

Asbjørn Christensen – Short CV

ORCID

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Degrees

- MSc (Eng.), Institute of Physics, Technical University of Denmark (1993).
- PhD, Center for Atomic-scale Materials Physics, Technical University of Denmark (1996).

Positions

- Postdoc, Department of Chemistry and Biochemistry, University of California, LA, USA (1996-1999).
- Scientific Consultant, UNI-C, Scientific Computing group, Technical University of Denmark (1999-2000).
- Scientific Programmer, Center for Atomic-scale Materials Physics, Technical University of Denmark (2000-2003).
- Research Scientist, Danish Institute for Fisheries Research/DTU Aqua, Technical University of Denmark (2003-2012).
- Senior Researcher, Section for Marine Living Resources, DTU Aqua, Technical University of Denmark (2012-present).

Research area

Physical-biological interaction (individual-based modelling of early life history aspects, population/habitat connectivity, bioenergetics, larval backtracking and spatial distribution of species). Ecosystem impact assessment. Spatial population dynamics and life cycle modelling of sandeel populations in the North Sea (emphasis on physical-biological interaction on recruitment and fishery management). Life strategy optimization and influence of environmental changes and exploitation.

Memberships of scientific committees (last 5 years)

- Scientific steering group member of MEMC (Marine Ecological Modelling Centre, strategic research collaboration between DMI, DTU Aqua and AU) (2011-present).
- Scientific steering group member of CMP (Center for Maritime Planning, strategic research collaboration between AU, DTU Aqua, DMI and GEUS) (2018-present).
- Member of stationary ICES expert groups: WGEVO, WGPIEM, WGOOFE.

Publications

Type of publication:	Number
Web of Science publications:	44
Citations:	1885
<i>h</i> -index:	20
Other peer review publications:	2
Books:	1
Book chapters:	2
Reports:	32

Evaluation tasks and reviews (last 5 years)

- Referee for international journals including Marine Ecology Progress Series, Fisheries Research and Ocean Science.

Advisory tasks (last 5 years)

- Delegate for ICES Working Group for Fisheries-Induced Evolution (WGEVO) (2011-present).
- Delegate for ICES Working Group on Integrative, Physical-biological and Ecosystem Modelling (WGPIEM) (2012-present).

- Delegate for ICES Working Group on Oceanic Hydrography (WGOH) (2020-present).
- Contribution to advisory tasks for the Ministries, e.g. sandeel management and Natura 2000 area designations and risk assessment of invasive species dispersal from ballast water.

Educational tasks at academical level (last 5 years)

- Head of studies for MSc in Ocean Engineering (2025-)
- DTU course 25206 Preparatory chemistry and physics (BSc, responsible).
- DTU course 25328 Mathematical biology (MSc, responsible).
- DTU course 25324 Applied Ocean Observation (MSc, contributor).
- DTU course 25344 Environmental effects of maritime activities Technologies (MSc, contributor).

Supervision (ongoing or finished in the last 5 years)

	Principal/main supervisor	Co-supervisor
Other (MSc etc.)	8	6
PhD:	0	3
Postdoc:	1	2

Innovation activities (last 5 years)

- Larger software packages developed and maintained: IBMlib: a modular bio-physical modelling tool for spatial population dynamics for a wide variety of applications interfacing with hydrographic data sets and organism behaviour (github.com/IBMlib/IBMlib).
- Data service: ocebis.org (2017-2022 – operational biological downstream CMEMS user-uptake demonstration service)

Collaboration with other stakeholders (within last 5 years)

Fisheries organizations (DF, DPPO; research projects). DHI (research project). Vattenfall (research project). Seafarmer.dk (research project). Anchorlab I/S (data provision and tool development).

Grants (competitive) (ongoing or finished within last 5 years)

- OLAMUR (2023-2026, Horizon2020, PI)
- INTAROS (2016-2021, Horizon2020, PI)
- CLAIM (2017-2022, Horizon2020, PI)

Selected publications

- Christensen A, Mariani P & Payne MR (2018). A generic framework for individual-based modelling and physical-biological interaction. PLoS One, 13, 1, e0189956.
- Hansen, F. T., Pastor, A., Christensen, A. & Stuer-Lauridsen, F (2024). Using biophysical modelling and marine connectivity to assess the risk of natural dispersal of non-indigenous species to comply with the Ballast Water Management Convention. Biological Invasions. 26, p. 2539-2360 22 p.
- Ryberg, M. P., Christensen, A., Jørgensen, C., Neuenfeldt, S., Skov, P. V. & Behrens, J. W. (2023). Bioenergetics modelling of growth processes in parasitized Eastern Baltic cod (*Gadus morhua* L.). Conservation Physiology. 11, 1, 13 p., coad007.
- Christensen, A., Murawski, J., She, J. & John, M. S. (2023) Simulating transport and distribution of marine macro-plastic in the Baltic Sea. PLOS ONE. 18, 1, 24 p., e0280644.
- Bossier S, Nielsen JR, Almroth-Rosell E, Höglund A, Bastardie F, Neuenfeldt S, Wåhlström I & Christensen A (2021). Integrated ecosystem impacts of climate change and eutrophication on main Baltic fishery resources. Ecological Modelling, 435, 12 p., 109609.