

Alexander Oliver Jueterbock

Biologist, PhD degree

CV version November 2019

Research interests: marine biology, phycology, biodiversity, molecular ecology, conservation, biogeography, genomics, epigenetics, and bioinformatics. Current focus on functional-trait variation at the molecular level and rapid mechanisms of adaptation to environmental change in ecologically and economically important marine benthic macrophytes; with the aim to apply this knowledge towards sustainable growth of economically important algae, management of kelp forests under the impact of climate change, and predictive models and monitoring of coastal systems.

PERSONAL DATA

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Homepage <http://marinetics.org>
ORCID-ID 0000-0002-0659-3172
Date of birth 21.03.1983
Nationality German
Children 2, German-Russian, born 03.05.2018 and 21.08.2020, paternity leave 16.10.2018-25.03.2019 and 10.03.2021-27.08.2021

EDUCATION

PhD 2010-2013 Faculty of Biosciences and Aquaculture, Nord University, Norway.
Degree in Aquatic Biosciences with specialization in evolutionary ecology of marine algae. Disputation date: 12.08.2013. **Completed within three years.**
Topic: Ecological and evolutionary responses to global warming in the seaweed *Fucus serratus*.
Supervisor: Prof. Galice Hoarau

MSc 2004–2010 Research Group 'Animal Biodiversity and Evolutionary Biology' Carl von Ossietzky University, Germany.
Degree in Biology with specialization in genetics, marine ecology, and zoology. **With distinction.**
Topic: Population dynamics of the periwinkle *Littorina littorea* (Linnaeus, 1758) in the East Frisian Wadden Sea.
Supervisor: Prof. Gabriele Gerlach

POSITIONS

2020-now Researcher. Algal and Microbial Biotechnology Division, Faculty of Biosciences and Aquaculture, Nord University, Norway.
Career development.
Funding: Research talents grant from Nord University

- 2018-2019 Researcher. Marine Ecology Group, Faculty of Biosciences and Aquaculture, Nord University, Norway.
Career development.
Funding: Research talents grant from Nord University
- 2015-2018 Postdoctoral Fellow. Marine Ecology Group, Faculty of Biosciences and Aquaculture, Nord University, Norway.
Epigenetic variation in seagrass clones.
Funding: The Research Council of Norway, HAVKYST Project 243916
- 2014-2015 Research assistant. Marine Ecology Group, Faculty of Biosciences and Aquaculture, Nord University, Norway.
Genomic effects of fishery-induced selection in Guppy *Poecilia reticulata*.
Funding: The Research Council of Norway, FRIMEDBIO project 214189
- 2013-2014 Postdoctoral Fellow. Centre for Ecological and Evolutionary Studies, University of Groningen, The Netherlands.
Response to global warming in the shallow subtidal: the ecology and phylogeography of transcriptomics in a key foundational species, the seagrass *Zostera marina*.
Funding: The Netherlands Organisation for Scientific Research, Earth and Life Sciences (NWO-ALW), Project Nr. 819.01.002
- 2004 Student assistant (Jan 1-Mar 15). Biological Institute for Polar and Marine Research on Helgoland, (AWI: Alfred Wegener Institut), Germany. Section 'Shelf Ecology', special field 'Pelagic Ecosystems'.

ACADEMIC AWARDS

- 2012 **Irene Manton prize for the best oral student presentation** at the 60th Annual Winter Meeting of the British Phycological Society, Newcastle, United Kingdom

GRANT PROCUREMENT

- 2021 Erasmus+ personal staff mobility grant. Host institution: Station Biologique de Roscoff, 8550 NOK.
- 2021 EEA grant - Initiative towards sustainable macroalgae farming along European shores, co-applicant/national PI. Awarded XXX.
- 2019 Personal research talents grant for 3 months from Nord University. Awarded 300 000 NOK.
- 2018 Personal research talents grant for 1 year from Nord University. Awarded 1 Million NOK.
- 2015 Bioinformatics on epigenetic variation in seagrass clones. The Research Council of Norway (Personal overseas research grant - HAVKYST/MARINFORSK). Partners: Hoarau G., Arnaud-Haond S., Olsen J.L., Sætstrom P., Van de Peer Y. Awarded 30 000 NOK.
- 2011 Ecological Niche Modelling in the seaweed *Fucus serratus*, a key foundational species in the North Atlantic intertidal. The Research Council of Norway (Personal overseas research grant – HAVKYST project-nr. 196505). Partners: Hoarau, G., de Clerck, O., Tyberghein L. Awarded 54 999 NOK.

2010 Host-Switch of Marine Herbivorous Sea Slugs to Invasive Algae: A Driving Force of Marine Speciation? Call ASSEMBLE (Association of European Marine Biological Laboratories, an EU FP7 research infrastructure initiative). Partner: Viard F.

PUBLICATIONS

19 published peer reviewed publications since 2010, 7 as first author, 1 as senior author, 8 independent from my PhD supervisor, XX in level-2 journals; 1151 citations, h-index=12 (source: Google Scholar, as of 07.09.2020). Journals: *BMC Evolutionary Biology*, *Ecology and Evolution*, *Evolutionary Applications*, *Frontiers in Marine Science*, *Frontiers in Plant Science*, *ICES Journal of Marine Science*, *Journal of Applied Phycology*, *Marine Genomics*, *Molecular Ecology*, *Nature*, *PLoS One*, *Royal Society Open Science*.

