



Oregon State University
**College of Earth, Ocean,
and Atmospheric Sciences**

104 CEOAS Admin Bldg
Corvallis, OR 97331-5503
541 737-1607, 541 737-2064 (fax)

November 8, 2024

Dr. Karina Nielsen
Chair Oregon's Ocean Policy Advisory Council's Scientific and Technical Advisory Committee

Dear Dr. Nielsen,

Please accept my enthusiastic nomination of Dr. James (Jim) Lerczak for a position on Oregon's Ocean Policy Advisory Council's Scientific and Technical Advisory Committee. As you can see from his resume, he has extensive experience working on coastal ocean and estuarine studies.

Professor Lerczak is a practicing coastal and estuarine oceanographer and on the faculty of the College of Earth, Ocean, and Atmospheric Sciences (CEOAS) at Oregon State University. He approaches the study of ocean and estuarine circulation from his physical oceanography background, but then takes those results and extends them, with his research team and students, to important biological questions like larval dispersal in estuaries. Professor Lerczak has carried out both observational and circulation modeling studies of estuaries along both coasts of the United States, including Oregon's Alsea Bay and Yaquina Bay estuaries.

Professor Lerczak is presently the Associate Dean for Research in CEOAS so, as such, has a broad view and connection to the wide range of coastal and estuarine research being done in CEOAS and OSU. From this point-of-view, he can contribute by engaging other experts when STAC needs input on topics outside Jim's immediate expertise.

In summary, Professor Jim Lerczak is eminently qualified to contribution to the mission of OPAC's STAC through his extensive knowledge of coastal and estuarine oceanography, including working in several of Oregon's estuaries. I recommend him enthusiastically for membership on STAC.

Sincerely,

Dr. John (Jack) A. Barth
Professor, College of Earth, Ocean, and Atmospheric Sciences
Fellow, American Meteorological Society
Fellow, The Oceanography Society

JAMES ALLEN LERCZAK
Associate Dean for Research and Professor

Oregon State University
College of Oceanic and Atmospheric Sciences
104 COAS Administration Building
Corvallis, OR 97331-5503

e-mail: jim.lerczak@oregonstate.edu
phone: 541-737-6128
fax: 541-737-5039
<https://ceoas.oregonstate.edu/directory/jim-lerczak>

EDUCATION:

2000 **Ph.D. in Oceanography, Scripps Institution of Oceanography, La Jolla, CA.**

1991 **M.S. in Physics, University of Washington, Seattle, WA.**

1988 **B.A. in Physics, Williams College, Williamstown, MA.**

PROFESSIONAL EXPERIENCE:

2022-present **Oregon State University, College of Earth, Ocean, and Atmospheric Sciences, Corvallis, OR. Associate Dean for Research.**

2017-present **OSU, CEOAS, Corvallis, OR. Professor.**

2007-2017 **OSU, CEOAS, Corvallis, OR. Associate Professor.**

2000-2006 **Woods Hole Oceanographic Institution, Physical Oceanography Dept., Woods Hole, MA. Assistant Scientist (2003-2006), Postdoc (2000-03).**

1995-2000 **Scripps Institution of Oceanography, La Jolla, CA. Research Assistant.**

1992-1995 **National Marine Mammal Laboratory, National Oceanic and Atmospheric Administration, Seattle, WA. Mathematical Statistician and Field Scientist.**

1989-1992 **University of Washington, Physics Dept., Seattle, WA. Research and Teaching Asst.**

1988-1989 **IBM Almaden Research Center, San Jose, CA. Research Technician.**

PROFESSIONAL ACTIVITIES:

University and College Committees and Activities

2022-present OSU Division of Research & Innovation, Assoc. Deans for Research Advisory Committee

2023-present PI on NSF Ship Operations and West Coast Van Pool Cooperative Agreements

2022-present CEOAS PI, NOAA Cooperative Inst. for Climate, Ocean, & Ecosystem Studies (CICOES)

2023-present Co-chair, OSU Gaulke Center for Marine Innovation and Technology Exec. Director search

2023-24 OSU Research Computing Task Force

National and Professional Committees

2024,21,18,12 NSF Proposal Review Panel

2014-2018 Editor (*Journal of Physical Oceanography*).

2012-13 Associate Editor (*Journal of Physical Oceanography*)

2011/12 Scientific Planning Committee for the 2012 Ocean Sciences Meeting.

2010 Co-chair (w/Lorenzo Ciannelli) of the organizing committee for the 2010 *Eastern Pacific Ocean Conference* at Timberline Lodge, Mt. Hood. Oregon.

Society Memberships: Association for the Sciences of Limnology and Oceanography (ASLO), The Oceanography Society (TOS), American Meteorological Society (AMS), American Geophysical Union (AGU), Coastal and Estuarine Research Federation (CERF).

TEACHING EXPERIENCE:

Teach undergraduate and graduate courses for CEOAS on coastal and estuarine oceanography, fluid dynamics, data analysis and computer programming. Currently engaged in an international research and outreach program for undergraduate students at OSU, Hampton University, and the University of Ghana.

AWARDS AND FELLOWSHIPS:

- 2015 The Patullo Award for Excellence in Teaching (OSU, CEOAS).
2012 Journal of Physical Oceanography Editor's Award, American Meteorological Society.
2000-2002 Cooperative Institute for Climate and Ocean Research (CICOR) Postdoctoral Scholarship.
1996-2000 ONR AASERT Graduate Student Fellowship.

