

CURRICULUM VITAE

PERSONAL INFORMATION

Marandino, Christa

Date of birth: 14-03-1976

Nationality: USA

Marital Status: Married, one child

<https://www.geomar.de/en/trase-ec>

ORCID ID 0000-0001-9947-4377

• CURRENT POSITION

02/18-present **Senior Scientist (permanent position)/Privat Dozent (PD, can officially supervise and teach)**

Marine and atmospheric chemistry, Christian-Albrechts-Universität Kiel and Chemical Oceanography, GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany

Since 2017 **Adjunct Faculty Member**

Bermuda Institute of Ocean Sciences, St. George's, Bermuda

• PREVIOUS POSITIONS

2012-2018 **W1 Professor (equivalent to assistant professor, but without tenure option)**

Marine and atmospheric chemistry, Christian-Albrechts-Universität Kiel and Chemical Oceanography, GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany

2008-2011 **Postdoctoral Researcher** (partially funded with **Humboldt Postdoctoral Fellowship**)

Chemical Oceanography, IFM-GEOMAR Leibniz Institute for Marine Sciences, Germany

2007-2008 **Postdoctoral Researcher**

Earth System Science Department, University of California, Irvine, USA

• EDUCATION

2007 **PhD in Earth System Science**

Title: *Eddy correlation Air/Sea Flux Measurements of Trace Gases using Atmospheric Pressure Chemical Ionization Mass Spectrometry*, Earth System Science Department, University of California, Irvine, USA, Supervisor: Prof. Dr. Eric Saltzman

2004 **MSc in Earth System Science**

Earth System Science Department, University of California, Irvine, USA

- **DIRECT SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS (further details below)**

2010-present Chemical Oceanography, GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany: Postdocs – 6, PhD – 6, Master's Students – 3

- **TEACHING ACTIVITIES (further details below)**

2012-present **PD/W1** - Atmospheric Chemistry, Air-Sea Gas Exchange (and the Sea Surface Microlayer), Climate Physics Seminar on the Indian Ocean, Introduction to Chemical Oceanography - Exercises, Chemical Oceanography Lab Practical, Chemical Oceanography Field Practical at Christian Albrecht University Kiel, Germany; Educational training and capacity building within the German SPACES program on board the R/V Sonne for German and African students; Lectures for SOLAS MSc program at the University of Galway

2001-2002 **Teaching assistant, graduate student researcher** - Geology, The Atmosphere at University of California, Irvine, Earth System Science Department, USA

- **COMMISSIONS OF TRUST (continued below under Institutional Responsibilities)**

2024-present **Co-Chair** of Surface Ocean Lower Atmosphere Study (SOLAS)

2021-present **Ombudsperson** GEOMAR (Good scientific practice – German Science foundation guidelines)

2020-present **Member** SCOR working group 162 Observing Air-Sea Interactions Strategy (OASIS) – also a UN Ocean Decade endorsed programme (**Co-chair since 2021**)

2020-2021 **Member** of GEOMAR working group to implement the Annual Dialogue (*Jahresdialog*)

2020-2021 **Member** of GEOMAR working group on internationalization

2019-2020 **Guest editor** of special issue in *Atmosphere* entitled, “Fluxes and Ecological Processes Near the Ocean-Atmosphere Interface”

2018-2020 **Alternate** for Permanent Scientists-Scientific Advisory Committee, GEOMAR Helmholtz Centre for Ocean Research Kiel/Germany

2017 **Coordinator** and **lecturer** of Integrated School of Ocean Sciences group taught PhD course – Introduction to Chemical Oceanography, ‘The Future Ocean’ Excellence Cluster and GEOMAR Helmholtz Centre for Ocean Research Kiel/Germany

2016-2023 **Editor** (member of Earth and Environmental Science editorial board) for *Scientific Reports*

2016-2023 **National representative** of the German SOLAS program (leads and co-leads many initiatives within the international program)

2014-2024 **Member** of the Women's Executive Board (WEB) steering committee, GEOMAR Helmholtz Centre for Ocean Research Kiel/Germany (**Co-chair since 2021**)

• **OUTREACH ACTIVITIES (continued below under Conference Organization)**

2018-2019 **Co-spokesperson** of German Committee for Sustainability Research (DKN) working group on Shipping Emissions-Impacts, Incentives and Regulation

2017-2023 **Director** SOLAS Summer Schools (2018, 2022, 2023)/~70 participants/France/online/Cape Verde

2016 Professional biography featured on NDR1 *Welle Nord* radio program *Schlaue Köpfe in Schleswig-Holstein*

2015 SPACES/OASIS research cruise featured in *The Indian Ocean Bubble*

2014-present Organization of events promoting women in science - public lectures highlighting successful women in science ('Marie Tharpe Lecture Series'), professional training and mentoring for women

2014 Earth Science Women's Network Workshop on Networking and Career Development in Kiel, Germany - local organizing committee member and panelist

2013 Short biography in DAAD Magazine *Letter*

2013 Helmholtz award featured in Helmholtz Brochure: Career and Talent - Women in the Helmholtz Organization

2012 Helmholtz award featured in *Unizeit* CAU Newspaper

2011 Helmholtz award featured in short TV program *Schleswig-Holstein Magazine*

2011 Nominated and included in AcademiaNet Internet Portal of Excellent Female Scientists (Robert Bosch Foundation)

2009 Accepted to the first ASCENT conference for women in science

2009 Nominated to and attended the 59th Meeting of Nobel Laureates (Chemistry) in Lindau, Germany

2006 PhD research featured in the third international SOLAS newsletter

• **OCEANOGRAPHIC CRUISE EXPERIENCE**

Since 2004, I have participated personally in cruises in the Baltic Sea, Pacific, Atlantic, Southern and Indian Oceans on research vessels from the USA, Germany, and New Zealand, spending approximately 300 days at sea. **I was a co-proponent of the SPACES/OASIS cruise on board the R/V Sonne in 2014 and chief scientist of the ASTRA-OMZ cruise on board the new R/V Sonne in 2015, in total granted with 45 ship days. In 2018, I successfully applied to be chief scientist on board the R/V Alkor for two cruises (approx. 30 ship days), but had to have a group member substitute as chief on board due to my maternity leave. I was chief scientist on board R/V Maria S. Merian for 27 working days in 2023.**

