

Short CV – Asbjørn Christensen

Degrees

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

Positions

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

Research area

- Physical-biological interaction (Individual-based modelling of early life history aspects, population connectivity, larval backtracking and spatial distribution of species).
- Spatial population dynamics and life cycle modelling of sandeel populations in the North Sea (emphasis on physical-biological interaction on recruitment, including life strategy optimization, demographic density effects and fishery management issues).

Memberships of scientific committees, 2011-present

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

Review, 2011-present

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

Peer reviewed publications: 23. Books and book chapters: 4. Reports: 10. International conferences: 28.

Advisory tasks, 2011-present

- Delegate/member for ICES working group for Fisheries-Induced Evolution (WGEVO) (2011-present).
- Delegate/member for ICES working group for Physical-Biological Interaction (WGPBI) (2004-2011), WGPIEM (2012-present).
- Delegate/member for ICES working group for Operational Oceanographic Products for Fisheries and the Environment (WGOOFE) (2011-2013).
- Contribution to impact assessment of wind farm at Horns Rev (2011-2012).
- Contribution to impact assessment of Femernbelt connection (2011-2012).
- Input to scientific basis in relation miscellaneous advisory tasks for the Ministry, e.g. sandeel management and Natura 2000 area designations and risk assessment of invasive species dispersal from ballast water.

Educational tasks, 2011-present

DTU courses: 25303 Mathematical Biology (Contributor), 25302 Physical Oceanography (Contributor), 25311 Fisheries Oceanography (Contributor).

Supervision, 2011-present

PhD students: 2 (Co-supervisor).

Grants, 2011-present

- Lead/Core Applicant in EU FP6/7 projects: MEECE (2008-2012, Co-PI), OPEC (2012-2015, PI), MyOcean 1,2,FO (2009-2015, PI), MESMA (2009-2013, Task Lead), CoCoNET (2012-2016, PI), BalticCheckpoint (2015-2018, PI).
- Lead/core applicant National collaborative projects: SUNFISH (DSF, 2008-2012 Task Lead), Nephros (GUDP 2011-2015, WP Leader), GUDP-VIND (GUDP, 2014-2018, WP Leader), MSC Plaice (EFF, 2012-2015, WP Leader).

Research collaboration with stakeholders, 2011-present

Sandeel, plaice and nephrops fisheries and their organizations, wind power enterprises (Horns Rev), and Femernbelt consortium in relation to impact assessment.

Five selected publications

Jahnke M, Christensen A, Micu D, Milchakova N, Sezgin M, Todorova V, Strungaru S, Procaccini G. (2016). Patterns and mechanisms of dispersal in a keystone seagrass species, *Marine Environmental Research*, 117, 54-62.

Maar M, Rindorf A, Møller EF, Christensen A, Madsen KS, van Deurs M. (2014). Zooplankton mortality in 3D ecosystem modelling considering variable spatial-temporal fish consumptions in the North Sea. *Progress in Oceanography* 124, 7891.

Hays GC, Christensen A, Fossette S, Schofield SG, Talbot J, Mariani P, (2014). Route optimisation and solving Zermelos navigation problem during long distancemigration in cross flows. *Ecology Letters*, 17, 137.

Christensen A, Butenschon M, Gurkan Z, Allen IJ, (2013). Towards an integrated forecasting system for fisheries on habitat-bound stocks. *Ocean Science*, 9, 261-279.

Christensen A, Andersen KH. (2011). General Classification of Reaction Norm Shape from Size-based Processes. *Bulletin of Mathematical Biology*, 73, 1004-1027.

Selected software

Christensen A, 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. <https://github.com/IBMlib/IBMlib>

Christensen A, GridWetData: an integrated scripting environment for accessing and analyzing oceanographic data. <https://github.com/asbjorn-christensen/GridWetData>