






PERSONAL INFORMATION

Kjell Gundersen

-  Stølhaugane 10, NO-5360 Kolltveit (Norway)
-  (+47) 404 28 173
-  Kjell.Gundersen@imr.no
-  http://www.imr.no/om_havforskningsinstituttet/ansatte/g/kjell_gundersen/en
-  Skype kjell.gundersen3

WORK EXPERIENCE

- 2013–Present **Researcher / Research Group Leader**
Institute of Marine Research, Bergen (Norway)

- 2006–2013 **Assistant Research Professor**
University of Southern Mississippi, Stennis Space Center (USA)

- 2004–2006 **Research Associate**
University of Maine, Orono (USA)

EDUCATION AND TRAINING

- 1992–1996 **Doctor of Philosophy**
University of Southampton, Southampton (United Kingdom)
Ph.D.-thesis: Factors controlling bacterial biomass, abundance and growth at the Bermuda Atlantic Time-series Study (BATS) site

PERSONAL SKILLS

Mother tongue(s) Norwegian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills Good communication skills gained through 28 years of studying and working abroad; Bermuda (UK), Stockholm (Sweden), Engalnd (UK), Maine (USA), Mississippi (USA)

Organisational / managerial skills In addition to my research, I have had the position as *Research Group Leader* in the *Plankton Research Group*, since September 2016.

Job-related skills In charge of Quality Control (QC) and archiving of all biogeochemical data at the Institute of Marine Research (IMR). Collection of samples, analysis and QC is tied with annual "Round Robin" comparisons with other entities and institutions (QUASIMEME, Norsk Akkreditering, IOCP-JAMSTEC).

ANNEXES

- CV_Kjell_03aug2017.pdf

CV_Kjell_03aug2017.pdf **Curriculum Vitae – Kjell Gundersen**

Institute of Marine Research
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NO-5817 Bergen, Norway
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Education

Doctor of Philosophy (April 1999) Biological Oceanography; *Factors Controlling Bacterial Abundance, Biomass and Growth at the Bermuda Atlantic Time-series Study Site*, Department of Oceanography, University of Southampton, England, UK
Master of Science (February 1989) Marine Biology; *Degradation and the Effect of Using Chloroform in Sediment Traps*, Institute for Marine Biology, University of Bergen, Norway

Professional Experience

2013-present Researcher, Plankton Research Group, Institute of Marine Research, Bergen, Norway
2006-2013 Assistant Research Professor, DMS, University of Southern Mississippi, MS, USA
2004-2006 Research Associate, Darling Marine Center, University of Maine, Orono, ME, USA
2003-2007 Adjunct Research Faculty, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME, USA
2002-2003 Postdoctoral Researcher, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME, USA
1998-2001 Postdoctoral Research Fellow, Stockholm University, Sweden
1989-1997 Research Assistant, Bermuda Atlantic Time-series Study (BATS) at Bermuda Biological Station for Research (BBSR), Bermuda

Professional Memberships

2004 – present The Oceanographic Society (TOS)
2002 – present American Geophysical Union (AGU)
1994 – 2006 Norwegian Microbiological Association (Norsk Mikrobiologisk Forening; NMF), a co-sponsor of the Federation of European Microbial Scientists (FEMS)
1994 – present American Society for Limnology and Oceanography [ASLO]

Community Service

Reviewer and member of an NSF Review Panel and reviewer of a number of U.S. National Science Foundation (NSF) proposals. Reviewer of Environmental Protection Agency (EPA) and The Fund for Scientific Research-FNRS (F.R.S.-FNRS) proposals.

*Curriculum Vitae - Kjell Gundersen***Community Service (cont.)**

Reviewer for: *Applied Microbial Ecology, Limnology & Oceanography Methods, Marine Biological Research, Limnology & Oceanography, Marine Chemistry, Deep-Sea Research, Environmental Microbiology and Environmental Microbiology Reports.*

