assessment (DSA), Operational Limitations (OL) and Operational Guidance (OG)*" – Invited presentation for the Workshop "Level 3 of the second generation intact stability criteria and its Operational Guidance – latest developments and outlook", 21<sup>st</sup> January 2016, International Maritime Organization, London, UK
20. Bulian, G., "*Nonlinear ship dynamics and intact stability assessment*" – Invited lecture at the Society of Naval Architects of Serbia, University of Belgrade, Belgrade, Serbia, 27 June 2016
21. Bulian, G., "*Direct Stability Assessment (DSA) and Operational Measures (OM): some food for thoughts*", Presentation during Workshop on Second Generation Intact Stability Criteria within the 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018), 16-21 September 2018, Kobe, Japan
22. Bulian, G., "*Ship Dynamics in the Framework of Safety of Navigation*". Invited seminar at Consorzio LaMMA, Sesto Fiorentino, Firenze, Italy, 10-11 December 2018.
23. Bulian, G., "*Towards a more general and flexible ship damage stability assessment framework*" - Invited keynote at 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland

### **35) Reviewer for international journals**

- International Shipbuilding Progress (2006, 2007, 2008, 2010, 2013, 2014, 2017, 2018, 2021, 2022)
- Journal of Marine Science and Technology (2006, 2009, 2010, 2011, 2012, 2013, 2016, 2017, 2018, 2020, 2021, 2022, 2023)
- ASME Journal of Computational and Nonlinear Dynamics (2009, 2010)
- Ocean Engineering (2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)
- IEEE Transactions on Control System Technology (2011)
- Marine Systems & Ocean Technology - A Journal of SOBENA (2012)
- Mathematical Problems in Engineering (2012)
- Safety Science (2014, 2016)
- Journal of Hydrodynamics (2014)
- Applied Ocean Research (2014, 2015, 2016, 2021, 2022)
- Journal of Marine Science and Application (2015, 2022)
- Journal of Fluids and Structures (2015, 2016, 2017, 2018, 2019)
- Journal of Ocean Engineering and Science (2016)
- Journal of Offshore Mechanics and Arctic Engineering (2016)
- Physics of Fluids (2016)
- Ships and Offshore Structures (2017, 2018, 2019, 2020, 2021, 2022)
- Reliability Engineering & System Safety (2020)
- Marine Structures (2021)
- Brodogradnja (2021, 2022, 2023)
- International Journal of Maritime Engineering (2021)
- Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability (2023)

### **36) Reviewer for international conferences**

- 9th International Conference on Stability of Ships and Ocean Vehicles (STAB2006), Rio de Janeiro, 25-29 September 2006
  - ISOPE-2007, The 17th International Offshore (Ocean) and Polar Engineering Conference, Lisbon, Portugal, July 1-6, 2007
  - 47th IEEE Conference on Decision and Control, Fiesta Americana Grand Coral Beach, Cancun, Mexico, December 9-11, 2008
  - 2011 American Control Conference, San Francisco, California, USA, June 29 - July 1, 2011
  - ISOPE-2011, The 21st International Offshore (Ocean) and Polar Engineering Conference, Maui, Hawaii, USA, June 19-24, 2011
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- 31st International Conference on Ocean, Offshore and Arctic Engineering (OMAE2012), June 10-15, 2012, Rio de Janeiro, Brazil
- 11th International Conference on the Stability of Ships and Ocean Vehicles (STAB2012), 23-28 September 2012, Athens
- 32nd International Conference on Ocean, Offshore and Arctic Engineering (OMAE2013), June 9-14, 2013, Nantes, France
- 33rd International Conference on Ocean, Offshore and Arctic Engineering (OMAE2014), June 8-13, 2014, San Francisco, CA, USA
- 3rd International Conference on electrical systems for aircraft, railway, ship propulsion and road vehicles (ESARS2015), March 3rd-5th 2015, Aachen – Germany
- 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 June 2015, Glasgow, Scotland, UK
- 16<sup>th</sup> International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport, 21-24 September 2015, Pula, Croatia
- 35th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2016), June 19-24, 2016, Busan, Korea
- 36th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2017), June 24-30, 2017, Trondheim, Norway
- International Conference on Ships and Offshore Structures (ICSOS2017), 11-13 September 2017, South University of Science and Technology of China, Shenzhen, China
- 37th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), June 17-22, 2018, Madrid, Spain
- 13th International Conference on the Stability of Ships and Ocean Vehicles (STAB2018), 16-21 September 2018, Kobe, Japan
- 7th International Maritime Conference on Design for Safety (DfS 2018), 16-21 September 2018, Kobe, Japan
- 17th International Ship Stability Workshop, 10-12 June 2019, Helsinki, Finland
- Sustainable and Safe Passenger Ships 2020, 4th March 2020, Piraeus, Greece.
- 39th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2020). Originally planned for June 28-July 3, 2020, Fort Lauderdale, Florida, USA . Later shifted online 3-7 August 2020.
- 30th International Offshore (Ocean) and Polar Engineering Conference (ISOPE-2020), October 12-16, 2020, Originally planned in Shanghai, China, later shifted Online.
- 4th International Conference on Renewable Energies Offshore (RENEW 2020), 12 - 15 October 2020, Lisbon, Portugal (mixed in-person / online)
- 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland
- International Conference on Ships and Offshore Structures (ICSOS 2021), 6-8 September 2021, online, organized by Hamburg University of Technology, Germany.
- 18th International Ship Stability Workshop, 12-14 September 2022, Gdansk, Poland.

### **37) Reviewer for book chapters**

- “*Contemporary Ideas on Ship Stability – Risk of capsizing*”, Belenky, V.L., Spyrou, K.J., van Walree, F., Almeida Santos Neves, M., Umeda, N. (Eds.), Springer, 2019, ISBN 978-3-030-00516-0 (eBook) 978-3-030-00514-6 (print) (reviews carried out in 2017)
- “*Contemporary Ideas on Ship Stability - From Dynamics to Criteria*”, Springer (reviews carried out in 2020 and 2021)

### **38) PhD: reviewer of thesis and/or participant to final examination board**

- Míguez González, M., "*A Study of Ship Parametric Roll Resonance for the Evaluation of Preventive Strategies*", Universidade da Coruña, Spain, 2012
  - Breu, D.A., “*Frequency Detuning of Parametric Roll Resonance*”, Norwegian University of Science and Technology, Norway, 2013
  - Mata Álvarez-Santullano, F., “*Fishing effort control regulations influence on stability, safety and operability of small fishing vessels: study of a series of stability related accidents occurred in Spain between 2004 and 2007*”, Universidad Politécnica de Madrid, Spain, 2014
  - Petacco, N., “*Second Generation Intact Stability criteria: Analysis, Implementation and Applications to significant ship typologies*”, University of Genova, Italy, 2019
-

- Karolius, K.B., “*Risk-Based, sensor-fused detection of flooding casualties for emergency response*”, Maritime Safety Research Centre (MSRC), Department of Naval architecture, Ocean and Marine engineering, University of Strathclyde, UK, 2019
- Luthy, V., “*Probability of occurrence of parametric roll on a predefined sea state*”, École nationale supérieure d'arts et métiers (ENSAM), France, 2023

***CURRICULUM VITAE***

*(Ultimo aggiornamento: 05 agosto 2023)*

CURRICULUM VITAE .....	1
1) Dati personali.....	2
2) Informazioni professionali.....	2
3) Posizione attuale .....	2
4) Abilitazione Scientifica Nazionale .....	2
5) Posizioni precedenti.....	2
6) Laurea e Dottorato di Ricerca.....	2
7) Partecipazioni a corsi.....	2
8) Partecipazioni a conferenze e workshop.....	3
9) Partecipazioni a riunioni e sessioni IMO.....	4
10) Collaborazioni e visite (più rilevanti).....	5
11) Partecipazione a progetti di ricerca.....	6
12) Partecipazione a progetti di ricerca in qualità di responsabile di progetto.....	6
13) Attività di tipo "Conto Terzi" .....	6
14) Principali attività sperimentali condotte al di fuori dell'Università di Trieste.....	6
15) Attività di coordinamento ed editoriali, attività come chairman in occasione di convegni .....	7
16) Appartenenza a comitati tecnici/scientifici.....	8
17) Borse di studio/Premi/Borse di mobilità.....	8
18) Argomenti di ricerca .....	9
19) Titolarità di insegnamenti (completi o in co-docenza).....	9
20) Lezioni ed esercitazioni tenute nell'ambito di corsi.....	10
21) Seminari/lezioni su invito (Università).....	10
22) Supervisore/co-supervisore di dottorandi/tesi di Dottorato (PhD).....	11
23) Relatore di tesi di laurea .....	12
24) Correlatore di tesi di laurea.....	12
25) Altre attività accademiche (più rilevanti) .....	13
26) Attività di valutazione (più rilevanti) .....	14
27) Pubblicazioni: Riviste Internazionali, Transactions .....	15
28) Pubblicazioni in Libri .....	17
29) Pubblicazioni: Conferenze Internazionali.....	18
30) Pubblicazioni: Conferenze Nazionali .....	22
31) Abstract su Rivista.....	22
32) Rapporti Tecnici (più rilevanti) .....	22
33) Partecipazione alla stesura di documenti IMO (International Maritime Organization) .....	24
34) Presentazioni, Keynote/Lezioni su invito, Workshop, Seminari.....	26
35) Revisore per riviste internazionali .....	27
36) Revisore per conferenze internazionali .....	28
37) Revisore per capitoli di libro .....	28
38) Tesi di dottorato (PhD): revisore di tesi e/o membro di commissione di valutazione.....	29

## **1) Dati personali**

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Profilo Google Scholar: <https://scholar.google.com/citations?user=ycvLo8oAAAAJ>

## **2) Informazioni professionali**

Titolo di Laurea: Dottore in Ingegneria Navale

Titolo di Dottorato: Dottore di Ricerca in Ingegneria Navale e Marina

Abilitazione professionale: Abilitato all'esercizio della professione di ingegnere (II sessione, anno 2003) con iscrizione all'albo dell'Ordine degli Ingegneri di Trieste dal 9 Marzo 2004 (Sezione A - Settori: civile e ambientale, industriale, dell'informazione).

## **3) Posizione attuale**

- Professore Associato presso il Dipartimento di Ingegneria e Architettura, Università degli Studi di Trieste. Settore Scientifico Disciplinare (SSD): "ING-IND/01 – Architettura Navale". Dal 01 Novembre 2018.

## **4) Abilitazione Scientifica Nazionale**

- Abilitato per l'accesso al ruolo di professore universitario di II fascia (professore associato) nel settore concorsuale "09/A1 – Ingegneria Aeronautica, Aereospaziale e Navale". Periodo di validità dell'abilitazione: 03 Febbraio 2014 – 03 Febbraio 2020 (Progressione di carriera da Ricercatore a Professore Associato: 01 Novembre 2018).

## **5) Posizioni precedenti**

- Dottorando presso il Dipartimento di Ingegneria Navale, del Mare e per l'Ambiente, Università di Trieste, periodo Gennaio 2003-Dicembre 2005.
- Ricercatore presso "Department of Naval Architecture and Ocean Engineering", Università di Osaka, Osaka, Giappone, grazie ad una borsa di studio post-doc (PE05052) finanziata dalla Japan Society for the Promotion of Science (JSPS) per il periodo Dicembre 2005-Novembre 2006 (11 mesi).
- Ricercatore confermato presso il Dipartimento di Ingegneria e Architettura, Università degli Studi di Trieste. Settore Scientifico Disciplinare (SSD): "ING-IND/01 – Architettura Navale". Periodo 15 Dicembre 2006 – 31 Ottobre 2018.