2021 **Jueterbock A.**, Minne A.J.P., Cock J. M., Coleman M. A., Wernberg T., Scheschonk L., Rautenberger R., Zhang J., Hu Z.-M. Priming of Marine Macrophytes for Enhanced Restoration Success and Food Security in Future Oceans. /*Frontiers in Marine Science* 8, Article 658485. doi:10.3389/fmars.2021.658485.

2021 Zhang J., Yotsukura N., **Jueterbock A.**, Hu Z.-M., Assis J., Yagasato C., Yao J., Duan D. Detecting no natural hybridization and predicting range overlap in *Saccharina angustata* and *Saccharina japonica*. *Journal of Applied Phycology* 33, 693-702. doi:10.1007/s10811-020-02300-3.

2020 **Jueterbock A.**, Boström C., Coyer J.A., Olsen, J.L., Kopp M., Dhanasiri A.K.S., Arnaud-Haond S., Van de Peer Y., Hoarau G.. The seagrass methylome is associated with variation in photosynthetic performance among clonal shoots. *Frontiers in Plant Science*, 11:571646. <https://doi.org/10.3389/fpls.2020.571646>. Citations: 2

2020 King N.G., Mckeown N.J., Smale D.A., Bradbury S., Stamp T., **Jueterbock A.**, Hrönn E., Groves E.A., Moore P.J. Hierarchical genetic structuring in the cool boreal kelp, *Laminaria digitata*: implications for conservation and management. *ICES Journal of Marine Science*, 77(5):1906-1913. doi:<https://doi.org/10.1093/icesjms/fsaa055>.

2019 Choquet M., Smolina I., Dhanasiri A.K.S., Blanco-Bercial L., Kopp M., **Jueterbock A.**, Sundaram A.Y.M., Hoarau G. Towards population genomics in non-model species with large genomes: a case study of the marine zooplankton *Calanus finmarchicus*. *Royal Society Open Science*, 6(2):180608. <https://doi.org/10.1098/rsos.180608>. Citations: 0

2019 Zhang J., Yao J., Hu Z.-M., **Jueterbock A.**, Yotsukura N., Krupnova T.N., Nagasato C., Duan D. Phylogeographic diversification and postglacial range dynamics shed light on the conservation of the kelp *Saccharina japonica*. *Evolutionary Applications*, 12(4):791-803. <https://doi.org/10.1111/eva.12756>. Citations: 0

2018 **Jueterbock A.**, Coyer J.A., Olsen, J.L., Hoarau, G. Decadal stability in genetic variation and structure in the intertidal seaweed *Fucus serratus* (Heterokontophyta: Fucaceae). /*BMC Evolutionary Biology*, 18(94)/. <https://doi.org/10.1186/s12862-018-1213-2>. Citations: 0

2018 Duarte B., Martins I., Rosa R., Matos A. R., Roleda M. Y., Reusch T., Engelen A.H., Serrao E.A, Pearson Gareth A., Marques, J.C., Caçador,

- I., Duarte C.M., **Jueterbock A.** Climate change impacts on seagrass meadows and macroalgal forests: an integrative perspective on acclimation and adaptation potential. *Frontiers in Marine Science*, 5:190. <https://doi.org/10.3389/fmars.2018.00190>. Citations: 13
- 2016 **Jueterbock A.**, Franssen S., Bergmann N., Gu J., Coyer J., Reusch T., Bornberg-Bauer, E., Olsen, J.L. Phylogeographic differentiation versus transcriptomic adaptation to warm temperatures in *Zostera marina*, a globally important seagrass *Molecular Ecology* 25(21):5396-5411. <http://dx.doi.org/10.1111/mec.13829>. Citations: 23
- 2016 Olsen J.L., Rouzé P., Verhelst B., Lin Y.-C., Bayer T., Collen J., Dattolo E., De Paoli E., Dittami S., Maumus F., Michel G., Kersting A., Lauritano C., Lohaus R., Töpel M., Tonon T., Vanneste K., Amirebrahimi M., Brakel J., Boström C., Chovatia, M., Grimwood J., Jenkins J.W., **Jueterbock A.**, Mraz A., Stam W., Tice H., Bornberg-Bauer E., Green P.J., Pearson G.A., Procaccini, G., Duarte C.M., Schmutz J., Reusch T.B.H. & Van de Peer Y. The genome of the seagrass *Zostera marina* reveals angiosperm adaptation to the sea *Nature* 530(7590):331-335. <http://dx.doi.org/10.1038/nature16548>. Citations: 193
- 2016 **Jueterbock A.**, Smolina I., Coyer J.A. & Hoarau, G. The fate of the Arctic seaweed *Fucus distichus* under climate change: an ecological niche modeling approach *Ecology and Evolution* 6(6):1712-1724. <http://dx.doi.org/10.1002/ece3.2001>. Citations: 42
- 2016 Smolina I., Kollias S., **Jueterbock A.**, Coyer J.A. & Hoarau G. Variation in heat stress response in two populations of the seaweed *Fucus distichus* from the Arctic and subarctic intertidal *Royal Society Open Science*, 3(1):150429. <http://dx.doi.org/10.1098/rsos.150429>. Citations: 8
- 2015 Hoarau G., Coyer J.A., Giesbers M.C.W.G., **Jueterbock A.** & Olsen J.L. Pre-zygotic isolation in the macroalgal genus *Fucus* from four contact zones spanning 100-10,000 years: a tale of reinforcement? *Royal Society Open Science*, 2:140538. <http://dx.doi.org/10.1098/rsos.140538>. Citations: 7
- 2014 **Jueterbock A.**, Kollias S., Smolina I., Fernandes J.M.O., Coyer J.A., Olsen J.L. & Hoarau G. Thermal stress resistance of the brown alga *Fucus serratus* along the North Atlantic coast: acclimatization potential to climate change. *Marine Genomics*, 13:27-36. <http://dx.doi.org/10.1016/j.margen.2013.12.008>. Citations: 47
- 2013 Karlsen B., Klingan K., Emblem, Å., Jørgensen, T.E., **Jueterbock A.**, Furmanek, T., Hoarau, G., Johansen, S., Nordeide J., & Moum, T. Genomic divergence between the migratory and stationary ecotypes of Atlantic cod *Molecular Ecology*, 22(20):5098-5111. <http://dx.doi.org/10.1111/mec.12454>. Citations: 54
- 2013 **Jueterbock A.**, Tyberghein L., Verbruggen H., Coyer J.A., Olsen J.L. & Hoarau G. Climate change impact on seaweed meadow distribution in the North Atlantic rocky intertidal *Ecology and Evolution*, 3(5):1356-1373. <http://dx.doi.org/10.1002/ece3.541>. Citations: 129
- 2013 Verbruggen H., Tyberghein L., Belton G.S., Mineur F., **Jueterbock A.**, Hoarau G., Gurgel F.D. & De Clerck O. Improving the transferability of

