

# **Curriculum Vitae Personal information**

First name / Surname

# Maro Corak

Address Telephone E-mail Web Skype Nationality Date of birth

Pavlenski put 9, 10000 Zagreb, Croatia +385 98802107 marocorak@gmail.com https://hr.linkedin.com/in/maro-ćorak-036a0b88 marocorak Croat 08 November 1981

Summary

Dates

Doctor of Science/Naval Architect with 12 years' experience within academic community. During that time involved in numerous commercial projects as well as research and educational projects. Experience and advanced user of 2D&3D CAD tools and finite element analysis (FEA) software. Experience in performing direct global and local ship strength analysis and working with design offices and classification societies.

## WORK EXPERIENCE

#### September 2018 – Present

#### Occupation or position held Assistant professor

Maritime Department, University of Dubrovnik, Ćira Carića 4, Dubrovnik, 20000, Croatia

- Main activities and responsibilities
- Work field: Ship structure, fatigue, loads, structural safety
  - Giving lectures at three undergraduate courses:
    - Means of Maritime Transport
      - (Subject at Undergraduate Marine Engineering course, I year)
    - (Subject at Undergr. Maritime Technology of Yachts and Marinas course, I year) Ship Construction
      - (Subject at Undergraduate Marine Engineering course, II year)
    - Yacht Construction, Resistance and Propulsion
      - (Subject at Undergr. Maritime Technology of Yachts and Marinas course, II year)
  - Co-editor of scientific journal Our Sea (Naše More)

#### Dates

Occupation or position held

Main activities and responsibilities

#### Senior research assistant

January 2014 - September 2018

Department of Naval Architecture and Ocean Engineering of the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb

- Work field: Ship structure, fatigue, loads, structural safety
  - Giving exercise lectures of two regular courses: Theory of Construction
    - Strength of Ship
  - Giving exercise lectures of two optional courses:
    - Basic of Oceanology

Fatigue Reliability and Rational Inspection Planning

Involved in many commercial project by performing modelling and structural analysis of various types of ships (Bulk Carrier - Vibration analysis, 3 Maj/Uljanik Shipyard; Chemical Tanker - Vibration analysis, 3 Maj/Uljanik Shipyard; Self-Propelled Cutter Suction Dredger - Strength and vibration analysis, Uljanik Shipyard; Patrol Vessel - Vibration analysis, Brodosplit Shipyard; Car Carrier -Modelling of ship structure, Bureau Veritas (BV)).

Producing engineering documentation such as design calculation and reports, working closely with shipyard design offices. Working towards classification societies in order to obtain approvals.

Dates	January 2008 – December 2013
Occupation or position held	Research assistant
	Department of Naval Architecture and Ocean Engineering of the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb
Main activities and responsibilities	<ul> <li>Work field: Ship structure, fatigue, loads, structural safety</li> <li>Giving exercise lectures of two optional courses: Basic of Oceanology Fatigue Reliability and Rational Inspection Planning</li> </ul>
	Involved in many commercial project by performing modelling and structural analysis of various types of ships ( <b>Bulk Carriers</b> – Modelling of ship structure, BV; <b>Chemical/Oil Tankers</b> – Modelling of ship structure, BV; <b>Container Ships</b> – Modelling of ship structure, Bureau Veritas (BV); <b>Suction Hopper Dredger</b> –Strength analysis, Uljanik Shipyard; <b>Juice Carrier</b> –Strength analysis, Brodosplit Shipyard).
Dates	March 2007 – January 2008
Occupation or position held	Assistant on the project "Structure Analyses of Ships and Offshore Floating Units, Bureau Veritas"
	Centre of Technology Transfer, Ivana Lučića 5, 10000 Zagreb, Croatia
Main activities and responsibilities	<ul><li>Modelling of ship structure</li><li>FEM and structural analysis</li></ul>
EDUCATION AND TRAINING	
Dates	October 2008 – December 2013

### Title of qualification awarded Name and type of organisation providing education and training

Title of qualification awarded

Name and type of organisation

providing education and training

Dates

#### October 2008 – December 2013

#### **Doctor of Science in Naval Architecture**

Joint doctoral programme (COTUTELLE) - Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb - Instituto Superior Technico, Technical University of Lisbon

Thesis title: "PROBABILISTIC COMBINATION OF WAVE AND WHIPPING BENDING MOMENTS ON SHIP STRUCTURE" (mentors: prof. dr.sc. Joško Parunov, prof. dr.sc. Carlos Guedes Soares)

#### October 2000 - March 2007

### Master of Science in Naval Architecture

Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb

Thesis title: "STRUCTURAL SAFETY OF CHEMICAL TANKER" (mentor: prof. dr.sc. Joško Parunov)

#### June 2010 - July 2010 Dates

#### Specialization

Title of qualification awarded Name and type of organisation providing education and training

Classification Society Bureau Veritas, Paris FEM (Femap/NX NASTRN) training and working on project of the Chemical Tanker.