PUBLICATIONS

Peer reviewed journal articles

1. Kumar, A., Tegtmeier, S., Fernandes, S. O., Biswas, H., Girach, I., Roxy, M. K., Kurian, S., **Marandino, C. A.**, Sarma, V. V. S. S., and Shenoy, D. M. (2024) *Surface ocean-lower atmospheric processes in the Indian Ocean: Current understanding, knowledge gaps, and future directions*. *Elementa: Science of the Anthropocene*, 12 (1). Art.Nr. 00041. DOI 10.1525/elementa.2023.00041.
2. Johnson, M., van Doorn, E., Hilmi, N., **Marandino, C.**, McDonald, N., Thomas, H., Allemand, D., Algarin, L. D., Lebleu, L., Ho, D. T., Oloyede, M., Safa, A., and Swarzenski, P. (2024) *Can coastal and marine carbon dioxide removal help to close the emissions gap? Scientific, legal, economic, and governance considerations*. *Elementa: Science of the Anthropocene*, 12 (1). Art.Nr. 00071. DOI 10.1525/elementa.2023.00071.
3. Lennartz, S. T., Simon, H., Booge, D., Zhou, L., and **Marandino, C.** (2024) *CS₂ Cycling in Seawater: Dark Production and UV Light Driven Consumption*, *Geophysical Research Letters*, 51 (5). Art.Nr. e2023GL107024. DOI 10.1029/2023GL107024.
4. van Doorn, E., **Marandino, C. A.**, Peters, A. J., and Keywood, M. (2024) *Science, international law, and policy across the air–sea interface*, *Elementa: Science of the Anthropocene*, 12 (1). Art.Nr. 00047. DOI 10.1525/elementa.2023.00047.
5. Shi, Z., Endres, S., Rutgersson, A., Al-Hajjaji, S., Brynolf, S., Booge, D., Hassellöv, I. M., Kontovas, C., Kumar, R., Liu, H., **Marandino, C. A.**, Matthias, V., Moldanová, J., Salo, K., Sebe, M., Yi, W., Yang, M., and Zhang, C. (2023) *Perspectives on shipping emissions and their impacts on the surface ocean and lower atmosphere: An environmental-social-economic dimension*, *Elementa: Science of the Anthropocene*, 11 (1). Art.Nr. 00052. DOI 10.1525/elementa.2023.00052.
6. Goddjinn-Murphy, L., Woolf, D. K., Pereira, R., **Marandino, C. A.**, Callaghan, A. H., and Piskozub, J. (2023) *The links between marine plastic litter and the air-sea flux of greenhouse gases*, *Frontiers in Marine Science*, 10:1180761. doi: <https://www.frontiersin.org/articles/10.3389/fmars.2023.1180761/full>.
7. Cronin, M., Swart, S., **Marandino, C.**, et al. (2023) *Developing an Observing Air-Sea Interactions Strategy (OASIS) for the global ocean*, *ICES Journal of Marine Science*, 80 (2). pp. 367-373. DOI 10.1093/icesjms/fsac149.
8. Zhou, L., Booge, D., Zhang, M., and **Marandino, C. A.** (2022) *Winter season Southern Ocean distributions of climate-relevant trace gases*, *Biogeosciences*, 19. pp. 5021-5040. DOI 10.5194/bg-19-5021-2022.
9. Yang, M., Bell, T. G., Bidlot, J.-R., Blomquist, B. W., Butterworth, B. J., Dong, Y., Fairall, C. W., Landwehr, S., **Marandino, C. A.**, Miller, S. D., Saltzman, E. S., and Zavarisky, A. (2022) *Global Synthesis of Air-Sea CO₂ Transfer Velocity Estimates From Ship-Based Eddy Covariance Measurements*, *Frontiers in Marine Science*, 9:826421. doi: 10.3389/fmars.2022.826421.
10. Tegtmeier, S., **Marandino, C.**, Jia, Y., Quack, B., and Mahajan, A. S. (2022) *Atmospheric gas-phase composition over the Indian Ocean*, *Atmospheric Chemistry and Physics*, 22. pp. 6625-6676. DOI: 10.5194/acp-22-6625-2022.
11. Zhao, Y., Booge, D., **Marandino, C. A.**, Schlundt, C., Bracher, A., Atlas, E. L., Williams, J., and Bange, H. W. (2022) *Dimethylated sulfur compounds in the Peruvian upwelling system* *Biogeosciences*, 19. pp. 701–714. <https://doi.org/10.5194/bg-19-701-2022>.
12. Zhang, M., **Marandino, C. A.**, Yan, J., Wu, Y., Park, K., Sun, H., et al. (2021) *Unravelling surface seawater DMS concentration and sea-to-air flux changes after sea ice retreat in the western Arctic Ocean* *Global Biogeochemical Cycles*, 35. e2020GB006796. <https://doi.org/10.1029/2020GB006796>.

13. Zhang, M., **Marandino, C. A.**, Yan, J. P., Park, K., Lin, Q., Park, K., Xu, G., Kim, T.-W., and Chen, L. (2021) *DMS sea-to-air fluxes and their influence on sulfate aerosols over the Southern Ocean, southeast Indian Ocean, and northwest Pacific Ocean* Environmental Chemistry, DOI: 10.1071/EN21003.
14. Lennartz, S. T., Gauss, M., von Hobe, M., and **Marandino, C. A.** (2021) *Monthly resolved modelled oceanic emissions of carbonyl sulfide and carbon disulfide for the period 2000–2019* Earth System Science Data, 13 (5). pp. 2095-2110. DOI: 10.5194/essd-13-2095-2021.
15. Wang, S., Apel, E. C., Schwantes, R. H., Bates, K. H., Jacob, D. J., & Fischer, E. V., Hornbrook, R. S., Hills, A. J., Emmons, L. K., Pan, L. L., Honomichl, S., Tilmes, S., Lamarque, J.-F., Yang, M., **Marandino, C. A.**, Saltzman, E. S., de Bruyn, W. J., Kameyama, S., Tanimoto, H., Omori, Y., Hall, S. R., Ullmann, K., Ryerson, T. B., Thompson, C. R., Peischl, J., Daube, B. C., Commane, R., McKain, K., Sweeney, C., Thames, A. B., Miller, D. O., Brune, W. H., Diskin, G. S., DiGangi, J. P., and Wofsy, S. C. (2020) *Global atmospheric budget of acetone: Air-sea exchange and the contribution to hydroxyl radicals* Journal of Geophysical Research: Atmospheres, 125. e2020JD032553. <https://doi.org/10.1029/2020JD032553>.
16. **Marandino, C. A.**, van Doorn, E., McDonald, N., Johnson, M., Acma, B., Breviere, E., Campen, H., Carou, S., Cocco, E., Endres, S., Hilmi, N., Hopkins, F. Liss, P., Maes, F. Martensson, M., Oeffner, J., Oloyede, M., Peters, A., Quack, B., Singh, P., and Thomas, H. (2020) *From monodisciplinary via multidisciplinary to an interdisciplinary approach investigating air-sea interactions – A SOLAS Initiative* Coastal Management, 48. pp. 238-256. DOI: 10.1080/08920753.2020.1773208.
17. Lennartz, S. T. , **Marandino, C. A.**, von Hobe, M., Andreae, M. O., Aranami, K., Atlas, E., Berkelhammer, M., Bingemer, H., Booge, D., Cutter, G., Cortes, P., Kremser, S., Law, C., Marriner, A., Simo, R., Quack, B., Uher, G., Xie, H. and Xu, X. (2020) *Marine carbonyl sulfide (OCS) and carbon disulfide (CS₂): a compilation of measurements in seawater and the marine boundary layer* Earth System Science Data, 12. pp. 591-609. <https://doi.org/10.5194/essd-12-591-2020>.
18. Lennartz, S. T. , von Hobe, M. , Booge, D., Bittig, H. , Fischer, T. , Goncalves-Araujo, R., Ksionzek, K. B., Koch, B. P. , Bracher, A. , Röttgers, R., Quack, B. and **Marandino, C. A.** (2019) *The influence of dissolved organic matter on the marine production of carbonyl sulfide (OCS) and carbon disulfide (CS₂) in the Peruvian upwelling* Ocean Science, 15. pp. 1071-1090. DOI 10.5194/os-15-1071-2019.
19. Zavarisky, A., and **Marandino, C. A.** (2019) *The influence of transformed Reynolds number suppression on gas transfer parameterizations and global DMS and CO₂ fluxes* Atmospheric Chemistry and Physics, 19 (3). pp. 1819-1834. DOI 10.5194/acp-19-1819-2019.
20. Zhang, M., Gao, W., Yan, J. , Wu, Y., **Marandino, C. A.**, Park, K., Chen, L., Lin, Q., Tan, G. und Pan, M. (2019) *An integrated sampler for shipboard underway measurement of dimethyl sulfide in surface seawater and air* Atmospheric Environment, 209. pp. 86-91. DOI 10.1016/j.atmosenv.2019.04.022.
21. Booge, D., Schlundt, C., Bracher, A., Endres, S., Zäncker, B. and **Marandino, C. A.** (2018) *Marine isoprene production and consumption in the mixed layer of the surface ocean – A field study over 2 oceanic regions* Biogeosciences, 15. pp 649-667. DOI: 10.519/bg-2017-257.
22. Fiehn, A., Quack, B., **Marandino, C. A.** and Krüger, K. (2018) *Transport Variability of Very Short-Lived Substances From the West Indian Ocean to the Stratosphere*. Journal of Geophysical Research: Atmospheres, 123 (10). pp. 5720-5738. DOI 10.1029/2017JD027563.
23. Zavarisky, A., Booge, D., Fiehn, A., Krüger, K., Atlas, E. and **Marandino, C. A.** (2018) *The influence of air-sea fluxes on atmospheric aerosols during the summer monsoon over the Indian Ocean* Geophysical Research Letters, 45. pp. 418-426. DOI: 10.1002/2017GL076410.
24. Zavarisky, A., Goddijn-Murphy, L., Steinhoff, T. and **Marandino, C. A.** (2018) *Bubble-Mediated Gas Transfer and Gas Transfer Suppression of DMS and CO₂*. Journal of