introduced species' distribution models: new tools to forecast spreading of a highly invasive seaweed *PLoS One*, 8(6):e68337. <http://dx.doi.org/10.1371/journal.pone.0068337>. Citations: 66

- 2011 Coyer J.A., Hoarau G., Pearson G., Mota C., **Jueterbock A.**, Alpermann T., John U. & Olsen J.L. Genomic scans detect signatures of selection along a salinity gradient in populations of the intertidal seaweed *Fucus serratus* on a 12km scale *Marine Genomics*, 4(1):41-49. <http://dx.doi.org/10.1016/j.margen.2010.12.003>. Citations: 30
- 2010 Gerlach G., **Jueterbock A.**, Kraemer P., Deppermann J. & Harmand P. Calculations of population differentiation based on GST and D: forget GST but not all of statistics! *Molecular Ecology*, 19(18):3845-3852. <http://dx.doi.org/10.1111/j.1365-294X.2010.04784.x>. Citations: 327

Theses

- 2013 **Jueterbock A.** Climate change impact on the seaweed *Fucus serratus* a key foundational species on North Atlantic rocky shores. *PhD thesis in Aquatic Biosciences no.10 (2013)*, Faculty of Biosciences and Aquaculture, Nord University, Bodø, Norway
- 2010 **Jueterbock A.** Population dynamics of the periwinkle *Littorina littorea* (Linnaeus, 1758) in the East Frisian Wadden Sea. *Diploma thesis in Biology (2010)*, Animal Biodiversity and Evolutionary Biology, Carl von Ossietzky University, Oldenburg, Germany.

TEACHING

Since 2009 continuous teaching experience at BSc (23-100 students), MSc (2-17 students), and PhD level (8-10 students). Topics: Programming, Bioinformatics, Biology, Marine Ecology, Evolution, Population genomics, Cell Biology. Very good course evaluations.

PhD level

- 2020 Lecturer in *Population Genomics (5 ECTS)* (BIO9001); 1 week course Mar 9-13; 21 students; funded by NORBIS; Nord University, Bodø, Norway. Course coordinator: Prof. Joost A.M. Raeymaekers.
- 2017 Guest lecturer in *Arctic Marine Molecular Ecology (10 ECTS)* (AB-832); Oct 1-2 in a 6 weeks course; 20 students; The University Centre in Svalbard, Longyearbyen, Norway. Course coordinator: Prof. Tove Gabrielsen.
- 2015-2020 Lecturer in *High Throughput Sequencing of non-model organisms (5 ECTS)* (DR425F); 2 weeks course; 8-10 students; Nord University, Bodø, Norway. Course coordinator: Prof. Truls Moum.

MSc level

- 2011-2014 Lecturer in *Scientific communication and research methods* (BI300F); autumn-semester; 8-17 students; Nord University, Bodø, Norway. Course coordinators: Prof. Ketil Eiane, Prof. Jorge M.O. Fernandes.

- 2011-2019 Lecturer in *Evolutionary genetics* (BI317F); autumn-semester; 3-10 students; Nord University, Bodø, Norway. Course coordinator: Prof. Galice Hoarau.
- 2011-2014 Guest-lecturer in *Biostatistical analysis with R* (BI318F); spring-semester; 2-6 students; Nord University, Bodø, Norway. Course coordinator: Prof. Ketil Eiane.
- 2009 Teaching assistant in *Marine biodiversity II*; winter-semester; 8 students; Carl von Ossietzky University, Oldenburg, Germany. Course coordinator: Prof. Gabriele Gerlach.