International Refereed Publications

- Chakraborty, S., S. E. Lohrenz, K. Gundersen (2017) Photophysiological and light absorption properties of phytoplankton communities in the river-dominated margin of the northern Gulf of Mexico, *Journal of Geophysical Research: Oceans* 122:4922–4938, DOI:10.1002/2016JC012092
- Xue, J., W.-J. Cai, X. Hu, W.-J. Huang, S.E. Lohrenz, K. Gundersen (2015) Temporal variation and stoichiometric ratios of organic matter remineralization in bottom waters of the northern Gulf of Mexico during late spring and summer. *Journal of Geophysical Research: Oceans*, DOI:10.1002/2015JC011453
- Lohrenz, S.E. W.-J. Cai, S. Chakraborty, K. Gundersen & M.C. Murrell (2013) Nutrient and carbon dynamics in a large river-dominated coastal ecosystem: the Mississippi-Atchafalaya river system. In: Bianchi, T.S., M. Allison, W.-J. Cai (eds.) *Biogeochemical dynamics at major river-coastal interfaces: linkages with global change*. Cambridge University Press
- Orcutt, K. M., K. Gundersen, J.W. Ammerman (2013) Intense ectoenzyme activities associated with *Trichodesmium* colonies in the Sargasso Sea. *Marine Ecology Progress Series*, 478:101-113
- Luo, Y.-W., Doney, S. C., Anderson, L. A., Benavides, M., Berman-Frank, I., Bode, A., Bonnet, S., Boström, K. H., Böttjer, D., Capone, D. G., Carpenter, E. J., Chen, Y. L., Church, M. J., Dore, J. E., Falcón, L. I., Fernández, A., Foster, R. A., Furuya, K., Gómez, F., Gundersen, K., Hynes, A. M., Karl, D. M., Kitajima, S., Langlois, R. J., LaRoche, J., Letelier, R. M., Marañón, E., McGillicuddy Jr, D. J., Moisander, P. H., Moore, C. M., Mouriño-Carballido, B., Mulholland, M. R., Needoba, J. A., Orcutt, K. M., Poulton, A. J., Rahav, E., Raimbault, P., Rees, A. P., Riemann, L., Shiozaki, T., Subramaniam, A., Tyrrell, T., Turk-Kubo, K. A., Varela, M., Villareal, T. A., Webb, E. A., White, A. E., Wu, J., and Zehr, J. P. (2012) Database of diazotrophs in global ocean: abundance, biomass and nitrogen fixation rates. *Earth System Science Data*, 4:47-73, DOI:10.5194/essd-4-47-2012
- Cai, W.-J., X. Hu, W.-J. Huang, M.C. Murrell, J.C. Lehrter, S.E. Lohrenz, W.-C. Chou, W. Zhai, J.T. Hollibaugh, Y. Wang, P. Zhao, X. Guo, K. Gundersen, M. Dai & G.-C. Gong (2011) Eutrophication and high atmospheric pCO₂ enhance ocean acidification and denitrification. *Nature Geoscience*, DOI:10.1038/NGEO1297
- Boss, E., L. Taylor, S. Gilbert, K. Gundersen, N. Hawley, C. Janzen, T. Johengen, H. Purcell, C. Robertson, D. Schar, G.J. Smith & M. Tamburri (2009) Comparison of inherent optical properties as a surrogate for particulate matter concentration in coastal waters. *Limnology & Oceanography: Methods* 7:803-810
- Orcutt, K.M., S. Ren & K. Gundersen (2009) Detecting proteins in highly autofluorescent cells using quantum dot antibody conjugates. *Sensors* 9:7540-7549
- Orcutt, K.M., K. Gundersen, M.L. Wells, N.J. Poulton, M.E. Sieracki & G.J. Smith (2008) Lighting up phytoplankton cells with quantum dots. *Limnology & Oceanography: Methods* 6:653-658

Curriculum Vitae - Kjell Gundersen

Degerholm, J., K. Gundersen, S. Hajdu, B. Bergman & E. Söderbäck (2008) Seasonal significance of N₂ fixation in coastal and off-shore waters of the north-western Baltic Sea. *Marine Ecology Progress Series* 360:73-84

*Curriculum Vitae - Kjell Gundersen***International Refereed Publications (cont.)**