## **6) Laurea e Dottorato di Ricerca**

- Conseguimento del titolo di Laurea in Ingegneria Navale il 16/10/2002 presso l'Università degli Studi di Trieste, con voto finale 110/110 e lode. Titolo della tesi: "*Rollio Parametrico in Mare Regolare e Stocastico*". Relatore: Prof. A. Francescutto, Correlatore: Prof. A. Cardo.
- Conseguimento del titolo di Dottore di Ricerca in Ingegneria Navale e Marina, Università degli Studi di Trieste, 31/03/2006 – Anno Accademico 2005/2006. Titolo della tesi: "*Development of analytical nonlinear models for parametric roll and hydrostatic restoring variations in regular and irregular waves*" (Settore Scientifico Disciplinare "ING-IND/01 Architettura Navale"). Relatore: Prof. A. Francescutto.

## **7) Partecipazioni a corsi**

- "Stability of Ships", DCAMM Ph.D.-Course / Advanced School, tenutosi al Danish Center for Applied Mathematics and Mechanics (DCAMM), Technical University of Denmark, Lyngby, 10-18 Giugno 2002.
- Serie di lezioni "Ship manoeuvring", tenute dal Prof. K.J. Spyrou all'Università di Strathclyde, Glasgow, 24-28 Febbraio 2003.
- "OPTIMISTIC – Optimization in Marine Design", 39<sup>th</sup> WEGEMT Summer School, Technical University of Berlin, 19-23 Maggio 2003.
- "First RISC/SCIENCE Training School in Symbolic Computation", 5-16 February 2007, Castle of Hagenberg, Austria, organizzata dal Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- OPENFOAM Training Course, Politecnico di Milano, Milano, Italia, 9 Luglio 2008.

- "SCSM - Scuola di Calcolo Scientifico con Matlab - Modulo 2: Calcolo Parallelo con MATLAB in ambiente HPC e Grid", Università degli Studi di Palermo, Italia, 5-9 Settembre 2011.
- "Analisi Dinamica con Applicazioni agli Elementi Finiti", Consorzio TCN – Tecnologie per il Calcolo Numerico – Centro Superiore di Formazione, Bergamo, Italia, 5-7 Febbraio 2014.
- "Tras-Formazione - Capitalizzare, sviluppare, rinforzare, innovare il patrimonio delle competenze didattiche di UniTS", 12h, Giugno - Luglio 2022. Organizzato da Università degli Studi di Trieste e Elidea Psicologi Associati.

## **8) Partecipazioni a conferenze e workshop**

(nell'elenco che segue, la partecipazione come relatore è esplicitamente riportata con l'indicazione "(R)")

- 5<sup>th</sup> International Workshop on Ship Stability and Operational Safety, Trieste, 11-14 Settembre 2001.
- International Conference on Marine Science and Technology for Environmental Sustainability (ENSUS2002), Newcastle, 16-18 Dicembre 2002.
- Conferenza Internazionale "Passenger Ship Safety", organizzata dalla Royal Institution of Naval Architects (RINA), 24-25 Marzo 2003, con il contributo di una borsa di studio fornita dal BMT Limited Group.
- International Conference on Ship and Shipping Research - NAV2003, Palermo, 24-27 Giugno 2003. (R)
- 8<sup>th</sup> International Conference on Stability of Ships and Ocean Vehicles – STAB2003, Madrid, 15-19 Settembre 2003. (R)
- 2<sup>nd</sup> International Maritime Conference on Design for Safety, 27-30 Ottobre 2004, Sakai, Giappone. (R)
- 7<sup>th</sup> International Ship Stability Workshop, 1-3 Novembre 2004, Shanghai, Cina. (R)
- "High-Speed Craft: Design and Operation", Conferenza Internazionale organizzata dalla Royal Institution of Naval Architects (RINA), 17-18 Novembre 2004, con il contributo di una borsa di studio fornita dal RINA.
- Conferenza Internazionale "Fishing Vessels, Fishing Technology & Fisheries" organizzata dal RINA, 13-14 Aprile 2005, Newcastle, UK. (R)
- Conferenza "Applications of Dynamical Systems" organizzata dalla Society for Industrial and Applied Mathematics (SIAM), 22-26 Maggio 2005, Snowbird, Utah. (R)
- Spring Meeting della Japan Society of Naval Architects and Ocean Engineers (JASNAOE), 25-26 Maggio 2006, Osaka, Giappone. (R)
- Conferenza Internazionale "Design & Operation of Passenger Ships" organizzata dalla Royal Institution of Naval Architects (RINA), 25-26 April 2007, Londra, UK. (R)
- IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering, 23-27 Luglio 2007, Amburgo, Germania. (R)
- 10<sup>th</sup> International Ship Stability Workshop (ISSW2008), 23-25 Marzo 2008, Daejeon, Corea del Sud. (R)
- Osaka Colloquium 2008, 26-29 Marzo 2008, Osaka, Giappone. (R)
- 3<sup>rd</sup> OPENFOAM Workshop, Politecnico di Milano, 10-11 Luglio 2008, Milano, Italia
- International Workshop on Dynamic Stability Considerations in Ship Design (DSCSD Workshop), 14-15 Settembre 2009, Iława, Polonia. (R)
- 16<sup>th</sup> International Conference of Ship and Shipping Research (NAV2009), Messina (Italy), 25-27 Novembre 2009. (R)
- 13<sup>th</sup> International Conference On Transport Science (ICTS 2010), 27<sup>th</sup> - 28<sup>th</sup> May 2010, Portorose, Slovenia. (R)
- 2<sup>nd</sup> International Workshop on Dynamic Stability Considerations in Ship Design, 2-3 September 2010, Windsor, Londra, UK. (R)
- GOALDS Workshop, 8-9 September 2010, Glasgow, UK. EU-FP7 "GOAL Based Damage Stability" project, 233876. (R)
- 12<sup>th</sup> International Ship Stability Workshop (ISSW2011), 12-15 June 2011, Washington D.C., USA. (R)
- Workshop on Parametric Resonance in Dynamical Systems, 22-26 June 2011, Longyearbyen, Svalbard, Norway - Organizzato da "Norwegian University of Science and Technology" (NTNU). (R)
- International Workshop on Risk-based Design for Maritime Safety and Marine Environment Protection, National Maritime Research Institute (NMRI) & Nippon Kaiji Kyokai (ClassNK), 11-12 October 2011, Tokyo, Giappone. (R)
- 11<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2012), 23-28 Settembre 2012, Athens, Greece. (R)
- GOALDS Final Workshop, 28 September 2012, Atene, Grecia. EU-FP7 "GOAL Based Damage Stability" project, 233876.
- Qualitative Theory of Nonlinear Differential Equations 2013 (QTNDE2013), Trieste, Italia, 30 Gennaio - 01 Febbraio 2013.

- First International Conference “Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region”, 17-19 Luglio 2013, Iquitos, Peru. (R)
- 13<sup>th</sup> International Ship Stability Workshop (ISSW2013), 23-26 Settembre 2013, Brest, Bretagna, Francia.
- First Maritime Europe Strategy Action (MESA) Workshop, “Designing Waterborne RDI Strategies”, 5 Marzo 2014, Bruxelles, Belgio. (R)
- Seguridad para la navegación y construcción naval, Universidad Católica Santo Toribio de Mogrovejo (USAT), 9-10 Maggio 2014, Chiclayo, Peru. (R)
- 14<sup>th</sup> International Ship Stability Workshop (ISSW2014), 29 Settembre – 01 Ottobre 2014, Kuala Lumpur, Malesia.
- 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 Giugno 2015, Glasgow, Scozia, UK. (R)
- Workshop: "Level 3 of the second generation intact stability criteria and its Operational Guidance – latest developments and outlook", 21 Gennaio 2016, International Maritime Organization, London, UK. (R)
- 15<sup>th</sup> International Ship Stability Workshop (ISSW2016), 13 – 15 Giugno 2016, Stoccolma, Svezia.
- 26<sup>th</sup> European Safety and Reliability Conference (ESREL2016), 25-29 September 2016, Glasgow, Scotland, UK. (R)
- Mini-Symposium on Ship Design, Ship Hydrodynamics & Maritime Safety, 30 September 2016, Athens, Greece.
- 16<sup>th</sup> International Ship Stability Workshop (ISSW2017), 5 – 7 Giugno 2017, Belgrado, Serbia.
- 27<sup>th</sup> European Safety and Reliability Conference (ESREL2017), 18-22 September 2017, Portoroz, Slovenia.
- Accelerating and Parallelizing MATLAB Code on HPC infrastructure, CINECA, Caselecchio di Reno, Bologna, Italia, 30 Maggio 2018.
- 37<sup>th</sup> International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), 17-22 Giugno 2018, Madrid, Spagna. (R)
- 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018) & 7<sup>th</sup> International Maritime Conference on Design for Safety (DfS2018), 16-21 Settembre 2018, Kobe, Giappone. (R)
- “HOListic optimisation of SHIP design and operation for life cycle (HOLISHIP)” Project - Year 2 Public Workshop, 27 Settembre 2018, Trieste, Italia.
- 17<sup>th</sup> International Ship Stability Workshop (ISSW2019), 10 – 12 Giugno 2019, Helsinki, Finlandia. (R)
- Matlab EXPO 2021, 4-5 May 2021, Online
- 5th Joint ISSC/ITTC International Workshop, 1 - 3 June 2021, Organised by the Joint ISSC/ITTC Committee on Uncertainty Modelling, with the local support of CENTEC-IST, Online
- 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland, Online. (R)
- 18<sup>th</sup> International Ship Stability Workshop (ISSW2022), 12 – 14 September 2022, Gdańsk, Polonia.

## 9) Partecipazioni a riunioni e sessioni IMO

- Riunione dell' "IMO Intersessional Correspondence Group for the revision of the Intact Ship Stability Code", Trieste, Febbraio 2004
  - SLF 47 (13-17 Settembre 2004, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - MSC 79 (Dicembre 2004, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - Riunione dell' "Intersessional Working Group on Subdivision and Damage Stability" (19-21 gennaio 2005, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - Riunione dell' "IMO Intersessional Correspondence Group for the revision of the Intact Ship Stability Code ", Stettino, 27 Febbraio – 2 Marzo 2005.
  - SLF 48 (12-16 Settembre 2005, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - Riunione dell' "IMO Intersessional Correspondence Group for the revision of the Intact Ship Stability Code ", Mitaka, Tokyo, 6– 8 Marzo 2006, come membro della delegazione Giapponese.
  - SLF 49 (24-28 Luglio 2006, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - SLF 50 (30 aprile - 4 Maggio 2007, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
  - SLF 51 (14-18 Luglio 2008, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
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- Incontro di coordinamento del gruppo italiano SLF-IMO in preparazione della SLF52, ("Comando Generale delle Capitanerie di Porto - Ministero dei Trasporti", Roma, Italia, 18 gennaio 2010)
- SLF 52 (25-29 Gennaio 2010, IMO, Londra, UK) come "observer" (componente tecnico) della Delegazione Italiana.
- SLF 53 (10-14 Gennaio 2011, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SLF 54 (16-20 Gennaio 2012, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SLF 55 (18-22 Gennaio 2013, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 1 (20-24 Gennaio 2014, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 2 (16-20 Febbraio 2015, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 3 (18-22 Gennaio 2016, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 4 (13-17 Febbraio 2017, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 5 (22-26 Gennaio 2018, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 6 (4-8 Febbraio 2019, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 7 (3-7 Febbraio 2020, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 8 (17-21 Gennaio 2022, IMO - Online) come "adviser" (componente tecnico) della Delegazione Italiana.
- SDC 9 (23-27 Gennaio 2023, IMO, Londra, UK) come "adviser" (componente tecnico) della Delegazione Italiana (partecipazione nelle giornate 23-25 Gennaio 2023).