BSc level

- 2020-2021 Lecturer in *Biochemistry and cell biology* (BI132F); spring-semester; 60-75 students; Nord University, Bodø, Norway. Course coordinator: Prof. Monica Fengsrud Brinchmann
- 2011-2019 Lecturer in *Ecology* (BI123F); autumn-semester; 23-63 students; Nord University, Bodø, Norway. Course coordinator: Prof. Galice Hoarau.
- 2009-2010 Tutor in *General biology*; winter-semester; ca. 100 students; Carl von Ossietzky University, Oldenburg, Germany. Course coordinator: Prof. Gabriele Gerlach.

SUPERVISION

PhD students

- 2021-now Co-supervisor of Charles Lavin, "Projecting the effects of ocean warming on species of economic importance in Norway", Nord University, Norway
- 2016-now Co-supervisor of William Hatchett, "Genomics of speciation, what can we learn from an alga", Nord University, Norway

MSc students

- 2021-2022 Supervisor of Anne Margrete Leiros Nilsen, "Potential for temperature priming / hardening of kelp", 60 ECTS, Nord University, Norway
- 2021-2022 Supervisor of Grete Thuv Tjønndal, "Sustainability in the production of macroalgae – applying models and certification standards of sustainability", 30 ECTS, Nord University, Norway
- 2014-2016 Supervisor of Marina Klochkova, "Speciation genes in *Fucus*", successfully defended after 15 months, Nord University, Norway.
- 2011-2012 Co-supervisor of Irina Smolina, "Climate change in the arctic intertidal: response of the seaweed *Fucus distichus* to rising temperature", 12 months, **highest grade**, Nord University, Norway. Currently research technician at Nord University, Norway.

BSc students

- 2017 Supervisor of Lena Götz, "Epigenetic variation in the a seagrass clone", 6 months, Defended with an **A**, Nord University, Norway

SCIENTIFIC MEETINGS AND PRESENTATIONS

Presented at 30 national and international conferences and workshops, 11 poster presentations, 19 oral presentations, **5 as an invited speaker**. Awarded best student presenter by the British Psychological Society (2012).

- 2021 *12th International Psychological Congress*; Mar 22-26; Virtual conference, attended
- 2020 Jueterbock A. Climate change impact on Macroalgae; *Webinar of the Macroalgae Initium Erasmus+ project*; Dec 10, Virtual meeting; oral presentation
- 2020 Jueterbock A., Boström C., Coyer J.A., Olsen, J.L., Kopp M., Dhanasiri A.K.S., Arnaud-Haond S., Van de Peer Y., Hoarau G. The seagrass methylome: Functional role in clonal shoots; *EPIMAR conference*; Oct 6-9, Virtual conference; oral presentation
- 2020 Scheschonk L., Bischof K., **Jueterbock A.** Flexibility of the methylome of *Saccharina latissima*; *Seagriculture conference*; Sep 24-25, Virtual conference; poster presentation
- 2020 BGINN (blue green innovation centre) seminar and workshop, *Nord University*; Jan 28-29 Bodø, Norway
- 2019 Collaboration workshop involving algal researchers and industry from China and Norway, *Nord University and Salten Havbruksparcken*; Oct 11-12 Bodø, Norway
- 2019 **Jueterbock A.**, Boström C., Reusch T.B.H., Olsen J.L., Kopp M., Dhanasiri A., Smolina I., Arnaud-Haond S., Hoarau G. Functional relevance of epigenetic variation in seagrass under heat stress; *FBA Ecology Group Retreat*; Sep 25-26, Kjerringøy, Norway; oral presentation
- 2019 **Jueterbock A.**, Boström C., Reusch T.B.H., Olsen J.L., Kopp M., Dhanasiri A., Smolina I., Arnaud-Haond S., Hoarau G. Functional relevance of epigenetic variation in seagrass under heat stress; *Marine Molecular Ecology Gordon Research Conference (GRC)*; Jul 14-19, Hong Kong, China; **invited talk**
- 2018 **Jueterbock A.**, Boström C., Reusch T.B.H., Olsen J.L., Kopp M., Dhanasiri A., Smolina I., Arnaud-Haond S., Hoarau G. Epigenetic variation in seagrass clones - key to success without epigenetic variation? ; *Evolutionary Biology 2018*; Aug 18-22, Montpellier, France; poster presentation
- 2018 Hoarau, G., **Jueterbock A.**; Epigenetic variation in seagrass clones - key to success without epigenetic variation?; *Marine Evolution 2019*; May 15-18, University of Gothenburg, Sweden; oral presentation
- 2017 Research Seminar, *Nord University, FBA*, Nov 15-17; Kjerringøy, Norway; oral presentation
- 2017 TransAlgae seminar; *NIBIO*; Oct 05; Bodø, Norway
- 2017 **Jueterbock A.**, Boström C., Reusch T.B.H., Olsen J.L., Kopp M., Dhanasiri A., Smolina I., Arnaud-Haond S., Hoarau G. Epigenetic variation in seagrass clones; /40th New Phytologist Symposium on Plant epigenetics: from mechanisms to ecological relevance/; Sep 12-15; Vienna, Austria; poster presentation