- Orcutt, K.M., K. Gundersen & U. Rasmussen (2007) Another look at green *Trichodesmium* colonies. *Limnology & Oceanography* 53:2049-2051
- Ohlendieck, U., K. Gundersen, M. Meyerhöfer, P. Fritsche, K. Nachtigall & B. Bergman (2007) The significance of nitrogen fixation to new production during early summer in the Baltic sea. *Biogeosciences* 4:1-11
- Degerholm, J., K. Gundersen, B. Bergman & E. Söderbäck (2006) Phosphorus limiting growth in the filamentous cyanobacteria *Nodularia* sp. and *Aphanizomenon* sp. *FEMS Microbiology Ecology* 58:323-332
- Gundersen, K., M. Heldal, S. Norland & D.A. Purdie (2002) Elemental C, N and P content of individual bacteria collected at the Bermuda Atlantic Time-series Study (BATS) site. *Limnology & Oceanography* 47:1525-1530
- Gallon, J.R., P. Albertano, B. Bergman, K.v. Bröckel, A. Canini, R. Congresti, A.M. Evans, P. Fritsche, K. Gundersen, S.te L. Hekkert, A. Jones, M. Meyerhöfer, K. Nachtigall, U. Ohlendieck, K.M. Orcutt, S. Repka, K. Sivonen, M. Staal & L.J. Stal (2002) Uncoupling of N₂ fixation and primary production in a developing cyanobacterial bloom in the Baltic Sea. *Limnology & Oceanography* 47:1514-1521
- Orcutt, K., U. Rasmussen, E.A. Webb, J.B. Waterbury, K. Gundersen & B. Bergman (2002) Characterization of *Trichodesmium* spp. using genetic techniques including HIP1 DNA fingerprinting. *Applied Environmental Microbiology* 68:2236-2245
- Gundersen, K., K.M. Orcutt, D.A. Purdie, A.F. Michaels & A.H. Knap (2001) Particulate organic carbon mass distribution at the Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research II* 48:1697-1718
- Orcutt, K.M., F. Lipschultz, K. Gundersen, R. Arimoto, A.F. Michaels, A.H. Knap & J.R. Gallon (2001) A seasonal study of the significance of N₂ fixation by *Trichodesmium* spp. at the Bermuda Atlantic Time-series Study (BATS) site. *Deep-Sea Research II* 48:1583-1608
- Heiskanen, A.-S., Haapala, J. & K. Gundersen (1998) Sedimentation and pelagic retention of particulate C, N and P in the coastal northern Baltic Sea. *Estuarine, Coastal and Shelf Science* 46:703-712
- Gundersen, K., G. Bratbak & M. Heldal (1996) Factors influencing the loss of bacteria in preserved seawater samples. *Marine Ecology Progress Series* 137:305-310
- Heiskanen, A.-S., T. Tamminen & K. Gundersen (1996) Impact of planktonic food web structure on nutrient retention and loss from late summer pelagic system in the northern Baltic Sea. *Marine Ecology Progress Series* 145:195-208
- Hansell, D., N.R. Bates & K. Gundersen (1995) Mineralization of dissolved organic carbon in the Sargasso Sea. *Marine Chemistry* 51:201-212
- Michaels, A.F., A.H. Knap, R.L. Dow, K. Gundersen, R.J. Johnson, J. Sorensen, A. Close, G.A. Knauer, S.E. Lohrenz, V.A. Asper, M. Tuel & R. Bidigare (1994) Seasonal patterns of ocean biogeochemistry at the U.S. JGOFS Bermuda Atlantic Time-series Study site. *Deep-Sea Research* 41:1013-1038
- Lignell, R., A.-S. Heiskanen, H. Kuosa, K. Gundersen, P. Kuuppo-Leinikki, R. Pajuniemi & A. Uitto (1993) Fate of phytoplankton spring bloom: sedimentation and carbon flow in the planktonic food web in the northern Baltic. *Marine Ecology Progress Series* 94:239-252

*Curriculum Vitae - Kjell Gundersen***International Refereed Publications (cont.)**

Gundersen, K. & P. Wassmann (1990) Use of chloroform in sediment traps: caution advised. *Marine Ecology Progress Series* 64:187-195

International Meeting Contributions (last 5 years)

