Curriculum

Nome Name:	Vincenzo
Cognome Surname:	CRUPI

ORCID:	0000-0001-7498-4733
Scopus Author ID:	23391764000
WOS Author ID:	H-3062-2011
Sito WEB WEB site:	https://unime.unifind.cineca.it/get/person/025350

POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:

Posizione attuale Current position:	In servizio
Qualifica Qualification:	Professore Ordinario (L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company:	Università degli Studi di MESSINA
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2015
Anno fine End Year:	n.d.

PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE (LAST 10 YEARS):

LINGUE / LANGUAGES:

Lingua Language:	Italiano
Scrittura Writing:	madrelingua
Comunicazione Comunication:	madrelingua

AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY

Area scientifico-disciplinare Area scientific-disciplinary:	Ingegneria industriale e dell'informazione
Area scientifico-disciplinare codice Area scientific-disciplinary code:	09
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Costruzioni e impianti navali
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-IIND-01/B

DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):

Descrizione Description:	*1. Design of a Green Ship through Additive Manufacturing and Lightweight Structures. The research topic is focused on the innovation of the marine and offshore industry through the use of advanced lightweight materials and additive manufacturing (AM) technologies. The adoption of AM technologies may also foster the implementation of innovative solutions, such as biomimetic design, marine robotics, and in particular Robotic Additive Manufacturing (RAM). Strategies for reducing CO_2 emissions in maritime transport can be classified into two main categories: the introduction of alternative energy sources with innovative propulsion systems, and structural design innovation based on lightweight design criteria, aiming at the development of light structures with high mechanical strength and excellent energy absorption capability. The goal of the research is the development of design criteria for a Green Ship. The main scientific results are reported in 5 articles (see below): doi: 10.1016/j.compstruct.2024.118607, doi: 10.1080/15397734.2020.1822184, doi: 10.1080/17445302.2021.1996109, doi: 10.1016/j.oceaneng.2024.117732, doi: 10.1080/15376494.2021.1941448. 2. Fatigue analysis of materials and joints for naval and offshore applications. The research activity is conducted by employing both conventional and advanced methodologies, supported by small- and full-scale experimental testing. Particular*

	attention is devoted to the investigation of the fatigue performance of welded joints between dissimilar materials in the framework of naval and offshore applications. The goal of the research is the development of innovative approaches for the prediction of fatigue life in marine and offshore structures. The main scientific results are reported in 4 articles (see below): doi: 10.1016/j.marstruc.2017.10.004, doi: 10.1016/j.tafmec.2021.103090, doi: 10.1016/j.oceaneng.2021.108582, doi: 10.1016/j.oceaneng.2018.04.070. 3. Green materials In the construction of wooden boats the technique of cold forming by means of strip planking, which involves layering and gluing laminate more or less thick, of various wood species and at different orientations, has several advantages. Experimental tests were carried out in order to characterize the elastic response of a particular laminated frequently used, consisting of long strips, made of Douglas (with fibber at 0 °) and thinner layers made of Mahogany ± 45 ° with fibber direction. The main scientific results are reported in the article (see below): doi: 10.1016/j.compositesb.2016.12.049.

PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2025
Citazione Citation:	Scattareggia Marchese, Simone, Epasto, Gabriella, Crupi, Vincenzo, Garbatov, Yordan (2025). Feasibility study on additive-manufactured honeycomb sandwich structural solutions for a Fast Patrol vessel. COMPOSITE STRUCTURES, p. 1-12, ISSN: 0263-8223, doi: 10.1016/j.compstruct.2024.118607

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Nikkhah H., Crupi V., Baroutaji A. (2022). Crashworthiness analysis of bio-inspired thin-walled tubes based on Morpho wings microstructures. MECHANICS BASED DESIGN OF STRUCTURES AND MACHINES, vol. 50, p. 3683-3700, ISSN: 1539-7734, doi: 10.1080/15397734.2020.1822184

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Palomba, G., Epasto, G., Sutherland, L., Crupi, V. (2022). Aluminium honeycomb sandwich as a design alternative for lightweight marine structures. SHIPS AND OFFSHORE STRUCTURES, vol. 17, p. 2355-2366, ISSN: 1744-5302, doi: 10.1080/17445302.2021.1996109

Anno della pubblicazione Year of publication:	2024

Citazione Citation:	Garbatov, Yordan, Scattareggia Marchese, Simone, Epasto, Gabriella, Crupi, Vincenzo (2024). Flexural response of additive-manufactured honeycomb sandwiches for marine structural applications. OCEAN ENGINEERING, vol. 302, p. 1-12, ISSN: 0029-8018, doi: 10.1016/j.oceaneng.2024.117732

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Palomba, Giulia, Epasto, Gabriella, Crupi, Vincenzo (2022). Lightweight sandwich structures for marine applications: a review. MECHANICS OF ADVANCED MATERIALS AND STRUCTURES, vol. 29, p. 4839-4864, ISSN: 1537-6494, doi: 10.1080/15376494.2021.1941448