- 2017 **Jueterbock A.** A decade into Next Generation Sequencing on marine non-model organisms: current state and developments; *ASLO 2017 Aquatic Sciences Meeting: Mountains to the Sea*; Feb 26 - Mar 3; Honolulu, Hawai'i, USA; **invited tutorial talk**
- 2017 **Jueterbock A.**, Coyer J.A., Smolina I., Tyberghein L., Verbruggen H., Olsen J.L., Hoarau G. North Atlantic fucoids in the light of global warming; *65th British Phycological Society Winter Meeting*; Jan 11-13; Bangor University, Wales, UK; **invited talk**
- 2016 **Jueterbock A.** Methylomes: Overview, potential for plasticity and for short-term adaptation; *Workshop 8: 'Omics for all' at the International seagrass biology workshop (ISBW 12)*; Oct 19; Nant Gwrtheyrn, Wales, UK; **invited talk**
- 2016 **Jueterbock A.**, Franssen S.U., Bergmann N., Gu J., Coyer J.A., Reusch T.B.H., Bornberg-Bauer E., Olsen J.L. Transcriptomic adaptation to warm temperatures in *Zostera marina* *International seagrass biology workshop (ISBW 12)*; Oct 16-21; Nant Gwrtheyrn, Wales, UK; poster presentation
- 2015 **Jueterbock A.**, Franssen S., Bergmann N., Gu J., Coyer J., Reusch T., Bornberg-Bauer, E., Olsen, J.L. Basin-wide transcriptomic response of the seagrass *Zostera marina* to a simulated heatwave *Plant Genome Evolution 2015*; Sep 6-8; NH Grand Krasnapolsky Hotel, Amsterdam, The Netherlands; poster presentation
- 2015 **Jueterbock A.**, Hoarau G. Climate change responses in canopy-forming seaweeds *XVth ESEB Meeting*; Aug 10-14; University of Lausanne, Switzerland; poster presentation
- 2015 Martínez B., Arenas F., Maggs C., De Clerck O., Hoarau G., **Jueterbock A.** Combining knowledge on intraspecific variation of thermal niches to species distribution models in geographical projections under climate change *7th Biennial Conference of 'The International Biogeography Society*; Jan 8-12 ; University of Bayreuth, Germany; poster and short talk
- 2014 **Jueterbock A.** Seaweed meadows in the light of global climate change *53rd Annual Northeast Algal Symposium: Algae as model systems*; Apr 25-27; Salve Regina University, Newport, United States; **invited keynote speaker**
- 2014 *The Zosmar Genome & Annotation Workshop*; 28-29 Jan; University of Gent, Belgium
- 2013 **Jueterbock A.** Ecological and evolutionary responses of a key ecosystem engineer, *Fucus serratus*, to climate change *Thematic training day for teacher at Bodø high school and Bodin high school*; Nov 22; Nord University, Bodø, Norway; oral presentation
- 2013 *Research Seminar - The Oceans and Coastal Areas (HAVKYST)*; Nov 13-14; The Research Council of Norway; Trondheim, Norway
- 2013 **Jueterbock A.** Ecological and evolutionary responses to global warming in the seaweed *Fucus serratus*, a key foundational species in the North Atlantic intertidal *PhD Student Seminar - The Oceans and Coastal Areas*

- (*HAVKYST*); Nov 12-13; The Research Council of Norway, Trondheim, Norway; oral presentation
- 2013 **Jueterbock A.**, Coyer J.A., Kollias S., Smolina I., Fernandes J., Tyberghein L., Olsen J.L., Hoarau G. Climate change impact on the seaweed *Fucus serratus*, a key foundational species on North Atlantic rocky shores *Nordic Marine Science Conference 2013*; Oct 28-30; Norske havforskere forening, Oslo, Norway; oral presentation
- 2013 Karlsen B.O., Klingan, K., Emblem Å., Jørgensen, T.E., **Jueterbock A.**, Furmanek T., Hoarau G., Johansen S. Genomic divergence between migratory and stationary ecotypes of Atlantic cod *Genomics in Aquaculture, 3rd International Symposium*; Sep 4-6; Nord University, Bodø, Norway; poster presentation
- 2013 **Jueterbock A.** Climate change impact on the seaweed *Fucus serratus*, a key foundational species on North Atlantic rocky shores *PhD defense*; Aug 8; Nord University, Bodø, Norway; oral presentation
- 2013 **Jueterbock A.** Range shifts and adaptive responses during ice ages and recent global warming with emphasis on the specificity of the marine environment *PhD trial lecture*; Aug 8; Nord University, Bodø, Norway; oral presentation
- 2012 **Jueterbock A.** Ecological and evolutionary responses to global warming in the seaweed *Fucus serratus*, a key foundational species in the North Atlantic intertidal *PhD Student Seminar - The Oceans and Coastal Areas (HAVKYST)*; Nov 27-28; The Research Council of Norway, Oslo, Norway; oral presentation
- 2012 **Jueterbock A.**, Coyer J.A., Tyberghein L., Olsen J.L. & Hoarau G. Climate change impact on seaweed meadow distribution in the North Atlantic rocky intertidal *The 47th European Marine Biology Symposium*; Sep 3-7; The Institute of Marine Research Arendal, Norway; poster presentation
- 2012 **Jueterbock A.**, Coyer J.A., Olsen J.L., Fernandes J. & Hoarau G. Climate change in the North Atlantic: Selection and local adaptation on the rocky shore *1st Joint Congress on Evolutionary Biology*; Jul 6-10; Ottawa, Canada; oral presentation
- 2012 *Molecular Ecology Symposium*; Jul 6; Symposium to celebrate the 20th anniversary of the journal *Molecular Ecology*, Ottawa, Canada
- 2012 **Jueterbock A.**, Coyer J.A., Tyberghein L., Olsen J.L. & Hoarau G. Responses of the macroalgal key species *Fucus serratus* driving the impact of climate change on North Atlantic rocky shores *60th Annual Winter Meeting of the British Phycological Society*; Jan 4-7; Newcastle, United Kingdom; **Awarded as best oral student presentation with the Irene Manton prize**
- 2011 **Jueterbock A.**, Coyer J.A., Tyberghein L., Olsen J.L., & Hoarau G. Responses of the intertidal key species *Fucus serratus* to North Atlantic warming *13th Congress of the European Society for Evolutionary Biology*, Aug 20-25; Tübingen, Germany; poster presentation