- Gundersen, K., P. Dalpadado & H.R. Skjoldal (2016) Dissolved inorganic nutrients determine phytoplankton primary production, cellular elemental composition and zooplankton growth in the Barents Sea. ICES 6th International Zooplankton Production Symposium, Bergen, Norway [POSTER]
- Chakraborty, S., S.E. Lohrenz & K. Gundersen (2015) Photosynthetic parameters and bio-optical properties of the phytoplankton community in the Northern Gulf of Mexico. 2015 *International Ocean Colour Science meeting*, San Francisco, CA, USA
- Howden, S., J. Griffin, R. Wanninkhof, G. Friederich, K. Gundersen & K. Martin (2014) A pilot project for autonomous ocean acidification surveys in the northern Gulf with the Liquid Robotics Wave Glider. ASLO Ocean Sciences, Honolulu, HI, USA [POSTER]
- Gundersen, K., S. Howden, D. Redalje & S. Lohrenz (2012) River discharge, stratification and shelf water hypoxia in the Mississippi Bight, Ocean Science Meeting, Salt Lake City, UT, USA [POSTER]
- Orcutt, K.M., P. Burnett and K. Gundersen (2012) Molecular detection of unicellular diazotrophs in the Northern Gulf of Mexico. ASLO Ocean Sciences, Salt Lake City, UT, USA
- Vandermeulen, R.A. & K. Gundersen (2012) Community growth physiology and nutrient chemistry in an estuarine coastal environment in the Northern Gulf of Mexico, Ocean Science Meeting, Salt Lake City, UT, USA [POSTER]
- Burnett, P., K. Orcutt, K. Gundersen, A. Mojzic & D. Redalje (2011) The nitrogen budget in coastal waters of the Northern Gulf of Mexico is influenced by seasonal hypoxic events, 21st Biennial Conference of the Coastal and estuarine research Federation (CERF), Daytona Beach, FL, USA [POSTER]
- Vandermeulen, R.A. & K. Gundersen (2011) Balancing photosynthesis and community respiration in an estuarine coastal environment in the Northern Gulf of Mexico, 21st Biennial Conference of the Coastal and estuarine research Federation (CERF), Daytona Beach, FL, USA [POSTER]
- Cumaa, N.O., K. Gundersen & A.C. Ortmann (2011) Archaeal community structure in two distinct seasonally hypoxic zones in the Northern Gulf of Mexico region. ASLO Aquatic Sciences meeting, San Juan, PR, USA
- Ortell N., K. Gundersen & A.C. Ortmann (2011) Distribution and diversity of *Archaea* in two distinct seasonally hypoxic regions: Mobile Bay and coastal Mississippi. Mississippi-Alabama Bays and Bayous Symposium, Biloxi, MS, USA [POSTER]
- Gundersen, K. & R. Vandermeulen (2010) Diurnal respiration in microplankton measured by automated optical dissolved oxygen (DO) sensor technology. Gordon Research Conference – Marine Microbes, Tilton, NH, USA [POSTER]

*Curriculum Vitae - Kjell Gundersen***International Meeting Contributions (cont.)**

- Lohrenz, S.E., W.-J. Cai, K. Martin, S. Chakraborty, S. Epps, K. Gundersen, W. Huang & Y. Wang (2010) Carbon System Dynamics in the Large River-Dominated Northern Gulf of Mexico Coastal Margin: An Overview of the Gulf Carbon Program. AGU Fall Meeting, San Francisco, CA, USA [POSTER]
- Ren, S., K.M. Orcutt, K. Gundersen (2010) Using Qdot conjugates to detect proteins *in situ* in highly autofluorescent cyanobacteria cells. *In: Marine Technology for Our Future: Global and Local Challenges*, Oceans 09, MTS/IEEE-Biloxi, MS, USA
- Orcutt, K.M., S. Ren & K. Gundersen (2010) Detecting proteins in highly autofluorescent cells using Quantum dot antibody conjugates. Gordon Research Conference – Marine Microbes, Tilton, NH, USA [POSTER]
- Gundersen, K., S. Ren & K.M. Orcutt (2010) Quantum dot (Qdot) conjugates, a powerful new tool to detect proteins in highly autofluorescent cells. Ocean Sciences Meeting, Portland, OR, USA [POSTER]
- Gundersen, K., S.D. Howden & S. Lohrenz (2010) Hypoxia Monitoring on the Mississippi Gulf Coast. Workshop on Ecological Impacts of Hypoxia on Living Resources, NOAA National Coastal Data Development Center, Bay St. Louis, MS, USA

Science Reports

- Gundersen, K., L.F. Lunde, M. Petersen & J.S. Møgster (2016) Næringssalter, tilvekst av planteplankton og beitepress i norske havområder. *In: Bakketeig, I.E., M. Hauge, C. Kvamme, B.H. Sunnset & K.Ø. Toft, Havforskningsrapporten 2016, Fisken og havet – særnummer 1 – 2016*, 203 pp.
- Gundersen, K., J.S. Møgster, L.F. Lunde, M. Petersen, I.B. Tjelflaat & F. Rey (2015) Næringssalter og tilvekst av planteplankton i havområdene våre. *In: Bakketeig, I.E., H. Gjøsæter, M. Hauge, B.H. Sunnset & K.Ø. Toft, Havforskningsrapporten 2015, Fisken og havet – særnummer 1 – 2015*, 215 pp.