Anno della pubblicazione Year of publication:	2018
Citazione Citation:	P. Corigliano, V. Crupi, E. Guglielmino, A. Sili (2018). Full-field analysis of AL/FE explosive welded joints for shipbuilding applications. MARINE STRUCTURES, vol. 57, p. 207-218, ISSN: 0951-8339, doi: 10.1016/j.marstruc.2017.10.004

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Corigliano P., Crupi V., Pei X., Dong P. (2021). DIC-based structural strain approach for low-cycle fatigue assessment of AA 5083 welded joints. THEORETICAL AND APPLIED FRACTURE MECHANICS, vol. 116, p. 1-13, ISSN: 0167-8442, doi: 10.1016/j.tafmec.2021.103090

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Corigliano, Pasqualino, Crupi, Vincenzo (2021). Fatigue analysis of TI6AL4V/INCONEL 625 dissimilar welded joints. OCEAN ENGINEERING, vol. 221, p. 1-7, ISSN: 0029-8018, doi: 10.1016/j.oceaneng.2021.108582

Anno della pubblicazione Year of publication:	2017
Citazione Citation:	CORIGLIANO, PASQUALINO, CRUPI, Vincenzo, EPASTO, Gabriella, GUGLIELMINO, Eugenio, MAUGERI, NATALE ANTONIO, Marinò, A. (2017). Experimental and theoretical analyses of Iroko wood laminates. COMPOSITES. PART B, ENGINEERING, vol. 112, p. 251-264, ISSN: 1359-8368, doi: 10.1016/j.compositesb.2016.12.049

Anno della pubblicazione Year of publication:	2018
Citazione Citation:	P. Corigliano, V. Crupi, E. Guglielmino (2018). Non linear finite element simulation of explosive welded joints of dissimilar metals for shipbuilding applications. OCEAN ENGINEERING, vol. 160, p. 346-353, ISSN: 0029-8018, doi:

	10.1016/j.oceaneng.2018.04.070

DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):

Descrizione Description:	*FUNDED PROJECTS Scientific Responsible of Research Projects • 2025 - 2026 Scientific Responsible of the Research Unity of the University of Messina for the Research Project of MITE for hydrogen within the PNRR – M2C2 "META-CELL". • 2024 - 2025 Scientific Responsible of the Research Unity of the University of Messina for the Research Project PRIN 2022 PNRR "LODE" Code: P2022SXTA4_002. • 2017 - 2019 Scientific Responsible of the Research Unity of the University of Messina for the Research Project PRIN CLEBJOINT. Code: 2015PN8CEA_003. Participation to Research Projects •2023 - 2025 "SAMOTHRACE", PNRR. Reference of Task 4.2 "Applications of sensors for sustainable, safe and intermodal mobility". PROJECT ECS00000022. •2021 - 2024 "DAS PHANTOMSHIFFE". Code: F/190001/01-02-03/X44 •2021 - 2023 "EOLO". Code: ARS01_01044 •2019 - 2022 "THALASSA". Code: ARS01_00293. •2019 - 2022 "AEROMAT". Code: ARS01_01147 AWARDS • 26 October 2021, 11 October 2022, 4 October 2023, 16 September 2024 Inclusion in the list of the top 2 % most-cited scientists in various disciplines for the years 2020, 2021 2022 and 2023 (report della Stanford University) https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/5 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/7 • 16 October 2020 Inclusion in the 160.000 top-scientists list according to a study, published on Plos Biology. https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.300 0918 • 11 September 2021 Inclusion in the top italian*

	scientists list https://topitalianscientists.org/home

Descrizione Description:	1. Scientific Responsible of the Research Unity of the University of Messina for the Research Project of MITE; 2. Scientific Responsible of the Research Unity of the University of Messina for the Research Project PRIN 2022 PNRR “LODE”; 3. Scientific Responsible of the Research Unity of the University of Messina for the Research Project PRIN CLEBJOINT; 4. RESULTS OF EVALUATION RESEARCH QUALITY VQR 2004 – 2010: 6 EXCELLENT PAPERS; 5. RESULTS OF EVALUATION RESEARCH QUALITY VQR 2011 – 2014: 4 EXCELLENT PAPERS; 6. RESULTS OF EVALUATION RESEARCH QUALITY VQR 2015 – 2019: 9 EXCELLENT PAPERS (7 CLASS A, 2 CLASS B); 7. Inclusion in the list of the top 2 % most-cited scientists in various disciplines for the years 2020, 2021 2022 and 2023 (report della Stanford University); 8. Inclusion in the 160.000 top-scientists list according to a study, published on Plos Biology (16 October 2020); 9. Inclusion in the top italian scientists list (11 September 2021).