- Geophysical Research: Atmospheres, 123 (12). pp. 6624-6647. DOI 10.1029/2017JD028071.
25. Lennartz, S. T., **Marandino, C. A.**, Hobe, M. v., Cortes, P., Quack, B., Simo, R., Booge, D., Pozzer, A., Steinhoff, T., Arevalo-Martinez, D. L., Kloss, C., Bracher, A., Röttgers, R., Atlas, E. and Krüger, K. (2017) *Direct oceanic emissions unlikely to account for the missing source of atmospheric carbonyl sulfide* Atmospheric Chemistry and Physics, 17. pp. 385-402. DOI 10.5194/acp-17-385-2017.
 26. Schlundt, C., Tegtmeier, S., Lennartz, S. T., Bracher, A., Cheah, W., Krüger, K., Quack, B. and **Marandino, C. A.** (2017) *Oxygenated volatile organic carbon in the western Pacific convective centre: ocean cycling, air-sea gas exchange and atmospheric transport* Atmospheric Chemistry and Physics, 17. pp. 10837-10854. DOI: 10.5194/acp-17-10837-2017.
 27. Zhang, M., **Marandino, C. A.**, Chen, L., Sun H., Gao, Z., Park, K., Kim, I., Yang, B., Zhu, T., Yan, J., and Wang, J. (2017), *Characteristics of the surface water DMS and pCO₂ distributions and their relationships in the Southern Ocean, southeast Indian Ocean, and northwest Pacific Ocean* Global Biogeochemical Cycles, 31. DOI:10.1002/2017GB005637.
 28. Booge, D., **Marandino, C. A.**, Schlundt, C., Palmer, P. I., Schlundt, M., Atlas, E. L., Bracher, A., Saltzman, E. S. and Wallace, D. W. R. (2016) *Can simple models predict large scale surface ocean isoprene concentrations?* Atmospheric Chemistry and Physics, 16. pp. 11807-11821. DOI 10.5194/acp-16-11807-2016.
 29. Stramma, L., Fischer, T., Grundle, D., Krahnemann, G., Bange, H. W. and **Marandino, C.** (2016) *Observed El Niño conditions in the eastern tropical Pacific in October 2015* Ocean Science, 12 (4). pp. 861-873. DOI 10.5194/os-12-861-2016.
 30. Bell, T. G., De Bruyn, W., **Marandino, C.**, Miller, S. D., Law, C. S., Smith, M. J. and Saltzman, E. S. (2015) *Dimethylsulfide gas transfer coefficients from algal blooms in the Southern Ocean* Atmospheric Chemistry and Physics, 15 (4). pp. 1783-1794. DOI 10.5194/acp-15-1783-2015.
 31. Breviere, E. H. G., Bakker, D. C. E., Bange, H. W., Bates, T. S., Bell, T. G., Boyd, P. W., Duce, R. A., Garçon, V., Johnson, M. T., Law, C. S., **Marandino, C.**, Olsen, A., Quack, B., Quinn, P. K., Sabine, C. L. and Saltzman, E. S. (2015) *Surface ocean-lower atmosphere study: Scientific synthesis and contribution to Earth system science* Anthropocene, 12. pp. 54-68. DOI 10.1016/j.ancene.2015.11.001.
 32. Lennartz, S. T., Krysztofiak-Tong, G., **Marandino, C.**, Sinnhuber, B. M., Tegtmeier, S., Ziska, F., Hossaini, R., Krüger, K., Montzka, S. A., Atlas, E., Oram, D., Keber, T., Bönisch, H. and Quack, B. (2015) *Modelling marine emissions and atmospheric distributions of halocarbons and dimethyl sulfide: the influence of prescribed water concentration vs. prescribed emissions* Atmospheric Chemistry and Physics, 15 (20). pp. 11753-11772. DOI 10.5194/acp-15-11753-2015.
 33. Shi, Q., **Marandino, C.**, Petrick, G., Quack, B. and Wallace, D. W. R. (2014) *A time series of incubation experiments to examine the production and loss of CH₃I in surface seawater* Journal of Geophysical Research - Oceans, 119 (12). pp. 8242-8254. DOI 10.1002/2014JC010223.
 34. Shi, Q., Petrick, G., Quack, B., **Marandino, C.** and Wallace, D. W. R. (2014) *Seasonal variability of methyl iodide in the Kiel Fjord* Journal of Geophysical Research - Oceans, 119 (3). pp. 1609-1620. DOI 10.1002/2013JC009328.
 35. Zindler, C., **Marandino, C.**, Bange, H. W., Schütte, F. and Saltzman, E. S. (2014) *Nutrient availability determines dimethyl sulfide and isoprene distribution in the eastern Atlantic Ocean* Geophysical Research Letters, 41 (9). pp. 3181-3188. DOI 10.1002/2014GL059547.
 36. **Marandino, C.**, Tegtmeier, S., Krüger, K., Zindler, C., Atlas, E. L., Moore, F. and Bange, H. W. (2013) *Dimethylsulphide (DMS) emissions from the West Pacific Ocean: a potential*

- marine source for the stratospheric sulphur layer* Atmospheric Chemistry and Physics, 13 (16). pp. 8427-8437. DOI 10.5194/acp-13-8427-2013.
37. Zindler, C., Bracher, A., **Marandino, C.**, Taylor, B., Torrecilla, E., Kock, A. and Bange, H. W. (2013) *Sulphur compounds, methane, and phytoplankton: interactions along a north-south transit in the western Pacific Ocean* Biogeosciences, 10 (5). pp. 3297-3311. DOI 10.5194/bg-10-3297-2013.
 38. Goddijn-Murphy, L., Woolf, D. K. and **Marandino, C.** (2012) *Space-based retrievals of air-sea gas transfer velocities using altimeters: Calibration for dimethyl sulfide* Journal of Geophysical Research, 117 (C8). C08028. DOI 10.1029/2011JC007535.
 39. Weichselgartner, J. and **Marandino, C.** (2012) *Priority knowledge for marine environments: challenges at the science–society nexus* Current Opinion in Environmental Sustainability, 4 (3). pp. 323-330. DOI 10.1016/j.cosust.2012.05.001.
 40. Zindler, C., Peeken, I., **Marandino, C.** and Bange, H. W. (2012) *Environmental control on the variability of DMS and DMSP in the Mauritanian upwelling region* Biogeosciences, 9. pp. 1041-1051. DOI 10.5194/bg-9-1041-2012.
 41. Masotti, I., Belviso, S., Alvain, S., Johnson, J. E., Bates, T. S., Tortell, P. D., Kasamatsu, N., Mongin, M., **Marandino, C.**, Saltzman, E. S. and Moulin, C. (2010) *Spatial and temporal variability of the dimethylsulfide to chlorophyll ratio in the surface ocean: an assessment based on phytoplankton group dominance determined from space* Biogeosciences, 7 (10). pp. 3215-3237. DOI 10.5194/bg-7-3215-2010.
 42. Miller, S. D., **Marandino, C.** and Saltzman, E. S. (2010) *Ship-based measurement of air-sea CO₂ exchange by eddy covariance* Journal of Geophysical Research - Atmospheres, 115 (D2). D02304. DOI 10.1029/2009JD012193.
 43. **Marandino, C.**, de Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2009) *Open ocean DMS air/sea fluxes over the eastern South Pacific Ocean* Atmospheric Chemistry and Physics, 9. pp. 345-356.
 44. Miller, S. D., **Marandino, C.**, de Bruyn, W. J. and Saltzman, E. S. (2009) *Air-sea gas exchange of CO₂ and DMS in the North Atlantic by eddy covariance* Geophysical Research Letters, 36. L15816. DOI 10.1029/2009GL038907.
 45. Saltzman, E. S., de Bruyn, W. J., Lawler, M. J., **Marandino, C.** and McCormick, C. A. (2009) *A chemical ionization mass spectrometer for continuous underway shipboard analysis of dimethylsulfide in near-surface seawater* Ocean Science, 5. pp. 537-546. DOI 10.5194/os-5-537-2009.
 46. **Marandino, C.**, De Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2008) *DMS air/sea flux and gas transfer coefficients from the North Atlantic summertime coccolithophore bloom* Geophysical Research Letters, 35 (23). DOI 10.1029/2008GL036370.
 47. **Marandino, C.**, De Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2007) *Eddy correlation measurements of the air/sea flux of dimethylsulfide over the North Pacific Ocean* Journal of Geophysical Research, 112 (D3). DOI 10.1029/2006JD007293.
 48. **Marandino, C. A.**, de Bruyn, W. J., Miller, S. D., Prather, M. J., and Saltzman, E. S. (2005) *Oceanic uptake and the global atmospheric acetone budget* Geophysical Research Letters, 32 (15). DOI 10.1029/2005GL023285.