#### **10) Collaborazioni e visite (più rilevanti)**

- 15 Aprile 2005, invitato presso lo Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, nell'ambito del progetto europeo "SAFEDOR". Argomento: "SP2.1 – Fast and Accurate Flooding Prediction".
- 2-6 Maggio 2005, invitato presso lo Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, nell'ambito del progetto europeo "SAFEDOR". Argomento: "SP2.1 – Fast and Accurate Flooding Prediction".
- 25-29 Luglio 2005, invitato presso lo Ship Stability Research Centre, University of Strathclyde, Glasgow, UK, nell'ambito del progetto europeo "SAFEDOR". Argomento: "SP2.1 – Fast and Accurate Flooding Prediction".
- 21 Febbraio-1 Marzo 2009, invitato presso Dept. of Naval Architecture and Ocean Engineering, Osaka University, Osaka, Japan, nell'ambito del lavoro di ricerca sullo sviluppo degli "IMO New Generation Intact Stability Criteria" e come partecipante alla discussione delle presentazioni di tesi dei laureandi (MSc).
- 04-21 Marzo 2012, invitato presso Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) nell'ambito di collaborazioni di ricerca.
- 03-27 Marzo 2013, invitato presso Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) nell'ambito di collaborazioni di ricerca.
- 11-16 Maggio 2014, invitato da la Escuela Superior Politécnica del Litoral (ESPOL), Facultad de Ingeniería Marítima, Ciencias Biológicas, Oceánicas y Recursos Naturales (FIMCBOR) come docente del seminario "Advanced Dynamics and Safety of Ships" (18h)
- 20-24 Aprile 2015, invitato presso "Integrated Group of Engineering Research, University of Coruna, Spain" nell'ambito di collaborazioni di ricerca e attività seminariali di insegnamento riguardanti la sicurezza e la stabilità delle navi.
- 23-28 Giugno 2016, invitato presso la "University of Belgrade, Faculty of Mechanical Engineering", nell'ambito di collaborazioni di ricerca riguardanti la stabilità, la dinamica e la sicurezza delle navi, e per tenere una lezione presso la "Society of Naval Architects of Serbia" sul tema della dinamica nave nonlineare e associate verifiche di stabilità a nave integra.
- 19-24 Aprile 2019, invitato presso la "University of Belgrade, Faculty of Mechanical Engineering", nell'ambito di collaborazioni per scambi internazionali, collaborazioni di ricerca riguardanti la stabilità, la dinamica e la sicurezza delle navi, e per tenere una lezione sul tema della normativa SOLAS probabilistica armonizzata di compartimentazione e stabilità in condizione di allagamento.

- 14-22 Dicembre 2019, invitato presso Universidad Politécnica de Madrid (UPM) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) nell'ambito di collaborazioni di ricerca.

### **11) Partecipazione a progetti di ricerca**

- Progetto Europeo: "*Design, Operation and Regulation for Safety*" (SAFEDOR), 6th Framework Programme for Research and Technological Development (FP6), Project No. IP-516278. Durata del progetto: Febbraio 2005 - Gennaio 2009. Partecipazione come *sub-contractor*.
- "*Studio e validazione sperimentale di criteri alternativi di progettazione per il miglioramento della sicurezza e delle prestazioni idrodinamiche delle navi*", Consorzio per l'Alta Ricerca Navale (RINAVE), 01 Gennaio 2008 - 31 Marzo 2011.
- "*Determination of Relevant Parameters for the Alternative Assessment of Intact Stability Weather Criterion On Experimental Basis*", Project HYD-III-CEH-5, supported by the European Community's Sixth Framework Programme through the grant to the budget of the Integrated Infrastructure Initiative HYDRALAB III, Contract no. 022441 (RII3). Attività sperimentale nel 2008. Durata indicativa dell'attività di ricerca legata al progetto: Dicembre 2007-Novembre 2009.
- Progetto Europeo: "*GOAL Based Damage Stability*" (GOALDS), 7th Framework Programme Theme [FP7-SST-2008-RTD-1], Grant agreement no. 233876. Durata del progetto: Settembre 2009 - Ottobre 2012.

### **12) Partecipazione a progetti di ricerca in qualità di responsabile di progetto**

- "Direct intact stability assessment and operational guidance to the master in the framework of International Maritime Organization Second Generation Intact Stability Criteria: development of tools and procedures for safety assessment with particular attention to cargo securing", Schema di finanziamento: "Finanziamento per la Ricerca di Ateneo – FRA 2011" (Università degli Studi di Trieste), Progetto selezionato sulla base di valutazione comparativa con revisione esterna, Periodo: Marzo 2012 - Febbraio 2014.

### **13) Attività di tipo "Conto Terzi"**

- "Study on the Application to Superyachts of Proposals for Parametric Roll Level 1 Vulnerability Criteria in the Framework of the Development of IMO Second Generation Intact Stability Criteria". Attività commissionata da: SYBASS (Superyacht Builders Association). Ruolo: responsabile dell'attività. Periodo 2011-2012.
- "Attività di supporto nel settore della progettazione navale e simulazione numerica di operazioni di messa a mare e recupero mezzi in condizioni meteorologiche avverse". Attività commissionata da: Marina Militare Italiana. Ruolo: referente tecnico dell'attività "A2.6 - Verifica delle variazioni di stabilità allo stato integro in mare ondosso e controllo di possibile insorgenza di rollio parametrico" e partecipante all'attività "A2.7 - Determinazione dell'operatività del mezzo (moti verticali) sulla base di calcoli di moti nave basati su strip-theory e dati di moto ondosso di alta qualità" per la parte riguardante i calcoli di seakeeping. Periodo: 2011-2012.
- Partecipazione al progetto internazionale finanziato da EMSA (European Maritime Safety Agency) "*Study assessing the acceptable and practicable risk level of passenger ships related to damage stability*" (EMSA/OP/10/2013). Project leader: DNV-GL. Numero totale di partners: 16. Ruolo: responsabile per l'Università degli Studi di Trieste. Partecipazione al Task 3: Evaluation of risk from raking damages due to grounding. Period: 2013 - 2015.
- Attività di ricerca e sviluppo in supporto alla progettazione nel campo "Intact Stability". Fincantieri SpA. Ruolo: responsabile dell'attività. Periodo: 2015.
- International Joint Industry Project "*eSAFE – enhanced Stability After a Flooding Event – A joint industry project on Damage Stability for Cruise Ships*". Ruolo: responsabile per l'Università degli Studi di Trieste, leader di "work package" nell'ambito del progetto. Periodo: 2017 – 2018 (14 mesi).
- Progetto di ricerca "*Driving a Quantum Ship - A quantum-secured autonomous communication link for autonomous shipping: a feasibility study*". Progetto di ricerca finanziato da European Space Agency (ESA), partecipazione tramite subcontratto finanziato da PICOSATS srl. Ruolo: partecipante al progetto per l'attività di previsione moti nave. Periodo: 2021 – 2022.
- Progetto di ricerca "*SGISC*". Fincantieri SpA. Ruolo: responsabile dell'attività. Periodo: maggio 2021 – Maggio 2023.

### **14) Principali attività sperimentali condotte al di fuori dell'Università di Trieste**

- Laboratorio idrodinamico dell'INSEAN, Roma, Italia, Novembre 2002: Esperimenti sul rollio parametrico in mare regolare e irregolare.
  - Schiffbautechnische Versuchsanstalt (Vasca Navale di Vienna), Vienna, Austria, Giugno 2003: Esperimenti di rollio forzato nell'ambito di una ricerca congiunta tra DINMA e Fincantieri riguardante il Criterio Meteorologico.
  - Schiffbautechnische Versuchsanstalt (Vasca Navale di Vienna), Vienna, Austria, Novembre 2003: Esperimenti di rollio forzato nell'ambito del Progetto Europeo SAFENVSHIP
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- Schiffbautechnische Versuchsanstalt (Vasca Navale di Vienna), Vienna, Austria, 20-23 Gennaio 2004: Esperimenti di rollio forzato nell'ambito di una ricerca congiunta tra DINMA e Fincantieri riguardante il Criterio Meteorologico.
- Laboratorio Idrodinamico dell'INSEAN, Roma, Italia, Maggio/Giugno 2004: esperimenti sul rollio parametrico in mare regolare e irregolare, analisi di ergodicità e misura di momento raddrizzante in onde.
- Università di Osaka, Giappone, Marzo 2006: prove sperimentali di rollio parametrico in mare longitudinale regolare per una porta contenitori post-panamax.
- Università di Osaka, Giappone, Giugno 2006: prove sperimentali di rollio parametrico in mare longitudinale irregolare per una porta contenitori post-panamax.
- CEHIPAR, Madrid, Spagna, Luglio/Agosto 2008: esperimenti collegati al progetto di ricerca "*Determination of relevant parameters for the alternative assessment of Intact Stability Weather Criterion on experimental basis*" finanziato nell'ambito del Sesto Programma Quadro (FP6) della Comunità Europea tramite il Contratto no. 022441 (RII3) all'interno della "Integrated Infrastructure Initiative HYDRALAB III".
- Laboratorio idrodinamico CEHINAV, Madrid, Spagna, Dicembre 2019: esperimenti di resistenza al traino in acqua calma e in mare ondoso per una struttura offshore galleggiante per generazione di energia eolica. Gli esperimenti rappresentavano un'estensione delle attività condotte da Universidad Politécnica de Madrid (UPM) nell'ambito del progetto EU INTERREG ARCWIND, coordinato da CENTEC, Instituto Superior Técnico, Lisbon, Portugal. L'attività è stata svolta nell'ambito di collaborazioni di ricerca con il gruppo di ricerca del Canal de Ensayos Hidrodinámicos (CEHINAV) - Escuela Técnica Superior de Ingenieros Navales (ETSIN) - Universidad Politécnica de Madrid (UPM).