- 2011 **Jueterbock A.**, Coyer J.A., Tyberghein L., Olsen J.L., & Hoarau G. Responses of the Intertidal Key Species *Fucus serratus* to North Atlantic Warming *Aqua Nor*; Aug 16-19; Trondheim, Norway; poster presentation
- 2011 *Young Marine Scientist's Day*; Feb 25; Flanders Marine Institute (VLIZ); Brussels, Belgium
- 2010 **Jueterbock A.** Population dynamics of the periwinkle *Littorina littorea* (Linnaeus, 1758) in the East Frisian Wadden Sea *Diplom defense*; Mar 19; University of Oldenburg, Oldenburg, Germany; oral presentation

RESEARCH VISITS

- 2014 *Transcriptome analysis*; Jul; Petra Lenz' Lab at the Pacific Biosciences Research Center; **University of Hawaii at Manoa**, Honolulu HI, USA
- 2011 *Ecological Niche Modeling*; Feb-Mar; Phycology Research Group at the **Gent University**, Belgium

MAJOR CURRENT COLLABORATIONS

I am integrated in a dynamic national and international research network, and collaborate with partners from the US, China, and Europe, related to research on macroalgae and seagrass.

- 2019-present Prof. Gareth Pearson, Prof. Esther Serrao, Prof. Inka Bartsch, Luis Barreto, MARFOR project on Functional Variability and Dynamics of Response of Marine Forests to Global Change, Centre of Marine Sciences at the University of Algarve, Faro, PT, Funding: BiodivERsA grant, funded under the Horizon 2020 ERA-NET CO-FUND scheme
- 2019-present Prof. Kai Bischof and Lydia Scheschonk, Epigenetic variation and temperature response of Arctic kelps, Universität Bremen, DE, Funding: Personal research talents grant of Nord University
- 2018-present Prof. Mark J. Cock, Phaeoexplorer project on transcriptome data and annotated genome assemblies for 72 brown algal species, Roscoff Marine Station, FR. Funding: France Genomique **This collaboration is a milestone for the molecular work on brown algae, and has the potential to lead to several publications in high-profile journals, including Nature.**
- 2017-Present Dr. Bernardo Duarte, Sustainable development of kelp aquaculture in Europe, Faculty of Sciences at the University of Lisbon, PT
- 2017-present Dr. Brezo Martínez, Climate change impact on seaweed, Universidad Rey Juan Carlo, ES
- 2016-present Dr. James A. Coyer, seaweed and seagrass genetics and epigenetics, University of New Hampshire, USA
- 2016-present Dr. Sophie Arnaud-Haond, seagrass epigenetics, Ifremer, FR
- 2016-present Prof. Zi-Min Hu, niche modelling the past and future distribution of the red alga *Gracillaria vermiculophylla* in the northwest Pacific, Institute of Oceanology, Chinese Academy of Sciences, CN

2013-present Prof. Jeanine L. Olsen, seagrass epigenetics and microbiomics, University of Groningen, NL