Non-peer reviewed journal articles

1. Gutiérrez-Loza, L., Cronin, M. F., **Marandino, C.**, Swart, S., Bourassa, M. A., du Plessis, M. D., Edholm, J. M., Fairall, C. W., Gille, S. T., Karstensen, J., Looney, L. B., Patterson, R. G., Riihimaki, L., Smith, S. R., Somavilla, R. and Venkatesan, R. (2024) *The Need for*

a *Community of Practice for Air-Sea Flux Observations*. Marine Technology Society Journal, 58 (1). pp. 20-25. DOI 10.4031/MTSJ.58.1.3.

Book chapters

1. Bange, H. W., Arevalo-Martinez, D. L., Bikkina, S., **Marandino, C. A.**, Sarin, M., Tegtmeier, S., and Valsala, V. (2024) *Air-sea exchange and its impact on biogeochemistry in the Indian Ocean* In: *The Indian Ocean and its Role in the Global Climate System*. Elsevier, Amsterdam, Netherlands, pp. 329-350. Paperback ISBN: 9780128226988 eBook ISBN 9780128232866 <https://doi.org/10.1016/B978-0-12-822698-8.00010-X>.
2. Liss, P. S.* , **Marandino, C.***, Dahl, E. E., Helmig, D., Hints, E. J., Hughes, C., Johnson, M. T., Moore, R. M., Plane, J. M. C., Quack, B., Singh, H. B., Stefels, J., Glasow, R. and Williams, J. (2014) *Short-Lived Trace Gases in the Surface Ocean and the Atmosphere* In: *Ocean-Atmosphere Interactions of Gases and Particles*. Springer, Berlin, Germany, pp. 1-54. ISBN 978-3-642-25643-1 DOI 10.1007/978-3-642-25643-1_1.

*denotes lead authors

PRESENTATIONS

Below is a list of talks and posters that I personally presented. Student talks and poster presentations from my research group are not included, but were numerous (for an assortment of student talks and posters please see <http://oceanrep.geomar.de/> – search Marandino).

1. **Marandino, C.** and all PIs/Participants from MSM123 (2024) AB Holistic Approach to Ocean Observations for Process Understanding: Bubble-mediated Exchange in the Labrador Sea (poster), Ocean Sciences Meeting, New Orleans, USA.
2. **Marandino, C.** (2023) Bubble (mediated) Exchange in the Labrador Sea (BELS) – MSM123 (invited talk), R/V Maria S. Merian Reception, Halifax, Canada.
3. Booge, D., Paul, A. J., Tavares, J. F., Yang, S. C., Salo, K., Mackey, K. R. M., John S., G., **Marandino, C.** (2023) Influence of scrubber effluent on biogenic trace gas production (talk), TAP & SE Conference, Gothenburg, Sweden.
4. **Marandino, C.** (2023) Is bubble-mediated gas transfer important for climate-relevant trace gases? (invited talk), IUP U Bremen, Bremen, Germany.
5. **Marandino, C.** (2022) Is bubble-mediated gas transfer important for climate-relevant trace gases? (talk), UConn DMS Seminar, USA.
6. **Marandino, C.**, Cronin, M., Swart, S. (2022) Observing Air-Sea Interactions Strategy (poster), *Meeresumweltsymposium* (MUS), Hamburg, Germany.
7. **Marandino, C. A.** (2022) Concurrent, open ocean eddy covariance flux measurements of DMS and CO₂: What have they taught us about gas transfer and what should we do next? (*invited keynote talk*), Gas Transfer at Water Surfaces conference, Plymouth, United Kingdom (hybrid).
8. **Marandino, C. A.** (2021) Global shipping: Linking policy and economics to biogeochemical cycling and air-sea interaction (ShipTRASE) (*invited talk*), online – hosted in Guangzhou, China.
9. **Marandino, C. A.** (2021) Eddy covariance measurements of DMS and CO₂ (*invited keynote talk*), 'Bite-size' Gas Transfer at Water Surfaces Symposium, online – hosted in Plymouth, United Kingdom.

10. **Marandino, C. A.** (2021) The ocean cool skin and eddy covariance measurements (*invited short talk*), Global Carbon Budget Ocean Workshop, online – hosted in Bremerhaven, Germany.
11. **Marandino, C. A.** (2020) Atmospheric composition over the Indian Ocean (*invited keynote talk*) for the SOLAS Indian Ocean Meeting, online – hosted in Pune, India.
12. **Marandino, C. A.** (2020) Do ship emissions influence biogenic trace gas cycling and air-sea exchange? (*invited talk*), 3rd Future Ocean Network Event, online – hosted in Kiel, Germany.
13. **Marandino, C. A.** (2020) A database for carbonyl sulfide (COS) and carbon disulfide (CS₂) measurements in seawater and the marine boundary layer (*talk requested by session conveners*), Ocean Sciences Meeting, San Diego, United States.
14. **Marandino, C. A.** (2019) Baltic GasEx (*invited talk*), BONUS INTEGRAL Meeting, Uppsala, Sweden.
15. Ho, D. T., **Marandino, C. A.**, Friedrichs, G., Engel, A., Booge, D., Bange, H., Barthelmess, T., Fischer, T., Koffman, T., Lange, F., Quack, B., Paulsen, M., Schlosser, P., and Zhou, L. (2019) Baltic Sea Gas Exchange Experiment (Baltic GasEx) (*poster*), SOLAS Open Science Conference, Sapporo, Japan.
16. **Marandino, C. A.** (2019) How simultaneous eddy covariance measurements of DMS and CO₂ can shed light on air-sea flux limitation and the bubble effect (*invited talk*), IUP Colloquium, University of Heidelberg, Heidelberg, Germany.
17. **Marandino, C. A.** (2018) Marine derived, atmospherically important trace gases: A pre- and post-CLAW view (*invited talk*), Ecology seminar series, University of Cologne, Cologne, Germany.
18. Hepach, H., Quack B., Altas, E., Fiehn, A., **Marandino, C.**, Fuhlbrügge, S., Tegtmeier, S., Bracher, A., and Krüger, K. (2017) SO243 – Beeinflusst ENSO die Emission von marinen Spurengasen im tropischen Ostpazifik? (*poster*), Statusseminar Meeresforschung mit FS SONNE, Oldenburg, Germany.
19. Lennartz, S., von Hobe, M., Quack, B., Steinhoff, T., Arévalo-Martínez, D., Bracher, A., Röttgers, R., and **Marandino, C. A.** (2017) SO243 – Emissionen klimawirksamer Schwefelverbindungen im Peruanischen Auftriebsgebiet: Karbonsulfid and Karbon Disulfid (*poster*), Statusseminar Meeresforschung mit FS SONNE, Oldenburg, Germany.
20. **Marandino, C. A.** (2017) Marine derived atmospherically important trace gases, a pre- and post-CLAW view (*invited talk*), Bermuda Institute of Ocean Sciences, Bermuda.
21. **Marandino, C. A.** (2017) Techniques exploiting direct gas exchange (*invited talk*), Future research symposium, GEOMAR, Kiel, Germany.
22. **Marandino, C. A.**, Engel, A. (2017) Surface Ocean Lower Atmosphere International Campaign (SLIC): A new time-series concept for Cabo Verde (*invited talk*), Cabo Verde – International Marine and Atmospheric Workshop, Mindelo, Cape Verde.
23. **Marandino, C.**, Steinhoff, T., and the scientific team of SO243 (2017) SO243 – ASTRA-OMZ: Air-sea interaction of trace elements in the oxygen minimum zone (*talk given by C. Marandino and T. Steinhoff*), Statusseminar Meeresforschung mit FS SONNE 2017, Oldenburg, Germany.
24. Steinhoff, T., Arévalo-Martínez, D., Bange, H., Körtzinger, A., Zavarsky, A., **Marandino, C.** (2017) SO243 – Gasaustauschflüsse von CO₂ und N₂O während der Sonne Expeditionen 243 (*poster*), Statusseminar Meeresforschung mit FS SONNE, Oldenburg, Germany.
25. Steinhoff, T., Patara, L., Zavarsky, A., Körtzinger, A., and **Marandino, C. A.** (2017) Eddy covariance direct CO₂ flux measurements and carbon cycling in the western Indian Ocean (*poster*), International Carbon Dioxide Conference 10, Interlaken, Switzerland.