### **15) Attività di coordinamento ed editoriali, attività come chairman in occasione di convegni**

- Marzo/Maggio 2005 – Coordinatore dello "Splinter Group" per lo sviluppo delle linee guida per la verifica sperimentale del Criterio Meteorologico, nell'ambito della revisione del Codice di Stabilità a Nave Integrale all'IMO, così come deciso durante la riunione dell' "Intact Stability Correspondence Group" tenutasi a Stettino (Febbraio/Marzo 2005).
- Co-Organizzatore della Sessione 4 "Probabilistic Assessment of Intact Stability" del "10th International Ship Stability Workshop", 23-25 Marzo 2008, Daejeon, Corea del Sud
- Interim coordinator del comitato internazionale "Stability R&D Committee" (periodo: 2011-2012)
- Chairman del comitato internazionale "Stability R&D Committee" (periodo: Luglio 2012-Giugno 2015)
- Co-Organizzatore della Sessione "Risk-Based Assessment of Ship Stability (Intact & Damage)" del "13th International Ship Stability Workshop", 23-26 Settembre 2013, Brest (Francia)
- Curatore scientifico, insieme a Alberto Francescutto e Manuel Arcenio Urcia Larios, degli Atti della Prima Conferenza Internazionale "Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region", 17-19 July 2013, Iquitos, Peru.
- Co-Organizzatore del Workshop "Ship Stability and Safety through Operational Measures", tenutosi durante la "12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015)", 14-19 Giugno 2015, Glasgow, Scozia, UK
- Chairman della sessione "Safety & Security (2)" durante 16th International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport, 21-24 September 2015, Pula, Croatia
- Co-Organizzatore della Sessione "Operational Aspects" del "15th International Ship Stability Workshop", 12-15 Giugno 2016, Stoccolma, Svezia
- Co-Organizzatore della Sessione "Stability and safety of inland and river-sea ships" durante 16th International Ship Stability Workshop, 5-7 Giugno 2017, Belgrado, Serbia
- Membro del Comitato Editoriale della Rivista "International Shipbuilding Progress" (periodo: da Novembre 2017)
- Chairman della sessione "12-2-2 Floater Dynamics and Hydrodynamics - 2" durante 37th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), 17-22 Giugno 2018, Madrid, Spagna
- Chairman di "S&D 5: Probability (3)": sessione congiunta di 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018) & 7<sup>th</sup> International Maritime Conference on Design for Safety (DfS2018), 16-21 Settembre 2018, Kobe, Japan
- Co-Organizzatore della Sessione "Presentation and discussion of outcomes from eSAFE - enhanced Stability After a Flooding Event - A joint industry project on Damage Stability for Cruise Ships", durante 17th International Ship Stability Workshop, 10-12 Giugno 2019, Helsinki, Finlandia
- Deputy Editor per "Journal of Marine Science and Technology" (periodo: da Giugno 2020)
- Membro del Comitato Editoriale della Rivista "Brodogradnja" (periodo: da Settembre 2021)
- Membro della 'Associate Board' della Rivista "Journal of Marine Science and Application (JMSA)" (periodo: da Novembre 2021)
- Co-Organizzatore della Sessione "Stability and safety of special vessels" durante 18th International Ship Stability Workshop (ISSW 2022), 12-14 Settembre 2022, Gdansk, Polonia

- Membro della Advisory Board per la serie di volumi “Progress in Marine Science and Technology” (IOS Press). Periodo: dal 2022.
- Co-Organizzatore della Sessione “Stability and safety of special vessels” durante 18th International Ship Stability Workshop (ISSW 2023), previsto per 11-13 Settembre 2023, Istanbul, Turchia

## **16) Appartenenza a comitati tecnici/scientifici**

- Febbraio 2006-Febbraio 2007: Membro del comitato giapponese SCAPE (Strategic Research Committee on Estimation Methods of Capsizing Risk for the IMO New Generation Stability) creato dalla Japan Society of Naval Architects and Ocean Engineers (JASNAOE).
- Membro del comitato internazionale "Stability R&D Committee" (2011 – Marzo 2016)
- Membro del comitato scientifico dello "Joint 19th International Conference on HYDroynamics in Ship Design and 4th International Symposium on Ship MANoeuvring - HYDMAN2012", 19-21 Settembre 2012, Hawa, Polonia
- Membro del comitato scientifico della First International Conference “Safety and Energy Efficiency in River Transportation for a Sustainable Development of the Peruvian Amazon Region”, 17-19 Luglio 2013, Iquitos, Peru.
- Membro del comitato scientifico dello "16th International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport", 21-24 Settembre 2015, Pola, Croazia
- Membro del comitato tecnico internazionale della "RINA International Conference on Ship & Offshore Technology (ICSOT) – India 2015 – ‘Coastal and Inland Shipping’ ", 10-11 Dicembre 2015, Kharagpur, India
- Membro del comitato internazionale "STAB International Standing Committee". Da Giugno 2015.
- Membro del comitato tecnico internazionale della "RINA International Conference on Ship & Offshore Technology (ICSOT) – India 2017 – ‘Innovations in Ocean Structures’ ", 7-8 Dicembre 2017, Kharagpur, India
- Membro del comitato scientifico della “International Conference on Ships and Offshore Structures (ICSOS 2018)”, 17-19 Settembre 2018 a Göteborg, Svezia.
- Membro del gruppo di lavoro permanente sulla sicurezza della navigazione, istituito dal Comando Generale del Corpo delle Capitanerie di Porto, Ministero delle Infrastrutture e dei Trasporti / Ministero delle infrastrutture e della mobilità sostenibili, Italia. Periodo: da Aprile 2018.
- Membro del comitato scientifico della “International Conference on Ships and Offshore Structures (ICSOS 2019)”, 4-8 Novembre 2019 a bordo della nave Carnival Liberty.
- Membro del comitato tecnico internazionale della "6<sup>th</sup> International Conference on Ship & Offshore Technology (ICSOT – India 2019) – ‘Dynamics of Ocean Structures’ ", organizzata dalla Royal Institution of Naval Architects (RINA-UK) e dal Department of Ocean Engineering and Naval Architecture at Indian Institute of Technology Kharagpur, 7-8 Novembre 2019, Kharagpur, India
- Membro del comitato scientifico della conferenza “Sustainable and Safe Passenger Ships 2020”, 4 Marzo 2020 a Pireo, Grecia.
- Membro del comitato scientifico della “International Conference on Ships and Offshore Structures (ICSOS 2020)”, 1-3 Settembre 2020, online, organizzata da University of Strathclyde, Glasgow, UK.
- Membro del comitato scientifico della “International Conference on Ships and Offshore Structures (ICSOS 2021)”, 6-8 settembre 2021, online, organizzata da Hamburg University of Technology, Germania.
- Membro del Technical Programme Committee della “6th International Conference on Maritime Technology and Engineering (MARTECH 2022)”, 24-26 Maggio 2022, Lisbona, Portogallo & online.
- Membro del comitato scientifico della “International Conference on Ships and Offshore Structures (ICSOS 2022)”, 17-18 ottobre 2022, online, organizzata da Norwegian University of Science and Technology, Norvegia.

## **17) Borse di studio/Premi/Borse di mobilità**

- Assegnatario di una borsa di Dottorato in Ingegneria Navale e Marina finanziata dall'Università di Trieste - XVIII Ciclo di Dottorato 2003-2005 (Università di Trieste). Anno: 2003.
- Assegnatario di una borsa di Dottorato in Ingegneria Navale e Marina finanziata dall' dall'INSEAN (Istituto Nazionale per Studi ed Esperienze di Architettura Navale) per il XVIII Ciclo di Dottorato 2003-2005 (Università di Trieste). Anni: 2004-2005.
- Assegnatario di una borsa di studio di 11 mesi fornita dalla "Japan Society for the Promotion of Science (JSPS)" per condurre attività di ricerca in Giappone in collaborazione con l'Università di Osaka, a partire da Dicembre 2005. Argomento della ricerca: "Analisi del rollio parametrico nonlineare tramite un approccio modulare in vista dello sviluppo dei nuovi "Performance Based Criteria" per la verifica di stabilità a nave integra nell'ambito del programma a lungo termine così come deciso dall'International Maritime Organization".
- Assegnatario di una borsa di studio fornita dal Research Institute for Symbolic Computation (Johannes Kepler University, Linz, Austria) per la partecipazione a “First RISC/SCIENCE Training School In Symbolic

Computation”, 5-16 February 2007, Castle of Hagenberg, Austria. Borsa di studio finanziata da “European Commission Framework 6 Programme for Integrated Infrastructures Initiatives” nell’ambito del progetto SCIENCE.

- Assegnatario, nel 2008, del “Samuel Baxter Prize” conferito dalla Royal Institution of Naval Architects (RINA) per l’articolo “*Safety and Operability of Fishing Vessels in Beam and Longitudinal Waves*”, giudicato come il miglior articolo pubblicato da un autore sotto i 30 anni nelle Transactions 2007 e riguardante problemi legati alla sicurezza.
- ERASMUS/LLP Mobility Programme Teaching Staff A.A. 2011/12: supporto finanziario per un periodo di insegnamento di 6 giorni (05/03/2012-10/03/2012) presso Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)
- ERASMUS/LLP Mobility Programme Teaching Staff A.A. 2012/13: supporto finanziario per un periodo di insegnamento di 5(+2) giorni (04/03/2013 - 09/03/2013) presso Universidad Politécnica de Madrid (UPM) - Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)
- ERASMUS+ Mobility Programme Teaching Staff A.A. 2017/18: supporto finanziario per un periodo di insegnamento di 5(+2) giorni (23/04/2018 - 27/04/2018) presso University of Belgrade – Faculty of Mechanical Engineering – Department of Naval Architecture
- ERASMUS+ Mobility Programme Teaching Staff A.A. 2019/20: supporto finanziario per un periodo di insegnamento di 5(+2) giorni (09/12/2019 - 13/12/2019) presso Universidad Politécnica de Madrid (UPM) - Departamento de Arquitectura, Construcción y Sistemas Oceanicos y Navales (DACSON) - Escuela Técnica Superior de Ingenieros Navales (ETSIN)

## **18) Argomenti di ricerca**

- Sicurezza della nave
- Rollio parametrico
- Stabilità a nave integra
- Compartimentazione e stabilità a nave allagata
- Effetti della modellazione nonlineare sui moti nave
- Dinamica nonlineare
- Processi stocastici
- Analisi d'incertezza
- Approcci probabilistici nel campo dell'ingegneria navale
- Sloshing
- Evacuazione
- Manovrabilità

## **19) Titolarità di insegnamenti (completi o in co-docenza)**

- A.A. 2007/08 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Laboratorio di Progetto delle Navi*” (6 CFU) – Laurea Triennale in Ingegneria Navale
- A.A. 2008/09 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Laboratorio di Progetto delle Navi*” (6 CFU) – Laurea Triennale in Ingegneria Navale
- A.A. 2009/10 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Laboratorio di Progetto delle Navi*” (6 CFU) – Laurea Triennale in Ingegneria Navale
- A.A. 2011/12 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Statica della Nave IP*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2011/12 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – corso di 75h: “*Fundamentos de Proyectos Navales*” (Fondamenti di Progetto delle Navi) – In Inglese. Nell’ambito di una collaborazione tra Università degli Studi di Trieste e USAT.
- A.A. 2012/13 – Università degli Studi di Trieste – Facoltà di Ingegneria / Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2013/14 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2014/15 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2015/16 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2015/16 - Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Laboratorio di strumenti informatici per l'ingegneria navale e offshore*” (Corso in co-docenza: 3 CFU totali – Lezioni impartite: 1 CFU) – Laurea Magistrale in Ingegneria Navale

- A.A. 2016/17 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2016/17 - Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Laboratorio di strumenti informatici per l'ingegneria navale e offshore*” (Corso in co-docenza: 3 CFU totali – Lezioni impartite: 1 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2017/18 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2017/18 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Manovrabilità delle Navi*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2018/19 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2018/19 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Manovrabilità delle Navi*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2019/20 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2019/20 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Manovrabilità delle Navi*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2020/21 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2020/21 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Manovrabilità delle Navi*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2021/22 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave IP*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2021/22 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Manovrabilità delle Navi*” (6 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2022/23 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Statica della Nave*” (9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2022/23 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Strumenti Informatici per l'Ingegneria Navale*” (3 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2022/23 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Meccanica Computazionale per l'Ingegneria Navale*” (2 CFU – Corso completo: 9 CFU) – Laurea Magistrale in Ingegneria Navale
- A.A. 2022/23 – Università degli Studi di Trieste – Dipartimento di Ingegneria e Architettura – Corso: “*Tenuta della Nave al Mare*” (1 CFU – Corso completo: 9 CFU) – Laurea Magistrale in Ingegneria Navale

## **20) Lezioni ed esercitazioni tenute nell'ambito di corsi**

- A.A. 2006/07 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Manovrabilità delle Navi*”
- A.A. 2006/07 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Statica della Nave*”
- A.A. 2006/07 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Statica della Nave IP*”
- A.A. 2007/08 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Manovrabilità delle Navi*”
- A.A. 2007/08 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Statica della Nave IP*”
- A.A. 2007/08 – Università degli Studi di Trieste – Facoltà di Ingegneria – Corso: “*Geometria dei galleggianti*”
- A.A. 2013/14 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – 30h di lezione nell'ambito del corso: “*Geometria de Elementos Flotantes*” (Geometria dei Galleggianti) – In Inglese. Nell'ambito di una collaborazione tra Università degli Studi di Trieste e USAT.