TRAINING AND COURSES

- 2021 Introduction to Machine Learning in R, Mar 22-26; Dr. Pietro Franceschi, Dr. Filippo Biscarini; *Physalia course*; 3 ECTS, online
- 2021 NGS analysis for gene regulation and epigenomics, Jan 11-15; Dr Jacques Serizay, Cyril Matthey-Doret; *Physalia course*; 3 ECTS. online
- 2020 Proposal writing course - advanced; Oct 4-5; *Dr Peter Sheard (Trend2000)*; Bodø, Norway
- 2020 Proposal writing course for beginners; Sep 30-Oct 1; *Dr Peter Sheard (Trend2000)*; Bodø, Norway
- 2019 Introduction to Machine Learning; Jun 3-7; *Physalia course*; Berlin, Germany
- 2018 ERC Starting Grant Proposals Workshop; Jun 21; *Yellow Research*, Amsterdam, The Netherlands
- 2018 ERC Starting Grant Course; Jun 13; *University of Bergen*, Norway
- 2018 Assembly and Annotation of Genomes; Feb 12-16; *Physalia course*; Berlin, Germany
- 2017 Doctoral supervision and communication using digital tools; Nov 27; *Symposium at Nord University*, Norway
- 2017 Sharing Science Through Storytelling; Mar 1; *Kylla Benes from the University of California, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2017 Science Videos that Engage; Feb 28; *Jonathan Sharp from the University of Delaware, Adrienne Sponberg (ASLO), Brian Palermo from the Groundlings Theatre in Los Angeles, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2017 Interdisciplinary Presentations Workshop; Feb 28; *Jonathan Sharp from the University of Delaware, Adrienne Sponberg (ASLO), Brian Palermo from the Groundlings Theatre in Los Angeles, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2017 Teaching Introductory Aquatic and Environmental Sciences; Feb 27; *Bob Chen from the University of Massachusetts, Boston, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2017 Demystifying the Teaching Philosophy Statement for Academic Job Applications; Feb 26; *Kylla Benes from the University of California, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2017 Aquatic Science Education and Outreach: Broadening the Reach of Your Science; Feb 26; *Bob Chen from the University of Massachusetts, USA*; Workshop at the ASLO meeting 2017 in Honolulu, Hawai'i, USA
- 2016 How to write a Competitive Proposal for Horizon 2020; Dec 16; *Hyperion, Sean McCarthy*; Nord University, Norway

- 2016 Introduction to Network Analysis in Life Sciences - 3rd Edition; Oct 24-28; *Transmitting Science*; Institut Català de Paleontologia Miquel Crusafont, Sabadell, Spain
- 2015 Epigenetic Control of Gene Expression; 8 week online non-credit course; **completed with distinction**; authorized by *The University of Melbourne*, Australia, and offered through *Coursera*
- 2015 How to develop a project - Horizon 2020; Apr 14; *The Research Council of Norway*; Nord University, Norway
- 2015 An Introduction to European Funding Sources, Proposal Writing, and Networking; Jan 29-30; *AQUATT*; Nord University, Norway
- 2014 Research Project Management; Dec 1-2; *AQUATT*; Nord University, Norway
- 2014 Horizon 2020 Training Workshop (Project proposal management); Sep 22-23; *AQUATT*; Nord University, Norway
- 2014 CLC Genomics Workshop; Apr 3; *CLC Bio*; Nord University, Norway
- 2014 MiSeq System Installation and Customer Training; *Illumina*; Nord University, Norway
- 2013 Marine Genomics; PhD course; Nov 25-29; 1 presentation; *Centre for Marine Evolutionary Biology*, University of Gothenburg, Sweden
- 2013 How to publish in peer-reviewed journals; Feb 5-7; 1 ECTS; *TRESS & TRESS GbR*; Nord University, Norway
- 2012 Ethics, Nature and Society; PhD course; Nov-Jan; 1 written report, 10 ECTS; *Nord University*, Norway
- 2012 Ion PGM System Operational Training; Apr 11-15; *Life Technologies*; Nord University, Norway
- 2012 5500 LifeScope Bioinformatics; Nov 7-8; *Life Technologies*; Darmstadt, Germany
- 2012 Next Generation Sequencing Workshop; Oct 16-18; *European Bioinformatics Institute*; Hinxton, United Kingdom
- 2012 Ion Torrent User Experience Tour; Oct 9; Live broadcasting Bodø, Norway, from the second *Life Technologies* NGS User Group Meeting in Albufeira, Portugal
- 2012 Next Generation Sequencing Data in Ecology and Evolution; Jul 11; *University of Ottawa*, Canada
- 2011 Aquatic Animal Health And Welfare; PhD course; 1 written report, 5 ECTS; *Nord University*, Norway
- 2011 9th Poznań Summer School of Bioinformatics - Advanced Techniques in Genome Analysis; PhD course; Jul 11-15; *Adam Mickiewicz University, Poznań*, Poland
- 2011 Evolutionary genetics; Masters course; autumn-semester Sep 30-Nov 1; 1 presentation, 1 written exam, 1 practical exam, 10 ECTS; *Nord University*, Norway

- 2010 Contemporary Evolution: Humans as Agents of Selection; PhD course; Oct 4-9; 1 presentation, 3 ECTS; *University of Bergen*, Norway
- 2010 Exploring the Use of 'Omics Technology in Natural Populations; PhD course; Sep 5-8; 1 presentation, 1 written report, 5 ECTS; *Aarhus University*, Sandbjerg, Denmark
- 2008 Volker Schmid Training Course on Experimental Developmental Biology of Marine Invertebrates; Masters course; May 19-30; 2 presentations; *Station Biologique de Roscoff*, France.
- 2007 Introduction to Biological Data Analysis and Simulation with Matlab; Masters course; Oct 8-19; *Carl von Ossietzky University*, Oldenburg, Germany

