CURRICULUM VITAE

PERSONAL INFORMATION

Full name: Voskakis Dimitris
Place of birth: Heraklion Crete, Greece
Nationality: Hellenic
Contact number: (+47) 462 86 741
(+30) 6945 03 53 31
E-Mail: dimitris.voskakis@ntnu.no

EDUCATION

[2024-Today] Doctorate (PhD) in Engineering Cybernetics, Faculty of Information Technology and Electrical Engineering, Norwegian University of Science and Technology
Thesis: ***Developing technological methods to assess farmed fish welfare at a shoal level***

[2016-2019] Master's Degree (MSc), Hellenic Mediterranean University of Crete, I.P.P.S Advanced manufacturing systems, automation and robotics,
Thesis: ***Fish Size and Shape Estimation with Stereoscopic Vision***
Grade 8.92/10 (with distinction)

[2008-2015] Bachelor's Degree (BSc), Department of Informatics Engineering, University of Applied Sciences Crete,
Thesis: ***Online library for students***
Grade 6.7/10 (with merit)

APPOINTMENTS

[Mar.2025-Aug.2025] Research Assistance, Norwegian University of Science and Technology, Faculty of Natural Sciences, Department of Biology

[Mar.2024-Today] Research Fellow, Norwegian University of Science and Technology (NTNU)

[Mar.2018-Feb.2024] Research Associate, Hellenic Center for Marine Research (HCMR)

[Mar.2018-May.2019] Research Collaboration, Foundation for Research and Technology-Hellas (FORTH)

[Oct.2017- Oct.2020] Voluntary educational robotics, Cultural Conference Center (Municipality of Malevizi)

[Feb.2015-Jun.2015] Internship at School of Health and Welfare Services - IT Department, University of Applied Sciences Crete

[Jun.2010-Sep.2010] Junior System Administrator, IT Department University of Crete

[Jun.2009-Aug.2009] Junior Developer MADCON A.E

A. RESEARCH PROJECTS

[2024-Today] **Title:** Non-Invasive Biological Warning Systems: monitoring of farmed fish and environment to improve welfare in aquaculture systems (BioWaSys)
Funding: Research council of Norway
Total budget: NOK 12 million

[2021-2024] **Title:** AQUAculture infrastructures for EXCELlence in European fish research 3.0 (AQUAEXCEL 3.0)
Funding: European Union's Horizon 2020 research and innovation programme under grant agreement No. 871108 (AQUAEXCEL 3.0)
Total budget: € 9,9 million
Website: *http://www.aquaexcel.eu*

[2019-2021] **Title:** Centre for the study and sustainable exploitation of Marine Biological Resources (CMBR)
Funding: Operational Programme Competitiveness, Entrepreneurship and Innovation (EPAnEK) 2014-2020
Total Budget: € 4 million

[2018-2019] **Title:** AQUAculture infrastructures for EXCELlence in European fish research towards 2020 (AQUAEXCEL 2020)
Funding: Horizon 2020 (INFRAIA-1-2014/2015)
Total budget: € 9,7 million
Website: *http://www.aquaexcel2020.eu*

[2018-2019] **Title:** Consumer Driven Production: Integrating Innovative Approaches for Competitive and Sustainable Performance across the Mediterranean Aquaculture Value Chain (PerformFISH)
Funding: Horizon 2020 (H2020-SFS-23-2016)
Total budget: € 7 million
Website: *http://www.performfish.eu*

B. PUBLICATIONS

JOURNAL

1. **Voskakis D**, Føre M, Svendsen E, Liland A, Planellas S, Eguiraun H, Klebert P, "*The Cyber-enhanced tank: A novel concept for increased realism and multi-modal monitoring in tank-based finfish aquaculture research*", Front Robot AI, 2025 [Accepted]
2. Chen, I.-H., Georgopoulou, D. G., Ebbesson, L. O. E., **Voskakis, D.**, Munthe-Kaas, A. Z., & Papandroulakis, N. (2025). "*Acoustic tags versus camera - A case study on feeding behaviour of European seabass in sea cages"*. Frontiers in Marine Science., 11.
3. Chen, I. H., Georgopoulou, D. G., Ebbesson, L. O., **Voskakis, D.**, Lal, P., & Papandroulakis, N. "*Food Anticipatory Behaviour on European Seabass in Sea Cages: Activity-, Positioning-and Density-based approaches"*. Frontiers in Marine Science, *10*, 1085.
4. Georgopoulou, D., Fanouraki, E., **Voskakis, D**., Mitrizakis, N., & Papandroulakis, N. "*European seabass show variable responses in their group swimming features after tag implantation"*. Frontiers in Animal Science, 109.
5. Stavrakidis-Zachou O, Asderis M, Anastasiadis P, Chalkiadakis V, **Voskakis D**, Senneset G, Papandroulakis N. D6. 3 "*Sampling in cages"*.
6. **Voskakis, D., "***Fish size and shape estimation with stereoscopic vision"*. (Master Thesis), Department of Mechanical Engineering, Hellenic Mediterranean University.