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):

Descrizione Description:	*SCIENTIFIC COLLABORATIONS - Universidade de Lisboa – Portugal (Prof. Y. Garbatov, Dr. L. Sutherland), - Trinity College Dublin – Ireland (Prof. D. Taylor), - University of Michigan – United States (Prof. P. Dong) - Southern Illinois University – United States (Prof. S. Abrate), - University TUHH di Amburgo – Germany, (Prof. W. Fricke),] - Hunan University – China (Prof. XG Wang), - Dalian University of Technology – China (Prof. C. Wu), - Iran University of Science and Technology (Dr. H. Mozafari), - Hitit Universit – Turkey (Dr. E. Kara), - Qatar University, Doha – Qatar (Prof. A.M. Hamouda), - Russian Academy of Sciences, Perm, Russian Federation (Dr. O. Plekhov), - University of Wolverhampton, United Kingdom (Dr. A. Baroutaji), - Politehnica University of Timisoara, Romania (Prof. E. Linul), - University of Trieste (Prof. A. Marinò), - University of Napoli Parthenope (Prof. A.*

	Scamardella), - Politecnico di Torino (Prof A. Audenino), - University of Napoli Federico II (Prof. A. Squillace, Prof. M. Altosole), - University of Modena e Reggio Emilia (Prof. E. Dragoni), - University of Calabria (Prof. C. Maletta, Prof. L. Bruno), - University of Catania (Prof. G. La Rosa), - - CNR-ITAE Messina, Distretto Tecnologico Trasporti Navali NAVTEC di Messina, - Unione Internationale Motonautique (S. Abrami), - Shipyards (Fincantieri, Intermarine, Aicon, Liberty, Zancle 757), Caronte & Tourist group. - Companies (Signo Motus, Ocean & Cables, 3DnA, Nebiolo, Blue Stone, NTET, Sophia).

Descrizione Description:	1. Chairman of the Scientific Committee of NAV 2025 Conference 2. Member of the Scientific Committee of MARSTRUCT 2025 Conference 3. Member of the Scientific Committee of CNM 2024 Conference 4. Member of the Scientific Committee of HSMV 2023 Conference 5. Member of the Track Directors of the Scientific Committee of NAV 2022 Conference for the topic “Ship structures and materials”

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):

Descrizione Description:	*INSTITUTIONAL ACTIVITY • 1 October 2018 Coordinator of Bachelor's Degree in "Sciences and Technologies of Navigation" of the University of Messina. Period: 6 years (since 1/10/2018 to 30/09/2024). • since 21 January 2020 to 29 November 2021 Member of the Coordinating Committee and Responsible of “Naval mechanical engineering” Area of research and service center CERISI (http://cerisi.unime.it/en.html#navalmeccanica) • since 6 June 2024 ANVUR Expert Evaluator (ANVUR Board of Directors Resolution no. 116 of*

	05/23/2024) • 14 april 2022 - 18 december 2024 Delegate of the Head of the Engineering Department for the teaching activity (Prot n. 48569) Member of journal Editorial Board "Journal of Marine Science and Engineering" (JMSE) "Metals". Deputy Editor of "Journal of Mechanical Engineering Science" (JMES). "Polish Maritime Research". REVIEWER OF RESEARCH PROJECTS Reviewer of projects for: Government of the Russian Federation, Croatian Science Foundation, Polish National Science Centre, Chilean Government, Czech Science Foundation, University of Campania Luigi Vanvitelli, Italy, University of Florence, Italy, Liguria Region, Italy, University of Trieste, Italy.

Descrizione Description:	1. Member of the Coordinating Committee and Responsible of "Naval mechanical engineering" Area of research and service center CERISI (http://cerisi.unime.it/en.html#navalmeccanica) 2. ANVUR Expert Evaluator (ANVUR Board of Directors Resolution no. 116 of 05/23/2024) 3. Member of journal Editorial Board "Journal of Marine Science and Engineering" (JMSE) 4. Member of journal Editorial Board "Metals". 5. Deputy Editor of "Journal of Mechanical Engineering Science".

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):

Descrizione Description:	*• since 9 June 2022 Responsible of the NETTUNO (Green and lightweight design of ship and offshore structures for sustainable mobility and blue growth) research group of the University of Messina. • since 30 May 2022 Faculty Advisor of "Messina Energy Boat" team for "Monaco Energy Boat Challenge". RESPONSIBLE OF LABORATORIES: "Ship design 1", "Ship design 2", "Mechanical testing", "Large scale testing". • 1 October 2018 Coordinator of Bachelor's Degree in "Sciences and Technologies of Navigation" of the University of Messina. Period: 6 years (since 1/10/2018 to 30/09/2024). • since 21 January 2020 to 29 November 2021 Member of the Coordinating Committee and Responsible of "Naval mechanical engineering" Area of research and service center CERISI (http://cerisi.unime.it/en.html#navalmeccanica) • 14 april 2022 - 18 december 2024 Delegate of*

	the Head of the Engineering Department for the teaching activity (Prot n. 48569)

Descrizione Description:	1. Responsible of the NETTUNO (Green and lightweight design of ship and offshore structures for sustainable mobility and blue growth) research group of the University of Messina. 2. Faculty Advisor of “Messina Energy Boat” team for “Monaco Energy Boat Challenge”. 3. RESPONSIBLE OF LABORATORIES: “Ship design 1”, “Ship design 2”, “Mechanical testing”, “Large scale testing”.

Informazioni aggiornate alla data di candidatura 20-08-2025

Vincenzo CRUPI

Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto