

Alexander Oliver Jueterbock

Biologist, PhD degree

CV version February 2018

Research interests: marine evolutionary biology, molecular ecology, conservation, genomics, microbiomics, epigenetics and bioinformatics. Current focus on eco-evolutionary responses of ecologically and economically important marine macrophytes to environmental change with emphasis on the role of epigenetic variation in seagrass plasticity and adaptation to the environment.

PERSONAL DATA

Phone +47 97464093
Address Holten 11, 8215 Valnesfjord, Norway
Email Alexander-Jueterbock@web.de
Homepage <http://marinetics.org>
ORCID-ID 0000-0002-0659-3172
Date of birth 21.03.1983
Nationality German

EDUCATION

PhD 2010-2013 Faculty of Biosciences and Aquaculture, Nord University, Norway.
Degree in Aquatic Biosciences with specialization in evolutionary ecology of marine algae. **Completed within three years.**
Topic: Ecological and evolutionary responses to global warming in the seaweed *Fucus serratus*.
Supervisors: Prof. Dr. Galice Hoarau Prof. Dr. Jorge M.O. Fernandes, Prof. Dr. Jeanine L. Olsen (external: University of Groningen, The Netherlands).

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.
Supervisors: Prof. Dr. Gabriele Gerlach, Dr. Thomas Friedl.

POSITIONS

2015-now Postdoctoral Fellow. 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. 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'.

AWARDS AND SCHOLARSHIPS

- 2018 **Scholarship: Research talents 2018**, 1 Million NOK, Nord University, Norway
- 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

Submitted as PI

- 2017 COSTRUCT: Coupling of (epi)genomic, and microbiome structure with physiological variation and ocean warming response in seagrass and kelp. Research Council of Norway (Researcher project - MARINFORSK). PI: **Jueterbock A.**, Partners: Aires T., Duarte B., Engelen A.; Hoarau G.; Martins, I.; Matos, A.R., Reusch, T.B.H.; Roleda, M.; Rosa R.; Serrao, E. Submitted in September; Declined with an overall mark of 'very good'.
- 2017 From local adaption to speciation, what can be learned from a seaweed? Research Council of Norway (Young Research Talents - FRIMEDBIO) PI: **Jueterbock A.**, Partners: Coyer J., Hoarau G., Pereyra K., Sjøtun K.; Submitted in May; Declined with an overall mark of 'fair'.
- 2016 Climate change impacts on ecophysiological fitness of seagrasses and temperate macroalgae at their biogeographical limits. Research Council of Norway (Researcher project - MARINFORSK). PI: **Jueterbock A.**, Partners: Duarte B., Engelen A.; Hoarau G.; Martins, I.; Reusch, T.B.H.; Roleda, M.; Rosa R.; Sandø, A.B.; Serrao, E.; Sjøtun, K.; Declined with an overall mark of 'very good'
- 2014 Epigenetic variation in the marine key species *Zostera marina* (seagrass): Ecological and evolutionary role under rapid climate change. The Research Council of Norway (Personal Post-doctoral Fellowships in the FRIMEDBIO programme). PI: **Jueterbock A.**; Partners: Van de Peer, Y., Hoarau G., Fernandes, J.M.O., Olsen J.L. Declined with an overall mark of 'very good'.

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). PI: **Jueterbock A.**; Partner: Viard F. (access to marine infrastructure at the Station Biologique de Roscoff, France). Awarded but had to be declined by Jueterbock due to his change in employment.

Submitted as co-applicant

2015 Bioinformatics on epigenetic variation in seagrass clones. The Research Council of Norway (Personal overseas research grant - HAVKYST/MARINFORSK). PI: Hoarau G., Partners: Arnaud-Haond S., **Jueterbock A.**, Olsen J.L., Sætstrom P., Van de Peer Y. Awarded 30 000 kr, 1 month in 2018.

2014 Epigenetic variation in seagrass clones: key to success without genetic variation? The Research Council of Norway (Researcher project - HAVKYST/MARINFORSK project-nr. 243916). PI: Hoarau G., Partners: Arnaud-Haond S., Fernandes J.M.O., **Jueterbock A.**, Olsen J.L., Sætstrom P., Van de Peer Y. Awarded 4.7 mill. kr, 3 years 2015-2018.

2013 Genetic adaptation to multiple climate change stressors during early development in *Fucus serratus*, a key foundational species. The Research Council of Norway (Researcher project - HAVKYST, MAROKO). PI: Hoarau G.; Partners: **Jueterbock A.**, Coyer J.A., Bierne N., Olsen J.L., Sjøtun K. DECLINED with good marks

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). PI: Hoarau G.; Partners: de Clerck, O., **Jueterbock A.**, Tyberghein L. Awarded 54 999 kr, 3 months in 2011-2012.

PUBLICATIONS

11 published peer reviewed publications since 2010, 4 as first author, 4 in level-2 journals; 562 citations (most cited paper Gerlach *et al.*, 2010 with 256 citations), h-index=8. Journals: *Ecology and Evolution*, *Marine Genomics*, *Molecular Ecology*, *Nature*, *PLoS One*, *Royal Society Open Science*. See also [Google Scholar Account](#).

Published

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>

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>

- 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*. <http://dx.doi.org/10.1002/ece3.2001>
- 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>
- 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>
- 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>
- 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>
- 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
- 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>
- 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>
- 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>
- 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>

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.*

In preparation

Immediate publication plan listing manuscripts that I am currently working on in the order of planned submission dates.

Nov 2017 Duarte B., Duarte M., Roleda M., Engelen A., Serrao E., Pearson G., Martins I., Reusch T.B.H., Rosa R., Matos A.R., **Jueterbock A.**: 'Review and future perspectives of climate change research on marine macrophytes as blue carbon sinks'; to *Frontiers in Marine Science* (level 1).

Nov 2017 **Jueterbock A.**, Kollias S., Coyer J.A., Olsen J.L., Hoarau G. 'Changes in genetic diversity and effective population size of the seaweed *Fucus serratus* under a decade of climate change'; to *BMC Evolutionary Biology* (level 2).

Dec 2017 Smolina I., **Jueterbock A.**, Diaz Pauli B., Hoarau G., Heino M. 'Fisheries-induced selection in guppy (*Poecilia reticulata*)'; to *Proceedings of the National Academy of Sciences of the United States of America* (level 2).

Dec 2017 Choquet M., Smolina I., Dhanasiri A.K.S., Kopp, M., **Jueterbock A.**, Sundaram A.Y.M., Hoarau G. 'Population genomics of zooplankton: how to deal with the challenges of large genomes in non-model species'; to *PLOS ONE* (level 1)

Jan 2018 **Jueterbock A.**, Gerlach G.: 'Population genetics of the periwinkle *Littorina littorea*'; to *PLOS ONE* (level 1).

Feb 2018 Zhang J., **Jueterbock A.**, Hu Z.-M. 'Paleoclimate change and current ocean warming shaping diversity and distribution of *Sargassum* sp. in the northwest Pacific'; to *Molecular Biology and Evolution* (level 2).

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. Very good course evaluations.

PhD level

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.

2015-2017 Co-teacher in *High Throughput Sequencing of non-model organisms* (DR425F); 2 weeks course; 8-10 students; Nord University, Bodø, Norway. Course coordinator: Prof. Truls Moum.

MSc level

- 2011-2014 Co-teacher in *Scientific communication and research methods* (BI300F); autumn-semester; 8-17 students; Nord University, Bodø, Norway. Course coordinators: Prof. Dr. Ketil Eiane, Prof. Jorge M.O. Fernandes.
- 2011-2017 Co-teacher 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

- 2011-2015 Co-teacher in *Ecology* (BI123F); autumn-semester; 23-63 students; Nord University, Bodø, Norway. Course coordinator: Prof. Dr. Galice Hoarau.
- 2009-2010 Tutor in *General biology*; winter-semester; ca. 100 students; Carl von Ossietzky University, Oldenburg, Germany. Course coordinator: Prof. Dr. Gabriele Gerlach.

SUPERVISION

PhD students

- 2016-now William Hatchett, "Genomics of speciation, what can we learn from an alga", Nord University, Norway
- 2015-now Chloé Marechal, "Evolutionary and ecological role of the seagrass microbiome", Nord University, Norway.

MSc students

- 2014-2016 Marina Klochkova, "Speciation genes in *Fucus*", 15 months, Nord University, Norway.
- 2011-2012 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 Researcher at Nord University, Norway.

BSc students

- 2017 Lena Götz, "Local variation in the seagrass and seaweed microbiome", Nord University, Norway

SCIENTIFIC MEETINGS AND PRESENTATIONS

22 national and international conferences and workshops, 9 poster presentations, 13 oral presentations, 4 as an invited speaker. Awarded best student presenter by the British Phycological Society (2012).