26. Zavarisky, A., Steinhoff, T., Goddjin-Murphy, L., **Marandino, C.** (2017) What can we learn from eddy covariance direct flux measurements of multiple trace gases, momentum, and heat simultaneously? (*poster*), Frontiers in ocean-atmosphere exchange: Air-sea interface and fluxes of mass and energy, SOLAS Workshop, Cargese, France.
27. Lennartz, S.T., von Hobe, M., Pozzer, A., Brühl, C., Quack, B., Krüger, K., and **Marandino, C.A.** (2016) The role of oceanic emissions in the atmospheric budget of carbonyl sulfide (*poster*), Air-Sea Gas Flux: Progress and Future Prospects Workshop, Brest, France.
28. **Marandino, C. A.** (2016) How the ocean impacts the atmosphere: Biogeochemical cycling in the ocean and air-sea gas exchange (*invited talk*), Biogenic Hydrocarbons & the Atmosphere Gordon Research Conference, Girona, Spain.
29. Paulsen, M., Steinhoff, T., Zavarisky, A., and **Marandino, C. A.** (2016) Towards continuous direct flux measurements of CO₂ in the North Atlantic Ocean (*poster*), 2nd ICOS Science Conference, Helsinki, Finland.
30. Endres, S., Hepach, H., **Marandino, C.**, Quack, B., and Engel, A. (2015) Mikrobielle Kontrolle organischer Bromverbindungen im oberen Ozean (*poster*), Statusseminar Meeresforschung mit FS SONNE, Bremen, Germany.
31. Krüger, K., Quack, B., **Marandino, C. A.** and SO235 and SO234/2 Team (2015) OASIS: Organische sehr kurzlebige Substanzen und ihr Luft-Wasser-Austausch vom Indischen Ozean bis in die Stratosphäre und SO234/2 Ausbildung (*talk given by K. Krüger and C. Marandino*), Statusseminar Meeresforschung mit FS SONNE 2015, Bremen, Germany.
32. Lennartz, S. T., **Marandino, C.**, Quack, B., von Hobe, M., and Krüger, K. (2015) Carbonylsulfid (OCS) im äquatorialen Indischen Ozean. (*poster*), Statusseminar Meeresforschung mit FS SONNE 2015, Bremen, Germany.
33. **Marandino, C. A.** (2015) Can we use CRDS for direct measurements of open ocean air-sea exchange using the eddy covariance technique? (*talk*), Marine applications and perspectives of cavity enhanced optical detection schemes workshop, Kiel, Germany.
34. Steinhoff, T., Arevalo-Martinez, D. L., Bange, H. W., Bell, T., Booge, D., Eirund, G., Körtzinger, A., and **Marandino, C.** (2015) Oberflächenodynamik von CO₂, N₂O, DMS und Isopren im Indischen Ozean (*poster*), Statusseminar Meeresforschung mit FS SONNE, Bremen, Germany.
35. Zavarisky, A., Steinhoff, T., and **Marandino, C.** (2015) Interpretation von direkten CO₂ und DMS Flussmengen mit Fernerkundungsdaten (*poster*), Statusseminar Meeresforschung mit FS SONNE, Bremen, Germany.
36. **Marandino, C. A.** (2014) Marine derived, atmospherically important trace gases: A post CLAW view (*invited talk*), Oceanography Department, Dalhousie University, Halifax, Canada.
37. **Marandino, C. A.** (2014) How the ocean impacts the atmosphere-Biogeochemical cycling in the ocean and air-sea gas exchange (*invited talk*), Oceanography Department, Dalhousie University, Halifax, Canada.
38. Steinhoff, T., Zavarisky, A. and **Marandino, C. A.** (2013) Interpretation of eddy covariance measurements of CO₂ and DMS fluxes and gas transfer coefficients using outputs from the OceanFlux Greenhouse Gases project (*poster*), Air-sea Gas Flux Climatology: Progress and Future Prospects, Brest, France.
39. **Marandino, C. A.** (2012) Trace gas surface ocean cycling and air-sea exchange (*invited talk*), Plymouth Marine Laboratory, Plymouth, UK.
40. **Marandino, C. A.** (2011) The role of the ocean in the atmospheric budget of OVOCs (*invited talk*), Seminar for Department of Atmospheric Sciences, Peking University, Beijing, China.

41. **Marandino, C. A.** (2011) Using the eddy correlation technique to measure open ocean DMS air-sea fluxes (*invited talk*), Yantai, China.
42. **Marandino, C. A.** (2011) Using the eddy correlation technique to measure open ocean DMS air-sea fluxes (*invited talk*), 8th Japanese-German Frontiers of Science Symposium (sponsored by Humboldt Foundation), Tokyo, Japan.
43. **Marandino, C. A.** (2010) Direct air-sea gas transfer measurements of DMS: Implications for gas exchange and atmospheric sulfate (*invited talk*), 5th International Symposium on Biological and Environmental Chemistry of DMS(P) and Related Compounds, Goa, India.
44. **Marandino, C. A.** (2010) How the Ocean Effects the Air We Breathe (*talk*), Humboldt Network Meeting, Ulm, Germany.
45. **Marandino, C. A.** (2010) Measuring open ocean DMS fluxes: A comparison and synthesis of air-sea gas transfer velocity experiments (*invited talk*), SOPRAN 3rd Annual Meeting, Hamburg, Germany.
46. **Marandino, C. A.** (2010) The role of the ocean in the atmospheric budget of OVOCs (*talk*), Plymouth Marine Laboratory, Plymouth, UK.
47. **Marandino, C. A.**, Zindler, C., Bange, H. W., Saltzman, E. S. and Wallace, D. W. R. (2010) Concurrent DMS and isoprene surface seawater variability in the eastern Atlantic Ocean (*talk*), Goldschmidt, Knoxville, TN, USA.
48. **Marandino, C. A.** (2009) Measuring open ocean DMS fluxes: A comparison and synthesis of air-sea gas transfer velocity experiments (*invited talk*), SOLAS Open Science Conference, Barcelona, Spain.
49. **Marandino, C. A.** (2009) DMS gas transfer coefficients derived from open ocean eddy covariance flux measurements (*invited talk*), Max-Planck-Institut für Chemie, Mainz, Germany.
50. **Marandino, C. A.** (2009) DMS gas transfer coefficients derived from open ocean eddy covariance flux measurements (*invited talk*), Institut für Umweltphysik, Heidelberg, Germany.
51. **Marandino, C. A.**, Zindler, C., Bange, H. W., Saltzman, E. S. and Wallace, D. W. R. (2009) Variability in surface ocean DMS and isoprene in the eastern Atlantic Ocean (*poster*), SOLAS Open Science Conference, Barcelona, Spain.
52. **Marandino, C.A.**, de Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2008) Eddy correlation air/sea flux measurements of DMS using API-CIMS (*invited talk*), IFM-GEOMAR, Kiel, Germany.
53. **Marandino, C.A.**, de Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2008) Open ocean DMS gas transfer coefficients from the N. and S. Pacific Ocean (*COST Action invited talk*), European Geosciences Union General Assembly, Vienna, Austria.
54. **Marandino, C.A.**, Miller, S. D., de Bruyn, W. J. and Saltzman, E. S. (2008) Air/sea gas transfer coefficients: A multi-study synthesis (*poster*), American Geophysical Union, San Francisco, CA, USA.
55. **Marandino, C.A.**, Miller, S. D., de Bruyn, W. J. and Saltzman, E. S. (2008) Open ocean measurements of trace gas air/sea concentrations and eddy correlation fluxes in the N. Atlantic Ocean (*poster*), European Geosciences Union General Assembly, Vienna, Austria.
56. **Marandino, C.A.**, Miller, S. D., de Bruyn, W. J. and Saltzman, E. S. (2008) Open ocean DMS air/sea eddy covariance fluxes and concentrations over the N. Atlantic (*talk*), AMEMR workshop, Plymouth, UK.
57. **Marandino, C.A.**, de Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2007) North Atlantic measurements of DMS air/sea gradient and eddy covariance flux using API-CIMS (*poster*), American Geophysical Union Fall Meeting, San Francisco, CA, USA.

58. **Marandino, C.A.**, de Bruyn, W. J., Miller, S. D. and Saltzman, E. S. (2006) Southern Pacific Ocean measurements of dimethylsulfide air/sea flux using the eddy correlation technique (*poster*), American Geophysical Union Fall Meeting, San Francisco, CA, USA.
59. **Marandino, C.A.**, de Bruyn, W. J., Miller, S. D., Prather, M. J. and Saltzman, E. S. (2005) Oceanic uptake and the global atmospheric acetone budget (*talk*), American Geophysical Union Fall Meeting, San Francisco, CA, USA.
60. **Marandino, C.A.**, de Bruyn, W. J. and Saltzman, E. S. (2003) Eddy correlation study of DMS flux at the Scripps Institute of Oceanography (*poster*), American Geophysical Union Fall Meeting, San Francisco, CA, USA.
61. **Marandino, C.A.**, de Bruyn, W. J. and Saltzman, E. S. (2003) Eddy correlation measurements of the air/sea flux of DMS using atmospheric pressure chemical ionization mass spectrometry (*talk*), SOLAS Summer School, Cargese, Corsica, France.
62. **Marandino, C.A.**, de Bruyn, W. J. and Saltzman, E. S. (2003) Eddy correlation measurements of the air/sea flux of DMS using atmospheric pressure chemical ionization mass spectrometry (*poster*), SOLAS Summer School, Cargese, Corsica, France.

FUNDED PROPOSALS

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>
Anthropogenic Influence to Biogenic Effects in the Bay of Bengal (AltoBE)	DFG	€192,820	2024-2027	Co-coordinator, task leader
Innovative Community Engagement for Building Effective Resilience and Arctic Ocean Pollution Control Governance in the context of Climate Change (ICEBERG)	EU	~€200k	2024-2026	WP co-lead, Institution lead, task leader
Bubble (mediated) Gas Exchange in the Labrador Sea (BELS)	GPF/DFG	43k€	2023	Leader, Chief scientist
Biogeochemical processes and Air-sea exchange in the Sea-Surface microlayer (BASS)	Research Unit DFG	Final sum pending (~€440k)	2022-2026	Subproject leader (EC expert)
A novel approach to quantify global oceanic emissions of carbonyl sulfide (COS)	Volkswagen Foundation	€300,000	2020-2023	Bulk trace gas analysis
Global shipping: Linking policy and economics to biogeochemical cycling and air-sea interaction (ShipTRASE)	Belmont Forum/ BMBF	€315,000 (German portion only)	2020-2023	German coordinator, task leader
The emissions of dimethylsulphide and isoprene and their influence on aerosols and climate in the Southern Ocean (SO-TRASE)	BMBF-SOA	€270,552	2017-2020	Coordinator, task leader
Eddy covariance: Understanding the environmental regulators of air-sea gas exchange and the importance of the Sargasso Sea for atmospheric CO ₂ variability	Cawthorne Innovation Grant - BIOS	€100,000	2016-2017	Task leader (EC expert)
Lagrangian study of marine trace gas air-sea exchange over the ocean (LASSO)	DFG Future Ocean	- €15,000	2016-2017	Co-coordinator, task leader
Giving the climate community what they need: Continuous, autonomous direct measurements of CO ₂ air-sea flux	DFG Future Ocean	- €74,951	2015-2017	Coordinator
Transatlantic sea-to-air N ₂ O fluxes: What we can learn from isotope and eddy covariance techniques	DFG Future Ocean	- €30,000	2015-2017	Co-coordinator, task leader
The influence of oceanic dissolved oxygen concentrations on N ₂ O cycling and implications for the atmosphere	DFG	€186,000	2015-2018	Co-coordinator, task leader
Air-sea interaction of trace	BMBF	€238,914	2015-	Coordinator, chief

elements in oxygen minimum zones (ASTRA-OMZ)			2017	Scientist
a) SONNE education cruise b) Organic very short-lived substances and their air sea exchange from the Indian Ocean to the stratosphere (SPACES and OASIS)	BMBF	€45,321	2014-2016	Co-coordinator, task leader
The role of oceanic halogen and sulphur compounds for the middle atmosphere in a changing climate (THREAT)	BMBF-ROMIC	€134,331	2013-2016	Co-coordinator, task leader
Trace gas air-sea exchange using eddy correlation	Helmholtz Young Investigator Group (YIG) - Helmholtz Association	€1,500,000	2012-2017	Coordinator, group leader
The influence of surface ocean processes on DMS and OVOCs in the atmosphere	BMBF-SOPRAN	€161,481	2010-2013	Coordinator
Surface ocean sources and sinks of oxygenated volatile organic compounds	Humboldt Postdoc Fellowship - Humboldt Foundation	€150,000	2009-2011	Postdoctoral research

TEACHING HOURS (since 2012)

SS 2012	
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS*
WS 2012/2013	
Atmospheric Chemistry	2.5 SWS
Chemical Oceanography Exercises	1 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
SS 2013	
Air-Sea Gas Exchange	2.5 SWS
Climate Physics Seminar on the Indian Ocean	2 SWS
WS 2013/2014	
Atmospheric Chemistry	2.5 SWS
Chemical Oceanography Exercises	1 SWS
SS 2014	
Chemical Oceanography Intensive Practical (at sea, 2 students)	6 SWS
WS 2014/2015	
Atmospheric Chemistry	2.5 SWS
Chemical Oceanography Exercises	1 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
SS 2015	
Trace gas air-sea exchange	2.5 SWS
Chemical Oceanography Intensive Practical (1 student)	6 SWS
WS 2015/2016	
Atmospheric Chemistry	2.5 SWS
Chemical Oceanography Exercises	1 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
SS 2016	
Chemical Oceanography Intensive Practical (3 students)	6 SWS
WS 2016/2017	
Atmospheric Chemistry	2.5 SWS
SS 2017	
Chemical Oceanography Laboratory Practical (2 students)	2.5 SWS
WS 2017/2018	
Atmospheric Chemistry	2.5 SWS
SS 2020	
Air-sea exchange (and the SML)	3 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
WS 2020/2021	
Atmospheric Chemistry	2.5 SWS
Chemical Oceanography Intensive Practical (1 student)	6 SWS
SS 2021	

Air-sea exchange (and the SML)	3 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
SS 2022	
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
WS 2022/2023	
Atmospheric Chemistry	2.5 SWS
SS 2023	
Air-sea exchange (and the SML)	3 SWS
Chemical Oceanography Laboratory Practical (1 student)	2.5 SWS
WS 2023/2024 & SS 2024	
<u>No teaching (above average field work)</u>	<u>- SWS</u>
Total (Required-88 SWS due to maternity leave)	86.5 SWS

*SWS denotes *Semesterwochenstunden* (hours teaching per week, 4 required per semester)

STUDENTS/POSTDOCS SUPERVISED

Postdocs

Dong, Y. (2024-ongoing) Humboldt Fellowship - Quantifying the importance of bubbles in air-sea gas exchange

Booge, D. (2018-ongoing) measurements of sulfur gases and isoprene and their impact on climate in the Southern Ocean

Lennartz, S. (2017-2018) measurements of sulfur gases and their impact on climate in the Southern Ocean

Ji, Q. (2016-2018) nitrous oxide cycling in oxygen minimum zones

Zindler/Schlundt, C. (2013-2015) cycling and air-sea exchange of marine derived atmospherically important trace gases

Shi, Q. (2013) methyl iodide cycling in Kiel Fjord

PhD Candidates (complete list including committees and second evaluator)

Barthlemeß, T. (2024) *Influence of small-scale dissolved and particulate carbohydrate and amino acid dynamics in the surface ocean on air-sea exchange processes* (committee member)

Karnatz J. (2024 – ongoing) BASS - mechanistic relationships between photoautotrophic production and the organic matrix properties of the SML (committee member)

Manville, G. (2023) *Quantifying and understanding dimethylsulfide variability and its influence on the climate system* (external examiner, University of Exeter, UK)

Lange, L. (2022-ongoing) Air-sea exchange process studies using the eddy covariance technique (**PhD advisor**)

Zhao, Y. (2022) *From coastal waters to the open ocean: Dimethylated sulfur compounds in the SW Baltic Sea, the SE Pacific Ocean, and the SW Indian Ocean* (committee member)

Krisch, Stephan (2021) *Iron biogeochemistry in Fram Strait and on the Northeast Greenland Shelf* (committee member)

Campen, H. (2019-2024) CO and DMS in the Arctic (committee member)

Ma, X. (2020) *From coastal waters to the open ocean: the variability and emissions of methane and nitrous oxide* (committee member)