## **21) Seminari/lezioni su invito (Università)**

- A.A. 2011/12 – Universidad Politécnica de Madrid (UPM) – Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – Corso/Seminario di 12ore dal titolo: “*IMO intact stability rules and nonlinear ship dynamics: an ongoing convergence*” (nell'ambito di una Erasmus Teaching Staff Mobility)
- A.A. 2012/13 – Universidad Politécnica de Madrid (UPM) – Departamento de Ciencias Aplicadas a la Ingeniería Naval (DCAIN) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – Corso/Seminario di 12ore dal titolo: “*IMO intact stability rules and nonlinear ship dynamics: an ongoing convergence*” (nell'ambito di una Erasmus Teaching Staff Mobility)
- A.A. 2013/14 – Virginia Tech (USA) – Lezione seminariale su invito (2h) nell'ambito del corso “AOE 5334 - Advanced Ship Dynamics” – Tema della lezione: “*What can we get from 1-DOF nonlinear roll modelling in case of multihulls?*” (lezione tramite teleconferenza)

- A.A. 2013/14 – Universidad Católica Santo Toribio de Mogrovejo (USAT) – Escuela de Ingeniería Naval – Seminario di 6h dal titolo: “*Research activities and tools for students of Naval Architecture*”
- A.A. 2013/14 – Escuela Superior Politécnica del Litoral (ESPOL), Facultad de Ingeniería Marítima, Ciencias Biológicas, Oceánicas y Recursos Naturales (FIMCBOR) – Corso/Seminario di 18 ore dal titolo: “*Advanced Dynamics and Safety of Ships*”
- A.A. 2013/14 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Lezione seminariale su invito (2h) nell’ambito del corso "Ship Buoyancy and Stability II" (“Пловност И Стабилитет Брода 2”) – Tema della lezione: “*Possibly dangerous ship dynamics in waves: real experience, mathematical modelling and regulatory countermeasures*” (lezione tramite teleconferenza)
- A.A. 2014/15 – University of A Coruña – Spain – Lezione seminario su invito (2h) nell’ambito dei corsi "Hydrostatics and Stability" and “Hydrostatics and Hydrodynamics” – Tema della lezione: “*Looking at some nonlinear dynamic stability phenomena in waves in the framework of development of intact stability regulations for ship design and ship-specific operational guidance*”
- A.A. 2014/15 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Lezione seminariale su invito (2h) nell’ambito del corso "Ship Buoyancy and Stability II" (“Пловност И Стабилитет Брода 2”) – Tema della lezione: “*Possibly dangerous ship dynamics in waves: real experience, mathematical modelling and regulatory countermeasures*” (lezione tramite teleconferenza)
- A.A. 2017/18 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Corso/Seminario di 10ore dal titolo: “*Probabilistic damaged ship stability assessment*” (nell’ambito di una Erasmus+ Teaching Staff Mobility)
- A.A. 2018/19 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Lezione seminariale su invito (5ore) dal titolo: “*SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations*” (24 Aprile 2019)
- A.A. 2019/20 – Universidad Politécnica de Madrid (UPM) – Departamento de Arquitectura, Construcción y Sistemas Oceanicos y Navales (DACSON) – Escuela Técnica Superior de Ingenieros Navales (ETSIN) – Corso/Seminario di 9ore dal titolo: “*SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations*” (nell’ambito di una Erasmus Teaching Staff Mobility)
- A.A. 2019/20 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Lezione seminariale su invito (2h) nell’ambito del corso "Ship Buoyancy and Stability II" – Tema della lezione: “*An Introduction to SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations*” (lezione tramite teleconferenza – 29 Aprile 2020)
- A.A. 2020/21 – University of Belgrade – Serbia (Универзитет у Београду – Србија) – Lezione seminariale su invito (2h) nell’ambito del corso "Ship Buoyancy and Stability II" – Tema della lezione: “*An Introduction to SOLAS Harmonized Probabilistic Subdivision and Damage Stability Regulations*” (lezione tramite teleconferenza – 24 Marzo 2021)

## **22) Supervisore/co-supervisore di dottorandi/tesi di Dottorato (PhD)**

1. Dottorando: Marco Sinibaldi. Università degli Studi di Trieste. Tema: sicurezza e dinamica nelle operazioni navali di traino, "Ciclo XXVII". Periodo: Gennaio 2012-Settembre 2013. Borsa di studio finanziata dal MIUR. Supervisore accademico.
2. Elkin Mauricio Botia-Vera, 2015, “Experimental and Statistical Investigation of Canonical Problems in Sloshing”, Tesi di dottorato, Universidad Politécnica de Madrid (UPM) (menzione "International PhD" e dottorato conseguito Cum Laude). Programma di Dottorato in “Ocean and Marine Engineering, 08D2”. Titolo di dottore di ricerca ottenuto dopo l’esame finale di dottorato sostenuto il 01 September 2015. Ruolo: Co-supervisore. Supervisore: Prof. Antonio Souto-Iglesias (UPM). Questa tesi ha conseguito il premio come migliore tesi di dottorato del 2014-2015 nel corrisponde programma.
3. Fabio Fucile, 2017, “Deterministic sea wave and ship motion forecasting: from remote wave sensing to prediction error assessment”, Tesi di dottorato, Università degli Studi di Trieste, XXIX Ciclo, Anno Accademico 2015/16. Periodo: Gennaio 2014 – Maggio 2017. Borsa di studio finanziata da CNR-INSEAN (Roma). Attività di ricerca in collaborazione con CNR-INSEAN (Dr. Claudio Lugni). Ruolo: Supervisore. Co-supervisore: Dr. Claudio Lugni (CNR-INSEAN). Titolo di dottore di ricerca ottenuto a valle dell’esame finale sostenuto il 25 Maggio 2017.
4. Gabriele Montecchiari, 2018, “Evacuation dynamics in the maritime field: modelling, simulation and real-time human participation”, Tesi di dottorato, Università degli Studi di Trieste, XXX Ciclo, Anno Accademico 2016/17. Periodo: Novembre 2014 – Marzo 2018. Borsa di studio finanziata dal MIUR. Ruolo: Supervisore. Co-supervisore: Prof. Paolo Gallina (UNITS). Università degli Studi di Trieste. Titolo di dottore di ricerca ottenuto a valle dell’esame finale sostenuto il 16 Marzo 2018.

### **23) Relatore di tesi di laurea**

- Laurea Triennale:
  1. Murgo, G., “*Studio dell’effetto dei ‘Second Generation Intact Stability Criteria’ per una nave portacontainer*”, Università degli Studi di Trieste, Anno Accademico 2013-2014.
- Laurea Magistrale:
  1. Sasdelli, M., “*IMO Second Generation Intact Stability Criteria: A Case Study on Parametric Roll Assessment for a Containership (Criteri IMO di seconda generazione per la stabilità a nave integra: un caso di studio riguardante il rollio parametrico per una nave portacontenitori)*” (In Inglese), Università degli Studi di Trieste, Anno Accademico 2014-2015.
  2. Marra, A.M.Y.E., “*Modellazione ed analisi della dinamica di una turbina eolica galleggiante*”, Università degli Studi di Trieste, Anno Accademico 2015-2016.
  3. Todde, A.E., “*Modifica delle forme di carena di una nave da crociera per il miglioramento della stabilità*”, Università degli Studi di Trieste, Anno Accademico 2015-2016.
  4. Dalle Vedove, F., “*Time domain simulation study of the operability of a ship equipped with an anti-rolling tank by means of a simplified procedure based on non-linear retardation functions (Studio basato su simulazioni nel dominio del tempo dell’operatività di una nave equipaggiata con una cassa anti-rollio tramite una procedura semplificata basata su funzioni memoria non-lineari)*” (in Inglese), Università degli Studi di Trieste, Anno Accademico 2015-2016.
  5. Salmaso, M., “*Analisi della dinamica di surf-riding e wave-blocking*”, Università degli Studi di Trieste, Anno Accademico 2017-2018.
  6. Savio, A., “*Analisi di alcuni problemi idrodinamici in campo navale tramite lo sviluppo di un codice di simulazione FEM*”, Università degli Studi di Trieste, Anno Accademico 2018-2019.
  7. Gardenal, A., “*Analisi della dinamica di rollio durante la manovra di evoluzione*”, Università degli Studi di Trieste, Anno Accademico 2019-2020.
  8. Jasa, J., “*Manoeuvring simulations of inland vessels and assessment of wind effects under navigational constraints*” (in Inglese), Università degli Studi di Trieste, Anno Accademico 2021-2022.
  9. Ambrosio, A., “*Miglioramento della stima del periodo di rollio per navi da crociera e impatto sui requisiti di stabilità a nave integra*”, Università degli Studi di Trieste, Anno Accademico 2021-2022.
  10. Montanaro, V., “*Experiments on small models with an application related to onboard estimation of GM from roll period*” (in Inglese), Università degli Studi di Trieste, Anno Accademico 2021-2022.