Homepages

- Initiated and helped create a homepage for the *Chemistry Laboratory* (Kjemilaboratoriet). The design was worked out in conjunction with the Daily Manager at the Chemistry Laboratory (Ingrid Sværen), laboratory staff and the Department of Public Relations (Kjersti Turøy) at the Institute of Marine Research (IMR).
http://www.imr.no/om_havforskningsinstituttet/fasiliteter/kjemilaboratoriet_1/kjemilaboratoriet/nb-no <pages are also available in English>
- Created a homepage for the *Inorganic Chemistry Group* (Gruppe uorganisk kjemi) together with the laboratory staff. The final design was a compromise between the laboratory staff and the Department of Public Relations (Kjersti Turøy).
http://www.imr.no/om_havforskningsinstituttet/fasiliteter/kjemilaboratoriet_1/kjemilaboratoriet/uorganisk_kjemi/nb-no <pages are also available in English>
- Restructured, modernized and updated the webpage for the *Plankton Research Group* (FG Plankton). Final design was decided after a workshop with the group, and in conjunction with the Department of Public Relations (Kjersti Turøy).
<http://www.imr.no/forskning/faggrupper/plankton/nb-no> <pages are also available in English>

*Curriculum Vitae - Kjell Gundersen***Technical Reports**

- Alliance for Coastal Technologies (2013) Performance Verification Statement for Automated Hydrocarbon Sensors. <http://www.act-us.info/evaluation-reports.php>
- Alliance for Coastal Technologies (2009) Performance Verification Statement for Automated Conductivity Sensors. <http://www.act-us.info/evaluation-reports.php>
- Alliance for Coastal Technologies (2007) Performance Verification Statement for Automated Turbidity Sensors. <http://www.act-us.info/evaluation-reports.php>
- Alliance for Coastal Technologies (2006) Performance Verification Statement for Automated Fluorometers. <http://www.act-us.info/evaluation-reports.php>
- Alliance for Coastal Technologies (2005) Performance Verification Statement for Dissolved Oxygen Sensors. <http://www.act-us.info/evaluation-reports.php>

Method Manuals & Workshop Proceedings

- UNESCO (1994) Protocols for the Joint Global Ocean Flux Study (JGOFS) Core measurements. Intergovernmental Oceanographic Commission (IOC) Scientific Committee on Oceanic research, Manual & Guides 29, UNESCO
- Knap, A., A.F. Michaels, R.L. Dow, R. Johnson, K. Gundersen, J.C. Sorensen, A.R. Close, F.A. Howse, M. Hammer, N. Bates, A. Doyle & T. Waterhouse (1993) Bermuda Atlantic Time-series Study BATS Method Manual, Version 3. U.S. Joint Global Ocean Flux Study, U.S. JGOFS Planning and Coordination Office, Woods Hole, MA, USA.
- Gundersen, K. (1990) Sampling precision and preservation of sediment trap material. *In: Sediment trap studies in the Nordic countries 2*, Proceedings of the symposium "Sediment traps in marine ecological research and monitoring", Wassmann, P., A.-S. Heiskanen & O. Lindahl (Eds.), NurmiPrint Oy, Finland.
- Gundersen, K. (1988) Degradation of organic matter in sediment traps. *In: Sediment trap studies in the Nordic countries 1*, Proceedings of the Workshop "Use of sediment traps for studies of vertical flux of particulate matter in the sea", Wassmann, P. & A.-S. Heiskanen (Eds.), Yliopistopaino, Finland.

Advisement of Students

- 2012 Vandermeulen, R.A. (M.S. thesis) Factors influencing the spatial and temporal distribution of primary productivity and community respiration in the Mississippi coastal estuarine region, Department of Marine Science, The University of Southern Mississippi.
- 2012 Burnett, P.F. (M.S. thesis) Effects of hypoxia on nitrogen fixation and removal in the Mississippi Bight, Department of Marine Science, The University of Southern Mississippi.
- 2010 Ren, S. (M.S. thesis) Molecular detection of marine N₂ fixation by cyanobacteria in the Northern Gulf of Mexico, Department of Marine Science, The University of Southern Mississippi.
- 2002 Degerholm, J. (Ph.D. thesis) Ecophysiological characteristics of the Baltic Sea N₂-fixing cyanobacteria *Aphanizomenon* and *Nodularia*, Department of Botany, Stockholm University.
- 1999 Rundqvist, C. (Licenciat thesis) Department of Botany, Stockholm University.
- 1999 Gøtfors, L. (Licenciat thesis) Department of Botany, Stockholm University.