Rodriguez-Ros, P. (2020) *Modelling of isoprene distribution and cycling in the oceans* (external committee member for Universitat Politècnica de Catalunya/Institut de Ciències del Mar, Spain)

McDonald, N. (2020) *Linking Source, Fate/Transport and Chemical Composition of CDOM in the North Atlantic Subtropical Gyre* (committee member)

Li, P. (2020) *Changing ventilation of the Mediterranean Sea studies with a suite of novel halogenated transient tracers* (committee member)

M. Liu (2019) *Water Masses in the Atlantic Ocean based on GLODAPv2 dataset: Overview of Characteristics, Distributions, and Estimation of Mean Transport Time* (committee member)

Kooijman, L. (2018) *Carbonyl Sulfide, A Way to Quantify Photosynthesis* (external committee member for University of Groningen, The Netherlands)

Zäncker, B. (2018) *Characterization of Biogenic Material and Microorganisms of the Surface Microlayer in the Ocean* (committee member)

Zhou, L. (2017-ongoing) development of atmospheric pressure chemical ionization mass spectrometric methods for continuous seawater measurements of climate-active compounds (**PhD advisor**)

Hahn, T. (2017-ongoing) *Evaluation and application of a novel optical sensor for the determination of oxygen and carbon dioxide on autonomous observation platforms* (committee member)

Seelman, K. (2017-2020) *Evaluation and use of a new autonomous analyser for total alkalinity of seawater in the field* (committee member)

Canning, A. (2016-2020) *Optimization and adaptation of sensors for CO₂, CH₄, and O₂ across a full river-ocean mixing regime* (committee member)

Loginova, A. (2016) *Dissolved organic matter cycling in and above oxygen minimum zones* (committee member)

Becker, M. (2016) *Autonomous ¹³C measurements in the North Atlantic - a novel approach for identifying patterns and driving factors of the upper ocean carbon cycle* (committee member)

Arevalo-Martinez, D. (2015) *Nitrous oxide distribution and emissions from the tropical Atlantic and Pacific Oceans* (committee member)

Fuhlbrügge, S. (2015) *Meteorological constraints on marine atmospheric halocarbons and their transport to the free troposphere* (committee member)

Sun, M. (2015- ongoing) *Methane in the ocean: Revealing its formation pathways in the oxic ocean* (committee member)

Bittig, H. (2014) *Towards a Quantum Leap in Oceanic Oxygen Observation - From Oxygen Optode Characterization to Autonomous Observation of Gas Exchange and Net Community Production* (committee member)

Ziska, F. (2014) *Global halocarbons emissions for the recent past and future* (committee member)

Fiehn, A. (2013-2017) *Air-sea gas exchange of organic very short lived substances from the Indian Ocean and their transport to the stratosphere* (committee member, supervisory role)

Lennartz, S. (2013-2017, completed with *summa cum laude*) *From local to global scale – Marine emission of the climate relevant sulfur gases carbonyl sulfide, carbon disulfide, and dimethyl sulfide* (**PhD advisor**)

Booge, D. (2013-2018) – *Oceanic isoprene: Formation, emissions, and their impact on atmospheric chemistry* (**PhD advisor**)

Zavarsky, A. (2012-2018) *Eddy covariance direct flux measurements of carbon dioxide and dimethylsulphide over the Indian Ocean (PhD advisor)*

Hepach, H. (2012-2013) *Halogenated trace gas ocean sources and air-sea exchange (committee member)*

Shi, Q. (2012-2013) *Production of methyl iodide in the surface ocean (committee member)*

Wuttig, K. (2010-2013) *Manganese biogeochemistry in the sunlit ocean (committee member)*

Zindler, C. (2010-2013) *Short-lived trace gases (DMS, isoprene, acetaldehyde and acetone) in the surface waters of the western Pacific and eastern Atlantic Oceans (PhD co-supervisor)*

Master's Students

Barthelmeß, E. T. (2019) *Organic matter composition and surface activity of the sea surface microlayer in the upwelling region off Mauritania (second advisor)*

Loghmani, A. (2018) *Determination of the plastic additives Bisphenol A and Phthalate esters in Kiel Förde (second advisor)*

Paulsen, M. (2017 – 2018) *Autonomous eddy covariance measurements onboard a VOS line and a research vessel (advisor)*

Wieck, H. (2016-2017) *Method development and incubation experiments of carbon disulphide and methanethiol (advisor)*

Drews, M. (2015) *GC-MS technique development for sulfur compounds in the surface ocean, incubation experiments to determine sources and sinks of trace gases in surface ocean (advisor)*

Bachelor's Students

Scheidereit, L. (2025) *CO₂ eddy covariance measurements in the North and Baltic Seas*

Loesel, C. (2021) *The impact of varying surface conditions on air/sea heat and momentum fluxes during the MSM89 cruise*

Marks, S. (2017) *Die saisonale Verteilung von Schwefelverbindungen (DMS, DMSP/DMSO) an der Zeitserien-Station Boknis Eck*

Gerke, L. (2017) *Transient Tracers and Eddies along GO-SHIP section A10.5*

Paulitschke, A. (2016) *Temporäre Variabilität der Ventilation im östlichen Mittelmeer – Ergebnisse von Spurengas-Messungen*

Hannig, L. (2016) *Schwefelhaltige Verbindungen (DMS, DMSP, DMSO) in tropischen Südostpazifik*

Heyda, J. P. M. (2016) *Messung von DMS, DMSP und DMSO an der Zeitserienstation Boknis Eck*

Radde, J. (2015/2016) *Die Konzentration und Bedeutung von DMS, DMSO und DMSP im Auftriebsgebiet vor Peru*

Dohms, M. (2015) *Verteilung von DMSP/O im West Indischen Ozean – Ergebnisse der OASIS-Fahrt Juli/August 2014*

External Students/Scientists Hosted

Moloto, T. M. (2022) five-week exchange from the Republic of South Africa to measure DMS samples (PhD candidate)

Astruc-Delur, C. (2019) five-week internship from France in trace gas lab (master's student)

Scherelis, C. (2017) one-month practical to learn trace gas measurement techniques (master's student)

Pimentel, J. (2016) two-month American university stipend to perform incubation experiments in the Kiel Fjord investigating the influence of crude oil spills on DMS production (bachelor's student)

Burger, M. (2016) summer semester practical to learn trace gas measurement techniques (finished secondary school)

Scherelis, V. (2015) summer semester practical to learn trace gas measurement techniques (bachelor's student)

Miming, Z. (2014-2015/2019-2020) four-month Chinese stipend to learn analytical methods for DMS(P/O) measurements (PhD student); returning as permanent scientist for an 11 month visiting scholar stipend from Chinese Scholarship Council in 2019

Lewis, C. (2014-2015) ten-month American Fulbright stipend to perform isoprene production and consumption incubation experiments in the Kiel Fjord and at Boknis Eck (finished bachelor's)

Hoffmann, I. (2013) one-month practical to learn gas chromatography-mass spectrometry (technical university student studying to be a laboratory technician)

Lanbin, L. (2012) summer semester practical to learn trace gas measurement techniques (bachelor's student)

COLLABORATION PARTNERS

CAU Kiel University

Gernot Friedrichs (Physical chemistry); Nele Matz-Lück (International law); Erik van Doorn (International law)

GEOMAR

Damian Arevalo-Martinez (CH); Hermann Bange (CH); Marcus Dengler (PO); Anja Engel (BI); Tim Fischer (PO); Johannes Karstensen (PO); Arne Körtzinger (CH); Gerd Krahmman (PO); Lavinia Patara (TM); Allanah Paul (BI); Birgit Quack (CH); Markus Schartau (BM); Tobias Steinhoff (CH)

Germany

Astrid Bracher (AWI); Marc Buckley (Hereon); Anne Chahine (RIFS); Thorsten Dittmar (U Oldenburg); Nina Doering (RIFS); Bert Engelen (U Oldenburg) Patrick Fink (UFZ); Martin Gade (U Hamburg); Mirjam Glessmer (IPN); Bernd Jaehne (U Heidelberg); Boris Koch (AWI); Annegret Kuhn (CAU); Sinikka Lennartz (U Oldenburg); Octavio Marin (BSH); Nele Matz-Luck (CAU); Andrea Pozzer (MPI Mainz); Gregor Rehder (IOW); Mariana Ribas-Ribas (U Oldenburg, ICBM); Rüdiger Röttgers (HZG); Björn-Martin Sinnhuber (KIT); Helmuth Thomas (Hereon); Bryce van Damm (Hereon); Marc von Hobe (Jülich); Oliver Wurl (U Oldenburg, ICBM)

