



CURRICULUM VITAE (short version)

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Current Professional Positions:

Associate Professor in Oceanography, Flinders University

Personal Data:

DOB: 12 April 1966, Berlin-Charlottenburg, Germany

Education:

PhD	University of Hamburg	Natural Sciences (Oceanography)	1996
Diploma	University of Hamburg	Natural Sciences (Oceanography)	1994

Academic Career:

1994-Dec 1999	University of Hamburg, Germany, Research Assistant (various projects)
Dec 1999-June 2005	Flinders University, Adelaide, Australia, Lecturer in Oceanography
July 2005-June 2009	Flinders University, Adelaide, Australia, Senior Lecturer in Oceanography
Since July 2009	Flinders University, Adelaide, Australia, Associate Professor

Professional Societies:

Australian Meteorological & Oceanographic Society (AMOS)
Australian Marine Science Association (AMSA)
American Geophysical Union (AGU)
Coastal & Estuarine Research Foundation (CERF)

Professional Activities:

President of Adelaide branch of AMOS (2005-2006)
President of Adelaide branch of AMOS (from 2019)
Local organiser of AMOS 2007 Adelaide conference

Awards:

September 2011	Finalist for the Australian Museum Eureka Prize (Environment)
November 2011	Finalist for the Jill Hudson Award, Conservation Council SA
August 2014	Winner the Jill Hudson Award for Environmental Protection awarded by the Conservation Council SA

Research interests:

Coastal & estuarine oceanography; upwelling; density-driven flows; mixing & diffusion; suspended sediment dynamics; marine connectivity; physical oceanography; hydrodynamic modelling

Research summary:

- Published 2 single-authored & 1 first-authored textbooks, comprising 21 chapters, another 4 chapters in other books, >42 peer-reviewed papers in international journals (17 as single author and 15 as first author of multi-authored papers) and numerous technical reports. See Kaempf's profiles on ResearchGate or GoogleScholar for more details.
- Presented over 50 oral presentations and research seminars at international and national conferences
- Supervised 17 honours, 3 M.Sc. and 6 Ph.D. students

Research highlights:

- Discovered the Great Southern Australian Coastal Upwelling System
- First detailed description of the water circulations of the Persian Gulf and South Australian gulfs with three-dimensional hydrodynamic models
- Explained the physics governing the majestic upwelling system of the Arafura Sea
- Contribution to the understanding of canyon-flow interactions
- Discovered the gelling ignition mechanism for mud suspensions
- Discovered that coastal downwelling leads to bursts of sediment suspension
- Provided the first theoretical explanation of upslope suspended sediment transport

Media and outreach:

Kaempf's research findings & opinion featured on more than 60 newspaper articles both nationally and internationally on subjects of seawater desalination, the missing MH370 Malaysian Airline, and other ocean- and climate-related issues. He attended ample radio interviews and had a number of television appearances.

Teaching & topic coordination:

EASC1102 Marine Sciences

EASC2701 Oceans and Estuaries

EASC2702 Global Climate Change

EASC3742 Earth Fluid Modelling

EASC8702 GE Global Climate Change

Administration:

In the past, Kaempf has been the honours and postgraduate coordinator for the School of the Environment and academic staff member of the University's Academic Senate (2017-2018). Kaempf was also the course coordinator of the BSc Major in Ocean and Climate Science, a fire warden, and ERA coordinator for the Earth Sciences and Environmental Science categories.

PUBLICATIONS (2015-2021)

BOOKS (AUTHORED)

1. Kämpf, J., and P. Chapman (2016) *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Springer International Publishing, 433 pages. (40 citations; 12,000 chapter downloads; Aug 2021)

BOOK CHAPTERS

1. Kämpf, J., and P. Chapman (2016) Preliminaries. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 1, p. 1–30, Springer International Publishing.
2. Kämpf, J., and P. Chapman (2016) The functioning of coastal upwelling systems. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 2, p. 31–66, Springer International Publishing.
3. Kämpf, J., and P. Chapman (2016) Large-scale setting, natural variability and human influences. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 3, p. 67–96, Springer International Publishing.
4. Kämpf, J., and P. Chapman (2016) The California Current upwelling system. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 4, p. 97–160, Springer International Publishing.
5. Kämpf, J., and P. Chapman (2016) The Peruvian-Chilean coastal upwelling system. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 5, p. 161–202, Springer International Publishing.
6. Kämpf, J., and P. Chapman (2016) The Canary/Iberia Current upwelling system. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 6, p. 203–250, Springer International Publishing.
7. Kämpf, J., and P. Chapman (2016) The Benguela Current upwelling system. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 7, p. 251–314, Springer International Publishing.
8. Kämpf, J., and P. Chapman (2016) Seasonal wind-driven coastal upwelling systems. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 8, p. 315–362, Springer International Publishing.
9. Kämpf, J., and P. Chapman (2016) Other upwelling systems. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 9, p. 363–394, Springer International Publishing.
10. Kämpf, J., and P. Chapman (2016) Comparison, enigmas and future research. In: *Upwelling Systems of the World: A Scientific Journey to the Most Productive Marine Ecosystems*. Chapter 10, p. 395–425, Springer International Publishing.