COMMISSIONS OF TRUST

- 2020-now Leader of weekly group meetings of the 'Algal and Microbial Biotechnology' division at Nord University, Norway
- 2021 Internal evaluator of PhD thesis "Transcriptomic and cellular studies on the intestine of Atlantic salmon: Discovering intestinal macrophages using omic tools", Student: Youngjin Park, Nord University, Norway
- 2021-now Genomics platform steering board, Nord University, Norway
- 2021 Sensor for final exam in the course *Biochemistry and cell biology* (BI132F) at Nord University, Norway
- 2019-2020 Planning committee for Blue Building of Nord University, Norway
- 2017 Expert reviewer for FONDECYT (Chilean National Science and Technology Commission)
- 2017-2020 Elected deputy member of the Research board of the Faculty of Biosciences and Aquaculture; Nord University, Norway
- 2016-2017 Organizer of the Faculty of Biosciences and Aquaculture Research Forum, Nord University, Norway
- 2016 Hiring committee for PhD position at Nord University, Norway
- 2013 Elected member of the Faculty board of the Faculty of Biosciences and Aquaculture; Nord University, Norway
- Since 2012 Reviewer for international journals (see <https://publons.com/author/304452/alexander-jueterbock>): *Biological Conservation*, *European Journal of Phycology*, *FACETS*, *Fisheries and Aquatic Sciences*, *Heredity*, *Journal of Biogeography*, *Journal of Sea Research*, *Marine Ecology Progress Series*, *Marine Genomics*, *PeerJ*, *Perspectives in Phycology*, *PLoS One*, *Scientific Reports*

OUTREACH

For weblinks to the articles, see <http://marinetics.org/outreach.html>

- 2016 Mange var nysjerrig på forskerne (Many were curious about the researchers) *Saltenposten 20. September* by Eva Winther

- 2016 The plant that went to sea *ScienceNordic.com* by Spilde, I.
- 2016 Planten som dro til sjøs *Forskning.no* by Spilde, I.
- 2016 Seagrass in Nature article *Nord University News* by Elle, P.J.
- 2014 Taredød truer fisk (Seaweed death threatens fish) Article in *ViMenn* Nr. 3 (in Norwegian)
- 2013 Tangbelte dør - fisk mister oppvekstmiljø (Seaweed meadows die - fish loses breeding grounds) Article in *Nationen* by Finne A. (in Norwegian)
- 2013 Fisk trues av tangbeltedød (Fish is threatened by seaweed death) Article on *forskning.no* by Finne, A. (in Norwegian)
- 2013 Kelp forest under threat *Nord University News* by Elle, P.J.
- 2012 Responses of the macroalgal key species *Fucus serratus*: Driving the impact of climate change on North Atlantic rocky shores Research statement in *The Phycologist* 82, 18 (Jueterbock A.)
- 2012 Klimaendringene dreper tangen i Sør-Europa - Markkroalgen *Fucus serratus* trekker mot Nordishavet (Climate change kills seaweed in southern Europe - the macroalga *Fucus serratus* extends towards the Arctic *Nord University News* by Elle, P.J. (in Norwegian)

SOFTWARE

- 2015 **Jueterbock A.** MaxentVariableSelection: Selecting the best set of relevant environmental variables along with the optimal regularization multiplier for Maxent Niche Modeling. *R package* Url: <https://github.com/cran/MaxentVariableSelection>
- 2011 **Jueterbock A.**, Krämer P., Gerlach G., Deppermann J. DEMEtics: Evaluating the genetic differentiation between populations based on GST and D values. *R package* Url: <http://cran.r-project.org/web/packages/DEMEtics/index.html>.

FIELD WORK AND INTERNSHIPS

- 2010-2019 **Intertidal field work**, East Frisian islands (Germany), Ribadeo (Spain), Roscoff and Montpellier (France), Blushøy, (Denmark), Kirkenes (Norway), Åland Islands (Finland), Northern Norway and around Iceland; Collecting seaweed, kelp, seagrass (*Zostera marina*) and periwinkles (*Littorina littorea*) at the intertidal and setting up live experiments.
- 2006, 2007 **Mapping of breeding birds**; 3 months; *Locations*: Dollart and Rysumer Nacken, Germany; *Institution*: NLWKN (an establishment for water management, coastal protection and nature conservancy), Norden-Norddeich, Germany. *Work*: Mapping of breeding birds in the field and data evaluation within the framework of a long-term monitoring project.
- 2004 **Internship**, Mar 22-Jun 20; *Institution*: Seal station in Friedrichskoog, Germany.
- 2002-2003 **Civilian service**, Oct 1-Jul 31; *Location*: Spiekeroog, Germany; *Institution*: NLWKN, Norden-Norddeich, Germany *Work*: Ornithological field work and data collection, guided tours on natural history.

MEMBERSHIP OF SCIENTIFIC SOCIETIES

Since 2018	The Norwegian graduate research school in bioinformatics (NORBIS)
Since 2018	Research School in Biosystematics (ForBio)
Since 2014	Northeast Algal Society (NEAS)
Since 2012	British Phycological Society (BPS)
Since 2011	European Society for Evolutionary Biology (ESEB)

SKILLS AND PRACTICAL EXPERIENCE

Languages

- German (native)
- English (fluent)
- French (intermediate)
- Norwegian (intermediate)
- Russian (beginning)

Bioinformatics

Expert in Next Generation Sequencing data analysis in the field of transcriptomics, genomics, and epigenomics.

Programming

Advanced experience in programming languages including R, Python, and Perl. Experience in database management with MySQL. Administration of three UNIX servers at Nord University since 2012.

Laboratory

Familiar with molecular genetic methods, ranging from DNA extraction to Next Generation Sequencing. Experienced in culturing of benthic marine organisms and common garden heat stress experiments

Diving

2015	PADI Advanced Open Water Diver
2014	PADI Open Water Diver, dry suit