#### PERSONAL SKILLS AND **COMPETENCES**

Mother tongue	Croatian
Other language	English (Level: Proficient user, C1/C2*)
Other language	Italian (Level: Basic user, A1*)
	(*) Common European Framework of Reference for Languages
Social skills and competences	Team player, good communication skills gained by giving lectures and presenting papers in numerous conferences. Pro-active with strong initiative to learn. High level of independency and reliability. Enjoying living and working in a multicultural environment.
Organisational skills and competences	Developed organizational skills. Management experience in education and design of various types of vessels. Experience in organizing and conducting teamwork.
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Technical skills and competences	The strong ability of critical and analytical thinking, excellent knowledge of computer hardware and software. Experienced 2D & 3D CAD, FEA software's and hand calculations user. Experience dealing with the various rules/regulations (ABS, DNV-GL, BV, IASC, IMO).
Computer skills and competences	Proficient user of Microsoft Office tools (Word, Excel and PowerPoint), MathCad, AutoCAD, Femap/NX NASTRN, BV-Hydrostar, BV-VeriSTAR Hull, BV-StarSpec, DNV-SESAM / Waveship and Postresp. Basic user of Microsoft Visual Studio-Intel FORTRAN.
Other skills and competences Driving licence	Enjoy all sports, particularly soccer. Love to travel and experience different cultures. B category.

# **ADDITIONAL INFORMATION**

Journal Publications	<ul> <li>Gledić, I., Parunov, J., Prebeg P., Ćorak, M., Low-cycle fatigue of ship hull damaged in collision, Engineering failure analysis, Vol. 96, pp. 436-454, 2019.</li> </ul>
	<ul> <li>Ćatipović, I., Ćorak, M., Parunov, J., Alujević, N., Seakeeping experiments on damaged ship, Ships and Offshore Structures, Vol. 1, No. 1, pp. 1-12, 2018.</li> </ul>
	• Ćorak, M., Parunov, J., Guedes Soares, C., Structural Reliability Analysis of Container Ships under Combined Wave and Whipping Loads, Journal of ship research. Vol. 62, No. 3, pp. 115-133, 2018.
	• Parunov, J., Rudan, S., Ćorak, M., Ultimate hull-girder-strength-based reliability of a double-hull oil tanker after collision in the Adriatic Sea, Ships and Offshore Structures. Vol. 12, No. 1, pp. 55-67, 2017.
	• Ćorak, M., Parunov, J., Guedes Soares, C., Probabilistic Load Combination Factors of Wave and Whipping Bending Moments, Journal of ship research. Vol. 59, No. 1, pp. 11-30, 2015.
	• Ćorak, M., Parunov, J., Guedes Soares, C., Long-term prediction of combined wave and whipping bending moments of container ships, Ships and Offshore Structures, Vol.10, No. 1, pp. 4-19, 2015.
	<ul> <li>Parunov, J., Andrić, J., Ćorak, M., Kitarović, S., Structural reliability assessment of container ship at the time of accident, Journal of Engineering for the Maritime Environment, Vol. 229, No. 2, pp. 111- 123, 2015.</li> </ul>
	• Parunov, J., Ćorak, M., Gilja, I., Calculated and prescribed stress concentration factors of ship side longitudinal connections, Engineering structures, Vol. 52, pp. 629-641, 2013.
	• Parunov, J., Ćorak, M., Pensa, M., Wave height statistics for seakeeping assessment of ships in the Adriatic Sea, Ocean engineering, Vol. 38, pp. 1323-1330, 2011.
	<ul> <li>Parunov, J., Ćorak, M., Guedes Soares, C., Structural Reliability of a Chemical Tanker, Marine Technology, Vol. 46, No.4, pp. 192-199, 2009</li> </ul>
Presentations and publications at conferences	Avaliable at <u>https://www.bib.irb.hr/pretraga/?operators=and %C4%86orak%20maro text author&amp;subgroup=cpr- other_proceedings%257Ccpr-professional_proceedings%257Ccpr-scientific_proceedings </u>
Projects	<ul> <li>MODUS - Modelling Uncertainty of Ship Response Prediction in the Adriatic Sea, HRZZ project</li> <li>DATAS - Structural Reliability of Damaged Oil Tanker in the Adriatic Sea, HRZZ project</li> <li>TULCS - Tools for Ultra Large Container Ships, EU FP7 project</li> <li>ASDEPP - Advanced Ship Design For Pollution Prevention, TEMPUS project</li> </ul>

Recommendations • Available upon request

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