CONFERENCE

1. **Voskakis, D.,** Føre, M., Svendsen, E., Liland, A. P., Planellas, S. R., Eguiraun, H., & Klebert, P. (2024). "*An enhanced and more realistic tank environment setup for the development of new methods for fish behavioral analysis in aquaculture*". arXiv preprint arXiv:2409.14730.
2. **D. Voskakis,** E.Kelasidi, N.Papandroulakis, "*Modeling and control of an underwater calibration arm*" in proceedings of the IEEE Mediterranean Conference on Control and Automation (MED 2024), Chania,Crete-Greece, June 11-14, 2024.
3. **D. Voskakis,** E.Kelasidi, N.Papandroulakis, "*Design and development of underwater robotic arm for automated camera calibration for aquatic environment*" in proceedings of the IEEE Automation, Robotics and Applications (ICARA 2024), Athens-Greece, February 22-24, 2024
4. **D. Voskakis**, A.Makris, N.Papandroulakis, "*Deep learning based fish length estimation. An application for the Mediterranean aquaculture*" in proceedings of the IEEE Ocean Engineering Society (OCEANS 2021), San Diego-Porto, September 20-23, 2021

C. CONFERENCES

1. **D. Voskakis,** M. Føre, S. Planellas, H. Eguiraun, P. Klebert, "*Event based fish detection in a cyber-enhanced tank. Two novel concepts for precision fish farming*". European Aquaculture Society (EAS2025). Valencia, Spain, September 22-25.
2. **D. Voskakis,** M. Føre, E. Svendsen, A. Liland, S. Planellas, H. Eguiraun, P. Klebert, "*An enhanced and more realistic tank environment setup for the development of new methods for fish behavioral analysis in aquaculture*" in proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024), Abu Dhabi, October 14-18, 2024.
3. **D. Voskakis,** E. Kelasidi, N. Papandroulakis, "*Modeling and control of an underwater calibration arm*" in proceedings of the IEEE Mediterranean Conference on Control and Automation (MED 2024), Chania, Crete Greece, June 11-14, 2024.
4. **D. Voskakis,** E. Kelasidi, N. Papandroulakis, "*Design and development of underwater robotic arm for automated camera calibration for aquatic environment*" in proceedings of the IEEE Automation, Robotics and Applications (ICARA 2024), Athens-Greece, February 22-24, 2024.
5. **D. Voskakis**, A. Makris, N. Papandroulakis. "*Deep learning based fish length estimation. An application in the Mediterranean aquaculture"*. IEEE Ocean Engineering Society (OCEANS 2021). San Diego-Porto, September 20-23.
6. N. Papandroulakis, V. Chalkiadakis, **D. Voskakis**, A. Makris, M. Sfakiotakis, V. Trigonis, A. Kapelonis, C. Schellewald, Walter Caharija. "*Novel technology to improve feeding management*". European Aquaculture Society (EAS2019). Berlin, Germany, October 7-10.

D. PATENT APPLICATIONS

1. **Voskakis D.**, Papandroulakis N., Makris A., HCMR, 2023. Method and system for the non-invasive measurement of the fish size in aquaculture. GR. Patent Application 20220100304 filed April 6, 2022, and issued January 16, 2023.
2. **Voskakis**, **D.**, Artificial-Intelligence craft's navigation system. GR. Patent Application 20180100033 filed January 25, 2018, and issued September 6, 2019.

E. INVITED TALKS

1. **D. Voskakis,** Invited talk with the title "*Cyber enhanced tank: An increased realism environment with the use of multi-modal monitoring system*", SINTEF OCEAN, Trondheim, Norway, 2025.
2. **D. Voskakis**, Invited talk at Inventors X - Contemporary Greek Inventors (MIND THE MINDS), with the title "*An A.I. application for the aquaculture*" Greece, 2023.
3. **D. Voskakis**, Invited talk with the title *"Nutrition and feeding in seabream and seabass production"*, Online training program, June 21-22, 2022.

F. HONOURS AND AWARDS

1. PhD Scholarship, Norwegian University of Science and Technology, Norway, 2024.
2. D. Voskakis, "*An A.I. application for the aquaculture*", Inventors X - Contemporary Greek Inventors (MIND THE MINDS), Thessaloniki, Greece, March 22, 2023

G. COURSES/WORKSHOPS ATTENDANCE

[Sept 2021-Dec 2021**]** "*Machine Learning with Python-From Linear Models to Deep Learning"*. Massachusetts Institute of Technology (MIT).

[17-18 Aug 2020**]** "*Short course on Deep Learning and Computer Vision for autonomous systems"*. Aristotle University of Thessaloniki – Center for Education and Lifelong Learning (AUTH-CELL).

[19-21 Aug 2020**]** "*Programming short course and workshop on Deep Learning and Computer Vision*". Aristotle University of Thessaloniki – Center for Education and Lifelong Learning (AUTH-CELL).

RESEARCH INTERESTS

Automation and Robotics in Aquaculture, Event (Dynamic) Vision Sensor, Mathematical Modeling and Simulation, Fish Welfare Technologies, Fish Behavior, Innovative Technologies for Enhanced Aquatic Environments, Underwater Image Analysis

SKILLS

LANGUAGES

- Greek - Native Language
- English - Certificate of Competency in English, MICHIGAN University (USA)
- German - Basic

COMPUTER

- Knowledge of Python, C/C++, Linux, Arduino, Matlab, Gazebo, ROS, Solidworks, Creo, Inventor, Linux for Tegra - L4T
- Version Control Systems: Git, PyCharm