JOURNAL PUBLICATIONS

1. Kämpf, J. (2021) On the upslope sediment transport at continental margins, *Journal of Marine Systems*, Volume 219, 103546, <https://doi.org/10.1016/j.jmarsys.2021.103546>.
2. Kämpf, J. (2021) Modelling of physical drivers of a large feeding aggregation of killer whales (*Orcinus orca*) in the western Great Australian Bight, Australia, Deep Sea Research Part I: Oceanographic Research Papers, Volume 171, 103526, <https://doi.org/10.1016/j.dsr.2021.103526>.
3. Kämpf J (2019) Extreme bed shear stress during coastal upwelling. *Ocean Dynamics*, Volume 69, Issue 5, pp 581–597.

4. Kämpf, J., and A. Kavi (2019) SST Variability in the Eastern Intertropical Indian Ocean: On the Search for Trigger Mechanisms of IOD Events. *Deep Sea Research II*, 166, 64-74, doi: 10.1016/j.dsr2.2018.11.010.
5. Kämpf, J., and P.M. Myrow (2018) Wave-created mud suspensions: A theoretical study. *J Mar Sci Eng* 6(2):29. <https://doi.org/10.3390/jmse6020029>
6. Kämpf, J., (2018) On the dynamics of canyon–flow interactions. *J Mar Sci Eng*, 6(4), 129; <https://doi.org/10.3390/jmse6040129>
7. Kämpf, J. (2017) Wind-driven overturning, mixing and upwelling in shallow water: a nonhydrostatic modeling study. *J Mar Sci Eng* 5:47, <https://doi.org/10.3390/jmse5040047>
8. Kämpf, J., and A. Kavi (2017) On the “hidden” phytoplankton blooms on Australia’s southern shelves, *Geophysical Research Letters*, DOI: 10.1002/2016GL072096.
9. Kämpf, J., and D. Cox (2016) Towards improved numerical schemes of turbulent lateral dispersion. *Ocean Modelling*, 106, 1–11, doi: 10.1016/j.ocemod.2016.08.003.
10. Kämpf, J. (2016) On the majestic seasonal upwelling system of the Arafura Sea. *Journal of Geophysical Research*, 121(2), 1218–1228, doi: 10.1002/2015JC011197.
11. Kämpf, J. (2015) Undercurrent-driven upwelling in the northwestern Arafura Sea, *Geophysical Research Letters*, 42, 9362–9368, doi:10.1002/2015GL066163.
12. Kämpf, J. (2015) Interference of wind-driven and pressure gradient-driven flows in shallow homogeneous water bodies. *Ocean Dynamics*, 65(11) pp. 1399–1410. [10.1007/s10236-015-0882-2]
13. Kämpf, J. (2015) Phytoplankton blooms on the western shelf of Tasmania: evidence of a highly productive ecosystem, *Ocean Science*, 11, 1–11, doi:10.5194/os-11-1-2015, 2015.
14. Kämpf, J. and H. Ellis (2015) Hydrodynamics and Flushing of Coffin Bay, South Australia: A Small Tidal Inverse Estuary of Interconnected Bays. *Journal of Coastal Research*. Volume 31, Issue 2: pp. 447–456. doi: 10.2112/JCOASTRES-D-14-00046.1

RESEARCH FUNDING HISTORY (PAST 10 YEARS)

- 2021: Project: “Towards a better understanding of upwelling and primary production around exposed and submerged atolls”, Marine & Coastal Research Consortium (A\$7,500)
- 2020: Project: “Climate-change impacts on upwelling in the eastern Great Australian Bight”, Flinders University Climate Seed Grant (A\$25,000)
- 2015-2018: Project: “The Large Marine Ecosystem of the *Arafura Sea: What are the physical drivers*”. Funding body: Australia Pacific Science Foundation (~A\$31,000)
- 2013: Project: “*Impact of the ice-age draining of the continental shelf on genetic diversity in inshore marine fauna in Southern Australia*” in collaboration with Dr Mike Gardner, Dr Luciana Möller and Professor Steve Donnellan (SA Museum)
- 2011: Involvement in capital project C0456 (Adelaide Coastal Waters Studies Outcomes) of the South Australian Water Corporation (~A\$40,000)