### **24) Correlatore di tesi di laurea**

- Laurea quinquennale vecchio ordinamento:
  1. Truja, V., “*Studio dello smorzamento di rollio nell’ambito di un miglioramento della Normativa di Stabilità a nave Intgra*”, Università degli Studi di Trieste, Anno Accademico 2001-2002.
  2. Passarella, V., “*Studio sperimentale del rollio parametrico di una fregata in risonanza armonica e sub-armonica*”, Università degli Studi di Trieste, Anno Accademico 2002-2003.
  3. Dreossi, M., “*Analisi critica di un metodo semi-empirico per la previsione dello smorzamento del moto di rollio*”, Università degli Studi di Trieste, Anno Accademico 2004-2005.
  4. Nicolosi, R.G., “*Sviluppo di un codice di manovrabilità 4-DOF ed effetto, sulle manovre standard, dell’incertezza nelle derivate idrodinamiche*”, Università degli Studi di Trieste, Anno Accademico 2005-2006.
  5. Turchetto, A., “*Caratterizzazione della manovrabilità di una nave attraverso l’utilizzo degli indici di manovrabilità*”, Università degli Studi di Trieste, Anno Accademico 2008-2009.
- Laurea triennale:
  1. Birsà, M., “*Lo sviluppo dei nuovi criteri di stabilità a nave integra*”, Università degli Studi di Trieste, Anno Accademico 2003-2004.
  2. Biselli, G., “*Studio della stabilità di un piccolo peschereccio in mare longitudinale*”, Università degli Studi di Trieste, Anno Accademico 2004-2005.
  3. Sinibaldi, M., “*Studio del rollio parametrico di un trimarano in mare longitudinale*”, Università degli Studi di Trieste, Anno Accademico 2006-2007.
  4. Dall’Aglia, G., “*Studio dello smorzamento del moto di rollio di un trimarano in funzione della velocità di avanzo*”, Università degli Studi di Trieste, Anno Accademico 2006-2007.
  5. Boaro, L., “*Ottimizzazione del posizionamento degli outriggers di un trimarano in relazione alla stabilità sull’onda*”, Università degli Studi di Trieste, Anno Accademico 2008-2009.

6. Burattini, D., "*Studio delle prestazioni idrodinamiche di uno yacht*", Università degli Studi di Trieste, Anno Accademico 2009-2010.
  7. Lamacchia, L., "*Studio di resistenza e stabilità allo stato integro per un piccolo traghetto passeggeri*", Università degli Studi di Trieste, Anno Accademico 2009-2010.
  8. Scalera, L., "*Bouncing water device*", Università degli Studi di Trieste, Anno Accademico 2011-2012.
- Laurea Specialistica/Magistrale:
    1. Sidari, M., "*Il problema del racking: sviluppo di una procedura per la verifica a fatica basata sul calcolo diretto dei moti nave*", Università degli Studi di Trieste, Anno Accademico 2006-2007.
    2. Fucile, F., "*Analisi del rollio parametrico per carene di forme atipiche*", Università degli studi di Trieste, Anno Accademico 2007-2008.
    3. Vidali, C., "*Effetto dell'incertezza sulle derivate idrodinamiche sulla valutazione della manovrabilità di una nave*", Università degli Studi di Trieste, Anno Accademico 2007-2008.
    4. Vettor, R., "*Sviluppo di una metodologia di nowcasting del moto ondoso finalizzata all'operatività di mezzi offshore*" Università degli Studi di Trieste, Anno Accademico 2009-2010.
    5. Dall'Aglio, G., "*Simulazione del moto di rollio in presenza di casse passive anti-rollio*", Università degli Studi di Trieste, Anno Accademico 2009-2010.
    6. Sinibaldi, M., "*Dinamica non lineare di rollio in mare al traverso: un confronto tra due modellazioni 1-DOF*", Università degli Studi di Trieste, Anno Accademico 2010-2011.
    7. Mocnik, F., "*Analisi idrodinamica dell'operatività di una nave oceanografica per il Mar Mediterraneo*", Università degli Studi di Trieste, Anno Accademico 2010-2011.
    8. Brocco, E., "*La risposta strutturale a carichi dinamici di uno stack di container*", Università degli Studi di Trieste, Anno Accademico 2011-2012.
  - Studenti non dell'Università degli Studi di Trieste:
    1. Tzamtzis, S., "*Development and testing of a procedure for the alternative assessment of Weather Criterion on experimental basis*" (In Inglese), Università degli Studi di Trieste e National Technical University di Atene (Studente SOCRATES), Anno Accademico 2003-2004.
    2. Medina Manuel, A., "*Estimation of hydrodynamic coefficients through forced oscillations and decay tests for heave plates of floating wind turbines*" (In Inglese), Universidad Politecnica de Madrid (UPM), Escuela Tecnica Superior de Ingenieros Navales (ETSIN), 2022.

## **25) Altre attività accademiche (più rilevanti)**

- Periodo Marzo 2007, Master universitario di I Livello "Navy Tech" (organizzato dall'Università degli Studi di Trieste, Fincantieri SpA e Regione Autonoma Friuli Venezia Giulia): insegnante del modulo "Basic ideas on screw propellers" (Concetti di base sulla propulsione ad elica).
- Periodo 2006-2008, Master universitario di I Livello "Navy Tech" (organizzato dall'Università degli Studi di Trieste, Fincantieri SpA e Regione Autonoma Friuli Venezia Giulia): tutore accademico per l'intera durata del Master.
- Membro del Collegio Docenti della "Scuola di Dottorato in Scienze dell'Ingegneria - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXVII (anno di inizio ciclo: 2011).
- Membro del Collegio Docenti della "Scuola di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXVIII (anno di inizio ciclo: 2012).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXIX (anno di inizio ciclo: 2013).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXX (anno di inizio ciclo: 2014).
- ERASMUS+ – Responsabile del Dipartimento di Ingegneria e Architettura per l'accordo tra Università degli Studi di Trieste (I TRIESTE01) e Università Politecnica di Madrid (E MADRID05). Dal 2014.
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria e Architettura - Indirizzo Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXI (anno di inizio ciclo: 2015).
- ERASMUS+ – Responsabile del Dipartimento di Ingegneria e Architettura per l'accordo tra Università degli Studi di Trieste (I TRIESTE01) e Università di Coruna (E LACORU01). Dal 2015.

- Titolato alla co-supervisione di dottorandi nel “PhD program on Ocean and Marine Engineering, 08D2, Universidad Politécnica de Madrid (UPM), Spain” (2015-2020).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXII (anno di inizio ciclo: 2016).
- Membro del Gruppo di Assicurazione della Qualità del Corso di Laurea in Ingegneria Navale e del Corso di Laurea Magistrale in Ingegneria Navale, Dipartimento di Ingegneria e Architettura, Università degli studi di Trieste. Periodo: A.A. 2017/18 – Gennaio 2023.
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXIII (anno di inizio ciclo: 2017).
- ERASMUS+ – Responsabile del Dipartimento di Ingegneria e Architettura per l'accordo tra Università degli Studi di Trieste (I TRIESTE01) e Università di Strathclyde (UK GLASGOW02). Periodo: 2017-2021.
- ERASMUS+ – Responsabile del Dipartimento di Ingegneria e Architettura per l'accordo tra Università degli Studi di Trieste (I TRIESTE01) e Università di Belgrado. Azione: KA107. Periodo: 2017-2019.
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXIV (anno di inizio ciclo: 2018).
- Membro della “Giunta di Dipartimento” del Dipartimento di Ingegneria e Architettura - Università degli Studi di Trieste. Periodo: Novembre 2018 – Ottobre 2021.
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXV (anno di inizio ciclo: 2019).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXVI (anno di inizio ciclo: 2020).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXVII (anno di inizio ciclo: 2021).
- Membro del Collegio Docenti del "Corso di Dottorato in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, Energetica e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXVIII (anno di inizio ciclo: 2022).
- Membro del Collegio Docenti del "Dottorato Industriale in Ingegneria Industriale e dell'Informazione - Curriculum Ingegneria Meccanica, Navale, dell'Energia e della Produzione", Università degli Studi di Trieste, Ciclo di Dottorato: XXXIX (anno di inizio ciclo: 2023).

## **26) Attività di valutazione (più rilevanti)**

- Membro (first opponent) della commissione di valutazione della tesi di dottorato, della “lezione di prova” e della presentazione e discussione della tesi di dottorato di Dominik Andreas Breu, Department of Engineering Cybernetics, Norwegian University of Science and Technology, Trondheim, Norvegia, 2013.
- Membro della commissione giudicatrice per l'ammissione al "Corso di Dottorato in Ingegneria e Architettura", Università degli Studi di Trieste, XXIX ciclo (2013).
- Membro della commissione per la valutazione dei progetti di ricerca di ateneo – Bando FRA 2013, Dipartimento di Ingegneria e Architettura, Università degli Studi di Trieste, 2013.
- Membro della commissione di valutazione della tesi di dottorato e della presentazione e discussione della tesi di dottorato di Francisco Mata Álvarez-Santullana, Escuela Técnica Superior de Ingenieros Navales, Universidad Politécnica de Madrid, Madrid, Spagna, 2014.
- Membro della commissione giudicatrice per il conseguimento del titolo di Dottore di Ricerca di Nicola Petacco, XXXI Ciclo, Corso di Dottorato in Scienze e Tecnologie per l'Ingegneria Elettrica, l'Ingegneria Navale e i Sistemi Complessi per la Mobilità (Curriculum: Ingegneria Navale), Università degli Studi di Genova, Italia, 2019.
- Membro della Commissione Giudicatrice per una posizione di Ricercatore a Tempo Determinato (Tipo A), Settore Concorsuale 09/A1 (Ingegneria aeronautica, aerospaziale e navale), Settore Scientifico Disciplinare ING-IND/01 (Architettura Navale), Università degli Studi di Genova, Italia, 2019.
- Membro (External examiner) della commissione di valutazione della tesi di dottorato e della presentazione e discussione della tesi di dottorato di Kristian Bertheussen Karoliuss, Maritime Safety Research Centre (MSRC), Department of Naval architecture, Ocean and Marine engineering, University of Strathclyde, Glasgow, Scotland, UK, 2019.
- Membro del “Comité de Suivi Individuel (CSI)” (Individual Follow-up Committee) del dottorando Théo Descamps, LHEEA - Centrale Nantes. Periodo: 2020 - 2022.
- Membro della commissione di valutazione della tesi di dottorato e della presentazione e discussione della tesi di dottorato di Vivien Luthy, Ecole nationale supérieure d'arts et métiers (ENSAM), Francia, 2023.

- Membro del “Comité de Suivi Individuel (CSI)” (Individual Follow-up Committee) della dottoranda Claire Monin, LHEEA - Centrale Nantes. Periodo: 2022 – in corso.