- 2017 Research Seminar, *Nord Univeristy, FBA*, Nov 15-17; Kjerringøy, Norway; oral presentation
- 2017 TansAlgae 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

- 2018 Planned: *Development of new data analysis methods for epigenetic data*; Jan-Feb; Yves Van de Peer's Bioinformatics \ Evolutionary Genomics Group at VIB, **Gent University**, Belgium
- 2014 *Development of a PERL based program for gene identification in de novo transcriptomes*; Jun 26-Jul 24; Petra Lenz' Lab at the Pacific Biosciences Research Center; **University of Hawaii at Manoa**, Honolulu HI, USA
- 2011 *Learning Ecological Niche Modeling*; Feb 1-Mar 1; Phycology Research Group at the **Gent University**, Belgium

MAJOR CURRENT COLLABORATIONS

- *Zi-Min Hu, Jie Zhang, Chinese Academy of Sciences, CN*; Biogeographic history of the kelp *Saccharina japonica* in the northwest Pacific
- *Thorsten Reusch, GEOMAR Helmholtz Centre for Ocean Research Kiel, DE*; Sea-grass epigenetics.
- *Nathan King, Pippa Moore and Jim Provan, Aberystwyth University, UK*; population genomics of kelp species.
- *Maria B. Martinez, King Juan Carlos University Móstoles, E*; Latitudinal variation in the thermal threshold of macroalgae.
- *Beatriz Diaz Pauli, Galice Hoarau, Irina Smolina, Mikko Heino, Evolutionary Fisheries Ecology at the University of Bergen*; Genomic effects of fishery-induced selection in Guppy *Poecilia reticulata*.

TRAINING AND COURSES

- 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

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** *Forsking.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 *Vi-Menn* 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

- 2010-2017 **Intertidal field work**, East Frisian islands (Germany), Ribadeo (Spain), Roscoff (France), Blushøy, (Denmark), Kirkenes (Norway), Åland Islands (Finland), Northern Norway and around Iceland; Collecting *Fucus* spp. (brown algae), 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.

SKILLS AND PRACTICAL EXPERIENCE

Professional Memberships

- Since 2017 *NORBIS*, the Norwegian graduate research school in bioinformatics
- Since 2017 *Naturvernforbundet*
- Since 2017 *Norsk algeforening*
- Since 2016 *Association for the Sciences of Limnology and Oceanography (ASLO)*
- Since 2016 *Arctic Marine Ecosystem Research Network (ARCTOS)*
- Since 2015 *Norsk Ornitologisk Forening (NOF)*
- Since 2014 *Northeast Algal Society (NEAS)*
- Since 2012 *British Phycological Society (BPS)*
- Since 2011 *European Society for Evolutionary Biology (ESEB)*

Positions of Trust

- 2017 Reviewer research proposal for the the FONDECYT Regular 2018 grant competition, an initiative of the Chilean National Science and Technology Commission (CONICYT - Chile)
- Since 2017 Elected deputy member of the Research board of the Faculty of Biosciences and Aquaculture; Nord University, Norway
- Since 2016 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 (see <https://publons.com/author/304452/alexander-jueterbock>): *Biological Conservation*, *European Journal of Phycology*, *FACETS*, *Journal of Biogeography*, *Marine Ecology Progress Series*, *Marine Genomics*, *Nature*, *PeerJ*, *Perspectives in Phycology*, *PLoS One*, *Scientific Reports*

Languages

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

Bioinformatics

- Quality control
- Transcriptome and Genome assembly
- SNP marker identification
- Alignment/Mapping
- RNA-seq analysis
- ddRAD analysis
- Gene prediction
- Differential expression
- Gene ontologies
- Functional enrichment
- Ortholog identification
- Outlier analysis for adaptive loci

Programming

- **R** (advanced, developed R packages *DEMEtics* and *MaxentVariableSelection*)
- **Unix** (advanced)
- **MySQL** (intermediate)
- **HTML/CSS/PHP/jQuery** (intermediate)
- **Git** (intermediate)
- **Python** (advanced)
- **Perl** (advanced)
- **Emacs** (advanced)
- **PHP** (basics)
- **Matlab** (basics)

Laboratory

Molecular genetics • DNA- and RNA-extraction • PCR • Gel electrophoresis • Microsatellite genotyping (ABI Genetic Analyzer 3500xl) • Next generation sequencing (SoliD, Ion Torrent, Illumina MiSeq and NextSeq) • Real-time qPCR (StepOnePlus Real-Time PCR System, Life Technologies) • Bisulfite conversion • RAD sequencing

Wetlab • Culturing benthic marine species • Common garden heat stress experiments

Diving

2015 PADI Advanced Open Water Diver

2014 PADI Open Water Diver, dry suit