International

Alon Amrani (Heb Univ Jer, Israel); Alon Angert (Heb Univ Jer, Israel); Elliot Atlas (RSMAS, USA); Nick Bates (BIOS, Bermuda); Rachael Beale (PML, UK); Tom Bell (PML, UK); Lucy Carpenter (U York, UK); Fabiana Corami (CNR, Italy); Meghan Cronin (NOAA, USA); Helen Czerski (UCL, UK); Gaud Dervilly (ONIRIS, France); Tzung-May Fu (Peking U, China); Lonneke Goddjin-Murphy (UHI, UK); Damian Grundle (BIOS, Bermuda); Thora Herrmann (U Oulu, Finland); Nathalie Hilmi (MSC, Monaco); David Ho (UH, USA); Frances Hopkins (PML, UK); Barbara Jozwiak (forScience, Poland), Martin Johnson (UEA, UK); Ilan Koren (Wiezmann, Israel); Kirstin Krüger (U Oslo, Norway); Bruno Le Bizec (ONIRIS, France); Yoav Lehahn (U Haifa, Israel); Elise Lepy (U Oulu, Finland); Mike Lomas (Bigelow, USA); Anoop Maharajan (IITM, India); Katherine Mackey (UCI, USA); Natasha McDonald (BIOS, Bermuda); Adam Nawrot (forScience, Poland); Paul Palmer (U Edinburgh, UK); Andrew Peters (BIOS, Bermuda); Tahnee Prior (Women of the Arctic, Canada); Laura Recuero-Virto (PS Paris/EIMS Brest, France); Riikka Rinnan (U Copenhagen, DK); Anna Rutgersson (UU, Sweden); Kent Salo (Chalmers, Sweden); Eric Saltzman (UCI, USA); Qiang Shi (Dal, Canada); Adam Stepien (U Lapland, Finland); Seb Swart (U Gothenburg, Sweden); Hiroshi Tanimoto (NIES, Japan); Joana Tavares (UCI, USA); Susann Tegtmeier (U Sask, Canada); Tommaso Tesi (CNR, Italy); Douglas Wallace (Dal, Canada); Mingxi Yang (PML, UK); Miming Zhang (TIO, China)

CONFERENCE ORGANIZATION

- 2024 **Organizer** of hybrid workshop SOLAS Science and Society/approx. 30 participants/India
- 2024 **Organizer** of hybrid OASIS Face-to-Face Community Workshop/approx. 55 participants/USA
- 2023 **Scientific committee** for the Shipping and the Environment Conference/approx. 150 participants/Sweden
- 2022 **Organizer** of hybrid workshop Cross-linking lab and field measurements and numerical modeling to identify and quantify the mechanisms of air-sea gas transfer/approx. 100 participants/Germany
- 2022 **Organizer** of UN Ocean Decade Productive Ocean Laboratory Satellite Event – OASIS for a Productive Ocean (offshore wind energy)/approx. 100 participants/online
- 2022 **Organizer and note taker** for UN Ocean Decade Accessible Ocean Laboratory Satellite Event – OASIS for an Accessible Ocean (FAIR data)/approx. 100 participants/online
- 2022 **Organizer** for OASIS Panel Discussion/Webinar - Best Practices panel discussion on Essential Ocean Variables (EOVs) needed for air-sea CO₂ fluxes/approx. 50 participants/online
- 2021 **Lead organizer** of UN Ocean Decade Clean Ocean Laboratory Satellite Event – OASIS for a Clean Ocean/approx. 75 participants/online
- 2021 **Lead organizer** of Open ocean eddy covariance best practices workshop series planning event – Ocean Best Practices System (OBPS) workshop/9 participants/online
- 2021 **Organizer and moderator** for UN Ocean Decade Predicted Ocean Laboratory Satellite Event – OASIS for a Predicted Ocean/approx. 200 participants/online
- 2020-2022 **Scientific steering committee member** for 8th International Symposium on Gas Transfer at Water Surfaces/approx. 150 participants/United Kingdom
- 2019 **Member** of organizing committee and **moderator** for panel discussion for *DKN* Transdisciplinary Workshop on Ship Emissions/approx. 30 participants/Germany
- 2017 **Member** of organizing committee for 3 follow up SOLAS Science and Society meetings/approx. 10 participants each/Monaco, Italy, Sweden
- 2016 **Organizer** of international SOLAS Science and Society Workshop/approx. 25 participants/Belgium
- 2016 **Scientific steering committee member** for second OceanFlux workshop/approx. 100 participants/France

- 2015 **Member** of the local organizing committee and **session convener** for the International SOLAS Open Science Conference/approx. 300 participants/Germany
- 2014 **Scientific reviewer** for the Earth Observation for Ocean-Atmosphere Conference/approx. 100 participants/Italy

Convener/sessions led

- 2023 **Convener** – Marine processes - fate of pollution from shipping in the marine environment: impact studies on ecotoxicology, eutrophication and acidification, energy pollution including underwater noise & induced mixing; experimental work, modelling studies of dispersion, transport, and chemical and biological processes in marine waters, Shipping and the Environment Conference, Gothenburg, Sweden.
- 2022 **Convener** – Get Involved! Observing Air-Sea Interactions Strategy (OASIS) Theme Teams, hybrid Town Hall Meeting, AGU Fall Meeting, Chicago, USA
- 2022 **Discussion session lead** – Strengthening Partnerships between OASIS and the Global South, SOLAS Open Science Conference, Cape Town, Republic of South Africa.
- 2022 **Discussion session co-lead** - SOLAS Science & Society: building upon past achievements & future possibilities, SOLAS Open Science Conference, Cape Town, Republic of South Africa.
- 2022 **Discussion session lead** – SOLAS science and global ship emissions – common challenges and next steps, SOLAS Open Science Conference, Cape Town, Republic of South Africa.
- 2022 **Discussion session co-lead** – How to cross-link lab and field measurements, Gas Transfer at Water Surfaces, Plymouth, UK.
- 2022 **Convener** – Get Involved! Observing Air-Sea Interactions Strategy (OASIS) Theme Teams, virtual Town Hall Meeting, Ocean Sciences Meeting
- 2021 **Forum convener** – The apparent mismatch between science and policy at the air-sea interface, Sustainability Research & Innovation Congress, Brisbane, Australia
- 2019 **Discussion session lead** - Can long term observatories be used to study the processes controlling air-sea exchange, SOLAS Open Science Conference, Sapporo, Japan.
- 2019 **Discussion session co-lead** - SOLAS Science & Society: achievements, present status & future possibilities, SOLAS Open Science Conference, Sapporo, Japan.
- 2015 **Discussion session lead** - SOLAS Science & Society, SOLAS Open Science Conference, Kiel, Germany

INSTITUTIONAL RESPONSIBILITIES (continued from Commissions of Trust above)

- 2016-2019 **Member** Internationalization Advisory Panel of 'The Future Ocean' Excellence Cluster in Kiel/Germany
- 2015-2017 **Alternate** for W1 Professors and Group Leaders-Scientific Advisory Committee, GEOMAR Helmholtz Centre for Ocean Research Kiel/Germany
- 2014-2017 **Elected alternate** to the Faculty of Mathematics and Natural Science Convent, Kiel University/Germany
- 2013-2020 **Co-speaker** for Work Package 1 Ocean-Atmosphere Coupling of Topic 2 Ocean Warming, Acidification, and Deoxygenation in the GEOMAR program-oriented funding OCEANS
- 2013 **Member** of the Future International SOLAS Junior Scientific Steering Committee
- 2013 **Member** of the reference user group of the OceanFlux GreenHouseGas (GHG) Project
- 2013 **Atmospheric science co-representative** of the Indian Ocean Initiative (Germany) project organizational board
- 2012-present **Full member** of 'The Future Ocean' Excellence Cluster in Kiel/Germany
- 2012-2018 **Board representative** for W1 Professors and Junior Group Leaders in the Cluster Board of 'The Future Ocean' Excellence Cluster in Kiel/Germany
- 2006-present **Peer reviewer** of international scientific journals (e.g. *Nature*, *PNAS*, *Copernicus* and *AGU* journals) and scientific proposals (e.g. NSF (USA), NSERC (Canada), NERC (UK), BELSPO (BE))