## 27) **Publicazioni: Riviste Internazionali, Transactions**

1. Francescutto, A., Bulian, G., Lugni, C., "Nonlinear and Stochastic Aspects of Parametric Rolling Modelling", Marine Technology, Vol 41, No. 2, April 2004, pp 74-81.
2. Bulian, G., "Estimation of nonlinear roll decay parameters using an analytical approximate solution of the decay time history", International Shipbuilding Progress, Vol.51, No. 1, 2004, pp. 5-32.
3. Bulian, G., Francescutto, A., Lugni, C., "On the Nonlinear Modeling of Parametric Rolling in Regular and Irregular Waves", International Shipbuilding Progress, Vol. 51, No. 2/3, 2004, pp. 173-203.
4. Bulian, G., "Approximate Analytical Response Curve for a Parametrically Excited Highly Nonlinear 1-DOF System with an Application to Ship Roll Motion Prediction", Nonlinear Analysis: Real World Applications, Vol. 5, No. 4, September 2004, pp. 725-748, doi:10.1016/j.nonrwa.2004.03.002
5. Bulian, G., Francescutto, A., "A simplified modular approach for the prediction of the roll motion due to the combined action of wind and waves", Journal of Engineering for the Maritime Environment, Vol. 218, no. M3, August 2004, pp. 189-212, doi:10.1243/1475090041737958
6. Bulian, G., "Nonlinear parametric rolling in regular waves - a general procedure for the analytical approximation of the GZ curve and its use in time domain simulations", Ocean Engineering, Vol 32, No. 3-4, March 2005, pp. 309-330, doi:10.1016/j.oceaneng.2004.08.008
7. Bulian, G., Francescutto, A., "Some considerations on the probability distributions for the damage length and damage penetration based on a re-analysis of recorded ship collisions data", International Shipbuilding Progress, Vol. 52, No. 4, 2005, pp. 325-356.
8. Bulian, G., "Nonlinear Parametric Rolling in Regular Waves - An Approximate Analytical Solution for the Response Curve in the Region of First Parametric Resonance", Journal of Ship Research, Vol. 50, No. 3, September 2006, pp. 239-249.
9. McCue, L., Alford, L., Belknap, W., Bulian, G., Delorme, L., Francescutto, A., Lugni, C., Troesch, A., Vakakis, A., "An overview of the minisymposium on 'Extreme Ship Dynamics' presented at the 2005 SIAM Conference on Application of Dynamical Systems", Marine Technology, Vol. 43, No. 1, January 2006, pp. 55-61.
10. Bulian, G., Francescutto, A., Lugni, C., "Theoretical, numerical and experimental study on the problem of ergodicity and 'practical ergodicity' with an application to parametric roll in longitudinal long crested irregular sea", Ocean Engineering, Vol. 33, 2006, pp. 1007-1043, doi:10.1016/j.oceaneng.2005.09.004
11. Bulian, G., Francescutto, A., "Safety and Operability of Fishing Vessels in Beam and Longitudinal Waves", Transactions of the Royal Institution of Naval Architects Part B: International Journal of Small Craft Technology, Vol. 148 (2), 2006, pp. 1-16.
12. McCue, L.S., Bulian, G., "A numerical feasibility study of a parametric roll advance warning system", Journal of Offshore Mechanics and Arctic Engineering (JOMAE), Vol. 129, Issue 3, August 2007, pp. 165-175.
13. Bulian, G., Francescutto, A., "On the Effect of Stochastic Variations of Restoring Moment in Long-Crested Irregular Longitudinal Sea", International Shipbuilding Progress - Special issue: Selected Papers from the 9th International Conference on Stability of Ships and Ocean Vehicles (STAB 2006), Vol. 54, No. 4, 2007, pp. 227-248.
14. Bulian, G., Francescutto, A., Zotti, I., "Stability and Roll Motion of Fast Multihull Vessels in Beam Waves", Ships and Offshore Structures, Vol. 3, No. 3, 2008, pp. 215-228, doi:10.1080/17445300801990913
15. Bulian, G., "Time-based damaged ship survivability: A quasi-static equivalent method", International Shipbuilding Progress, Vol.55, No. 3, 2008, pp. 183-226, doi:10.3233/ISP-2008-0047
16. Iqbal, K.S., Bulian, G., Hasegawa, K., Karim, M.M., Awal, Z.I., "A rational analysis of intact stability hazards involving small inland passenger ferries in Bangladesh", Journal of Marine Science and Technology, Vol. 13, No. 3, 2008, pp. 270-281, doi:10.1007/s00773-008-0016-3
17. Iqbal, K.S., Bulian, G., Hasegawa, K., Karim, M.M., Awal, Z.I., "Possible remedies for intact stability hazards involving contemporary small inland passenger ferries in Bangladesh", Journal of Marine Science and Technology, Vol. 13, No. 3, 2008, pp. 282-290, doi:10.1007/s00773-008-0023-4
18. Bulian, G., "On an Improved Grim Effective Wave", Ocean Engineering, Vol. 35, Nos. 17-18, 2008, pp. 1811-1825, doi:10.1016/j.oceaneng.2008.08.016
19. Bulian, G., Francescutto, A., Umeda, N., Hashimoto, H., "Qualitative and quantitative characteristics of parametric ship rolling in random waves in the light of physical model experiments", Ocean Engineering, Vol. 35, Nos. 17-18, 2008, pp. 1661-1675, doi:10.1016/j.oceaneng.2008.09.002
20. Bulian, G., Francescutto, A., "Experimental results and numerical simulations on strongly non-linear rolling of multihulls in moderate beam seas", Proceedings of the Institution of Mechanical Engineers - Part M - Journal of Engineering for the Maritime Environment, Vol. 223, 2009, pp. 189-210, doi:10.1243/14750902JEME126

21. Francescutto, A., Bulian, G., Urcia Larios, M., Arroyo Ulloa, M., "*Stability and dynamical effects of water on deck on the survivability of small fishing vessels*", Ship Science and Technology / Ciencia & Tecnología de Buques, Vol. 1, No.5, July 2009, pp. 73-82
22. Bulian, G., Souto-Iglesias, A., Delorme, L., Botia-Vera, E., "*Smoothed particle hydrodynamics (SPH) simulation of a tuned liquid damper (TLD) with angular motion*", Journal of Hydraulic Research, Vol. 48, Extra Issue, 2010, pp. 28-39, doi:10.1080/00221686.2010.9641243 (originally doi:10.3826/jhr.2010.0001)
23. Sadat-Hosseini, H., Stern, F., Olivieri, A., Campana, E. F., Hashimoto, H., Umeda, N., Bulian, G., Francescutto, A., "*Head-Waves Parametric Rolling of a Surface Combatant*", Ocean Engineering, Vol. 37, Issue 10, July 2010, pp. 859-878, doi:10.1016/j.oceaneng.2010.02.010
24. Bulian, G., "*Checking vulnerability to pure loss of stability in long crested following waves: A probabilistic approach*", Ocean Engineering, Vol. 37, Issues 11-12, August 2010, pp. 1007-1026, doi:10.1016/j.oceaneng.2010.03.013
25. Bulian G., Francescutto, A., "*Effect of roll modelling in beam waves under multi-frequency excitation*", Ocean Engineering, Vol. 38, Issue 13, September 2011, pp. 1448–1463, doi:10.1016/j.oceaneng.2011.07.004
26. Bulian, G., Francescutto, A., Fucile, F., "*Study of trimaran stability in longitudinal waves*", Ships and Offshore Structures, Vol.6, No.4, 2011, pp. 265-271, doi:10.1080/17445302.2010.507494
27. Peters, W., Belenky, V., Bassler, C., Spyrou, K., Umeda, N., Bulian, G., Altmayer, B., "*The Second Generation Intact Stability Criteria: An Overview of Development*", Transactions of The Society of Naval Architects and Marine Engineers (SNAME), Vol. 119 (2011), 2012, pp. 225-264
28. Bulian, G., Francescutto, A., "*Second Generation Intact Stability Criteria: on the validation of codes for direct stability assessment in the framework of an example application*", Polish Maritime Research, No.4/2013, 2013, pp. 52-61, doi:10.2478/pomr-2013-0041
29. Bulian, G., Botia-Vera, E., Souto-Iglesias, A., "*Experimental sloshing pressure impacts in ensemble domain: Transient and stationary statistical characteristics*", Physics of Fluids (1994-present), Vol. 26, 2014, 032102, doi: 10.1063/1.4866315
30. Sinibaldi, M., Bulian, G., "*Towing simulation in wind through a nonlinear 4-DOF model: Bifurcation analysis and occurrence of fishtailing*", Ocean Engineering, Vol. 88, 15 September 2014, pp. 366-392, doi:10.1016/j.oceaneng.2014.06.007
31. Souto-Iglesias, A., Bulian, G., Botia-Vera, E., "*A set of canonical problems in sloshing. Part 2: influence of tank width on impact pressure statistics in regular forced angular motion*", Ocean Engineering, Vol. 105, 1 September 2015, pp. 136-159, doi:10.1016/j.oceaneng.2015.06.016
32. Bačkalov, I., Bulian, G., Cichowicz, J., Eliopoulou, E., Konovessis, D., Leguen, J.-F., Rosén, A., Themelis, N., "*Ship stability, dynamics and safety: Status and perspectives from a review of recent STAB conferences and ISSW events*", Ocean Engineering, Vol. 116, 2016, pp. 312-349, doi:10.1016/j.oceaneng.2016.02.016
33. Cercos-Pita, J.L., Bulian, G., Pérez-Rojas, L., Francescutto, A., "*Coupled simulation of nonlinear ship motions and a free surface tanks*", Ocean Engineering (Virtual Special Issue: "Stability and Safety of Ships and Ocean Vehicles"), Vol. 120, 2016, pp. 281-288, doi:10.1016/j.oceaneng.2016.03.015
34. Bulian, G., Lindroth, D., Ruponen, P., Zaraphonitis, G., "*Probabilistic assessment of damaged ship survivability in case of grounding: development and testing of a direct non-zonal approach*", Ocean Engineering (Virtual Special Issue: "Stability and Safety of Ships and Ocean Vehicles"), Vol. 120, 2016, pp. 331-338, doi:10.1016/j.oceaneng.2016.02.018
35. Bačkalov, I., Bulian, G., Rosén, A., Shigunov, V., Themelis, N., "*Improvement of ship stability and safety in intact condition through operational measures: challenges and opportunities*", Ocean Engineering (Virtual Special Issue: "Stability and Safety of Ships and Ocean Vehicles"), Vol. 120, 2016, pp. 353-361, doi:10.1016/j.oceaneng.2016.02.011
36. Gallina, P., Bulian, G., Mosetti, G., "*Water bouncing robots: a first step toward large-scale water running robots*", Robotica, Vol. 34, Issue 07, 2016, pp. 1659-1676, doi:10.1017/S0263574714002495
37. Chai, W., Naess, A., Leira, B. J., Bulian, G., "*Efficient Monte Carlo simulation and Grim effective wave model for predicting the extreme response of a vessel rolling in random head seas*", Ocean Engineering, Vol. 123, 2016, pp. 191-203, doi:10.1016/j.oceaneng.2016.07.025
38. Montecchiari, G., Bulian, G., Gallina, P., "*Towards real-time human participation in virtual evacuation through a validated simulation tool*", Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, Volume 232, Issue 5, 2018, pp. 476-490, doi:10.1177/1748006X17705046
39. Míguez González, M., Bulian, G., "*Influence of ship dynamics modelling on the prediction of fishing vessels roll response in beam and longitudinal waves*", Ocean Engineering, Vol. 148, 2018, pp. 312-330, doi:10.1016/j.oceaneng.2017.11.032
40. Bulian, G., Cercos-Pita, J.L., "*Co-simulation of ship motions and sloshing in tanks*", Ocean Engineering, Vol. 152, 2018, pp. 353-376, doi: 10.1016/j.oceaneng.2018.01.028
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#### **34) Presentazioni, Keynote/Lezioni su invito, Workshop, Seminari**

1. Bulian, G., Francescutto, A., Lugni, C., "*On the Practical Ergodicity of Parametric Rolling*", Presentation given at the Mini-Symposium on Extreme Ship Dynamics (MS97) of SIAM (Society for Industrial and Applied Mathematics) conference on Application of Dynamical Systems, May 2005, Snowbird, Utah.
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3. Bulian, G., Francescutto, A., "*Large Amplitude Rolling and Strongly Nonlinear Behaviour of Multihull Ships in Moderate Beam Waves*", Lecture presentation given at the IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering, Hamburg, Germany, July 23-27, 2007.
4. Bulian, G., Francescutto, A., "*The response of the Duffing oscillator for different bandwidths of the Gaussian excitation*", Lecture presentation given at the 6th Osaka Colloquium on Seakeeping and Stability of Ships, 26-29 March 2008, Osaka, Japan.
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6. Bulian, G., Francescutto, A., "*New Generation Intact Stability Criteria: looking into the future*", Presented at the Cooperative Research Ships (CRS) Open Meeting 2010, 17-18 June 2010, FINCANTIERI Trieste, Monfalcone, Italy (Presented by A. Francescutto)
7. Bulian, G., Francescutto, A., Fucile, F., "*Nonlinear rolling of multi-hulls: experiments and simplified dynamical modelling*", Presented at the Cooperative Research Ships (CRS) Open Meeting 2010, 17-18 June 2010, FINCANTIERI Trieste, Monfalcone, Italy
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10. Bulian, G., Francescutto, A., "*Trimaran Vessels and Parametric Roll*", Invited presentation at Workshop on Parametric Resonance in Dynamical Systems, 22-26 June 2011, Longyearbyen, Svalbard, Norway - Organised by the Norwegian University of Science and Technology (NTNU)
11. Bulian, G., Francescutto, A., "*A probabilistic approach to grounding damages: development, issues and prospects*", Invited presentation for the International Workshop on Risk-based Design for Maritime Safety and Marine Environment Protection, National Maritime Research Institute (NMRI) & Nippon Kaiji Kyokai (ClassNK), 11-12 October 2011, Tokyo, Japan
12. Bulian, G., van Hooren, C., "*2nd Generation Intact Stability Requirements*", Invited presentation for the SYBAss Technical Seminar 2011: “Forthcoming IMO legislation”, 16 November 2011, Amsterdam, The Netherlands

13. Bulian, G., Francescutto, A., “*Dangerous Phenomena in Adverse Weather and Sea Conditions: when Stability Criteria Need to be Supplemented by Recommendations to the Master*”, COSMEMOS Workshop – Innovation in meteorology for maritime navigation, 23 October 2013, Livorno, Italy (Presented by A. Francescutto)
14. Bačkalov, I., Biot, M., Bresciani, F., Brocco, E., Bulian, G., Francescutto, A., Fucile, F., Hofman, M., Huss, M., Kalajdžić, M., Kutteneuler, J., Lugni, C., Maksić, I., Mccue, L., Moro, L., Ovegård, E., Palmquist, M., Rosén, A., Saldovieri, F., Serafino, F., Skoglund, L., Söder, C.-J., “*Ship Safety & Intact Stability: from Design to Operation*”, Presented at First Maritime Europe Strategy Action (MESA) Workshop, “Designing Waterborne RDI Strategies”, 5 March 2014, Bruxelles, Belgium
15. Bulian, G., “*Getting to know some potentially dangerous dynamic stability phenomena in waves and the idea of ‘Second Generation Intact Stability Criteria’*”, Seguridad para la navegación y construcción naval, Universidad Católica Santo Toribio de Mogrovejo (USAT), 9-10 May 2014, Chiclayo, Peru
16. Bačkalov, I., Bulian, G., Cichowicz, J., Eliopoulou, E., Konovessis, D., Leguen, J.-F., Rosén, A., Themelis, N., “*Ship Stability, Dynamics and Safety: Status and Perspectives*”, Invited keynote paper presentation at 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 June 2015, Glasgow, Scotland, UK
17. Cercos-Pita, J.L., Souto-Iglesias, A., Bulian, G., Bouscasse, B., Colagrossi, A., Colom, J., Servan, B., Garcia-Espinosa, J., “*Coupling between sloshing and ship motions with emphasis on wave-breaking*”, 16th International Workshop on Trends In Numerical and Physical Modeling for Industrial Multiphase Flows, Cargèse, Corsica, September 14th–18th, 2015 (presented by A. Souto-Iglesias)
18. Botia-Vera, E.M., Souto-Iglesias, A., Bulian, G., “*Sensitivity analysis of ISOPE benchmark C15 case (SDOF roll) regarding motion spectrum characteristics*”, 16th International Workshop on Trends In Numerical and Physical Modeling for Industrial Multiphase Flows, Cargèse, Corsica, September 14th–18th, 2015 (presented by A. Souto-Iglesias)
19. Bulian, G., “*Some notes and comments on Direct Stability Assessment (DSA), Operational Limitations (OL) and Operational Guidance (OG)*” – Invited presentation for the Workshop “Level 3 of the second generation intact stability criteria and its Operational Guidance – latest developments and outlook”, 21<sup>st</sup> January 2016, International Maritime Organization, London, UK
20. Bulian, G., “*Nonlinear ship dynamics and intact stability assessment*” – Invited lecture at the Society of Naval Architects of Serbia, University of Belgrade, Belgrade, Serbia, 27 June 2016
21. Bulian, G., “*Direct Stability Assessment (DSA) and Operational Measures (OM): some food for thoughts*”, Presentation during Workshop on Second Generation Intact Stability Criteria within the 13<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2018), 16-21 September 2018, Kobe, Japan
22. Bulian, G., “*Ship Dynamics in the Framework of Safety of Navigation*”. Invited seminar at Consorzio LaMMA, Sesto Fiorentino, Firenze, Italy, 10-11 December 2018.
23. Bulian, G., “*Towards a more general and flexible ship damage stability assessment framework*” - Invited keynote at 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland

### 35) Revisore per riviste internazionali

- International Shipbuilding Progress (2006, 2007, 2008, 2010, 2013, 2014, 2017, 2018, 2021, 2022)
- Journal of Marine Science and Technology (2006, 2009, 2010, 2011, 2012, 2013, 2016, 2017, 2018, 2020, 2021, 2022, 2023)
- ASME Journal of Computational and Nonlinear Dynamics (2009, 2010)
- Ocean Engineering (2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)
- IEEE Transactions on Control System Technology (2011)
- Marine Systems & Ocean Technology - A Journal of SOBENA (2012)
- Mathematical Problems in Engineering (2012)
- Safety Science (2014, 2016)
- Journal of Hydrodynamics (2014)
- Applied Ocean Research (2014, 2015, 2016, 2021, 2022)
- Journal of Marine Science and Application (2015, 2022)
- Journal of Fluids and Structures (2015, 2016, 2017, 2018, 2019)
- Journal of Ocean Engineering and Science (2016)
- Journal of Offshore Mechanics and Arctic Engineering (2016)
- Physics of Fluids (2016)
- Ships and Offshore Structures (2017, 2018, 2019, 2020, 2021, 2022)
- Reliability Engineering & System Safety (2020)
- Marine Structures (2021)

- Brodogradnja (2021, 2022, 2023)
- International Journal of Maritime Engineering (2021)
- Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability (2023)

### **36) Revisore per conferenze internazionali**

- 9th International Conference on Stability of Ships and Ocean Vehicles (STAB2006), Rio de Janeiro, 25-29 September 2006
- ISOPE-2007, The 17th International Offshore (Ocean) and Polar Engineering Conference, Lisbon, Portugal, July 1-6, 2007
- 47th IEEE Conference on Decision and Control, Fiesta Americana Grand Coral Beach, Cancun, Mexico, December 9-11, 2008
- 2011 American Control Conference, San Francisco, California, USA, June 29 - July 1, 2011
- ISOPE-2011, The 21st International Offshore (Ocean) and Polar Engineering Conference, Maui, Hawaii, USA, June 19-24, 2011
- 31st International Conference on Ocean, Offshore and Arctic Engineering (OMAE2012), June 10-15, 2012, Rio de Janeiro, Brazil
- 11th International Conference on the Stability of Ships and Ocean Vehicles (STAB2012), 23-28 September 2012, Athens
- 32nd International Conference on Ocean, Offshore and Arctic Engineering (OMAE2013), June 9-14, 2013, Nantes, France
- 33rd International Conference on Ocean, Offshore and Arctic Engineering (OMAE2014), June 8-13, 2014, San Francisco, CA, USA
- 3rd International Conference on electrical systems for aircraft, railway, ship propulsion and road vehicles (ESARS2015), March 3rd-5th 2015, Aachen – Germany
- 12<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles (STAB2015), 14-19 June 2015, Glasgow, Scotland, UK
- 16<sup>th</sup> International Congress of the International Maritime Association of the Mediterranean (IMAM 2015) - Towards Green Marine Technology and Transport, 21-24 September 2015, Pula, Croatia
- 35th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2016), June 19-24, 2016, Busan, Korea
- 36th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2017), June 24-30, 2017, Trondheim, Norway
- International Conference on Ships and Offshore Structures (ICSOS2017), 11-13 September 2017, South University of Science and Technology of China, Shenzhen, China
- 37th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2018), June 17-22, 2018, Madrid, Spain
- 13th International Conference on the Stability of Ships and Ocean Vehicles (STAB2018), 16-21 September 2018, Kobe, Japan
- 7th International Maritime Conference on Design for Safety (DfS 2018), 16-21 September 2018, Kobe, Japan
- 17th International Ship Stability Workshop, 10-12 June 2019, Helsinki, Finland
- Sustainable and Safe Passenger Ships 2020, 4th March 2020, Piraeus, Greece.
- 39th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2020). Originally planned for June 28-July 3, 2020, Fort Lauderdale, Florida, USA . Later shifted online 3-7 August 2020.
- 30th International Offshore (Ocean) and Polar Engineering Conference (ISOPE-2020), October 12-16, 2020, Originally planned in Shanghai, China, later shifted Online.
- 4th International Conference on Renewable Energies Offshore (RENEW 2020), 12 - 15 October 2020, Lisbon, Portugal (mixed in-person / online)
- 1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STAB&S 2021), 7-11 June 2021, online – organized by Maritime Safety Research Centre, Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde, Glasgow, Scotland
- International Conference on Ships and Offshore Structures (ICSOS 2021), 6-8 September 2021, online, organized by Hamburg University of Technology, Germany.
- 18th International Ship Stability Workshop, 12-14 September 2022, Gdansk, Poland.

### **37) Revisore per capitoli di libro**

- “*Contemporary Ideas on Ship Stability – Risk of capsizing*”, Belenky, V.L., Spyrou, K.J., van Walree, F., Almeida Santos Neves, M., Umeda, N. (Eds.), Springer, 2019, ISBN 978-3-030-00516-0 (eBook) 978-3-030-00514-6 (print) (reviews carried out in 2017)

- “*Contemporary Ideas on Ship Stability - From Dynamics to Criteria*”, Springer (reviews carried out in 2020 and 2021)

**38) Tesi di dottorato (PhD): revisore di tesi e/o membro di commissione di valutazione**

- Míguez González, M., "*A Study of Ship Parametric Roll Resonance for the Evaluation of Preventive Strategies*", Universidade da Coruña, Spain, 2012
- Breu, D.A., "*Frequency Detuning of Parametric Roll Resonance*", Norwegian University of Science and Technology, Norway, 2013
- Mata Álvarez-Santullano, F., "*Fishing effort control regulations influence on stability, safety and operability of small fishing vessels: study of a series of stability related accidents occurred in Spain between 2004 and 2007*", Universidad Politécnica de Madrid, Spain, 2014
- Petacco, N., "*Second Generation Intact Stability criteria: Analysis, Implementation and Applications to significant ship typologies*", University of Genova, Italy, 2019
- Karolius, K.B., "*Risk-Based, sensor-fused detection of flooding casualties for emergency response*", Maritime Safety Research Centre (MSRC), Department of Naval architecture, Ocean and Marine engineering, University of Strathclyde, UK, 2019
- Luthy, V., "*Probability of occurrence of parametric roll on a predefined sea state*", École nationale supérieure d'arts et métiers (ENSAM), France, 2023