ADVISING:

Graduate student advising: Advised and/or currently advising 11 graduate students; **Postdoctoral advising:** Mentored and/or currently mentoring 6 post-docs; **Graduate thesis committees:** Served and/or currently serving on 18 graduate thesis committees; **Undergraduate student advising:** Advised and/or currently advising 14 undergraduate students.

PARTICIPATION IN RESEARCH CRUISES (last 5 years; 22 cruises total):

- 2023-2024 Tidally-rectified flows in the Barnegat Bay lagoon system; Sponsored by NSF
2020-22 Temperature/salinity/turbidity measurements in Yaquina Bay estuary; Sponsored by Oregon Sea Grant and NSF.
2019 Tagging of marine birds in the Columbia River estuary with sensors to make physical oceanographic measurements in the estuary; Sponsored by ONR.

EIGHT MOST RECENT FUNDED GRANTS AND CONTRACTS:

- 2022-24. Collaborative research: Tidally rectified flows in multiple inlet/lagoon systems: Consequences for transport and residence times. J.A. Lerczak (PI). \$340,885.
2022-24. National Science Foundation. Internal tides in straits and small ocean basins: Resonant modes vs propagating waves. V. Zemskova (PI); J.A. Lerczak (coPI). \$454,776.
2022-25. Office of Naval Research. The Cormorant Oceanography Project – Expanded Research as Part of the Distributed, Autonomous, Scalable, Hydrographic Charting and METOC Sampling (DASHCAMS) DRI. J.A. Lerczak (PI); R. Orben and G. Wilson (coPIs). \$2,051,870.
2022-23. Office of Naval Research (DURIP). Fabrication and Testing of a Rapid Sampling Profiler for Energetic, High Ship Traffic Coastal Environments. Lerczak (PI). \$494,031.
2021-26. National Science Foundation. Collaborative Research: Cold Tongue Mixing. J. Moum (PI); D. Gibson, K. Hughes, J.A. Lerczak (coPIs). \$2,105,989.
2020-25. National Science Foundation. Water Temperature in Estuaries: The contributions of river and ocean temperature and surface heat flux. M. Fewings (PI); J.A. Lerczak (coPI). \$799,907.
2020-22. Subaward from Woods Hole Oceanographic Institution (to support a post-doc at OSU). Collaborative Research: Local Excitation and Scattering of Trapped Internal Tides at Coastal Margins. J.A. Lerczak (PI). \$143,866.
2020-22. Oregon Sea Grant. Determining habitat suitability under climate change and ocean acidification for oysters in Oregon's estuaries. G. Waldbusser (PI); J.A. Lerczak (coPI). \$230,000.

PUBLICATIONS (18 most recent; 50 total):

(solid underline indicates student author, dashed underline indicates post-doc author)

Zemskova, V.E., and J. Lerczak. 2024. Internal tide generation in semi-enclosed ocean basins. *J. Phys. Oceanogr.*, submitted.

Okun, K., A. Desai, P.E. Parnell, E. Masunaga, A.J. Lucas, J. Lerczak, and G. Pawlak. 2024. Semidiurnal inner shelf flow in the Southern California Bight. *J. Geophys. Res.*, In Revision.

Fang, C., A. J. Simpson, J. A. Lerczak, and M. C. Haller. 2024. Estimating the in situ stratification via remotely-sensed internal wave speeds. *J. Atmos. Oceanic Tech.*, 41, <https://doi.org/10.1175/JTECH-D-24-0001.1>.

- Musgrave, R. C., D. Winters, V. E. Zemskova, and J. A. Lerczak. 2024. The generation of superinertial coastally trapped waves by scattering at the coast. *J. Phys. Oceanogr.*, 54, <https://doi.org/10.1175/JPO-D-23-0180.1>.
- Zemskova, V. E., R. C. Musgrave, and J. A. Lerczak. 2024. Internal tides at the coast: Energy flux of baroclinic tides propagating into the deep basin in the presence of supercritical shelf topography. *J. Phys. Oceanogr.*, In Press.
- Conley, M. M., and J. A. Lerczak. 2024. Curves, Coriolis, and cross-channel circulation in the Hudson River estuary. *J. Phys. Oceanogr.*, 54, <https://doi.org/10.1175/JPO-D-23-0093.1>.
- Ardag, D., G. Wilson, J. A. Lerczak, D. S. Winters, A. Peck-Richardson, D. E. Lyons, and R. A. Orben. 2023. Multivariate data assimilation at a partially-mixed estuary. *J. Atmos. Oceanic Tech.*, 40, <https://doi.org/10.1175/JTECH-D-22-0101.1>.
- Cooley, K. M., M. R. Fewings, J. A. Lerczak, L. W. O'Neill, and K. S. Brown. 2022. Role of sea surface temperature changes during summer marine heat waves in the Chile-Peru Current System. *Journal of Geophysical Research Oceans*, 127, e2021JC018338, <https://doi.org/10.1029/2021JC018338>.
- Kumar, N., J. A. Lerczak, and co-authors. 2022. Examining the Inner Shelf: A Coastal Dynamics Experiment. *Bulletin of the American Meteorological Society*, 103(2), 117-126.
- McSweeney, J. M., M. R. Fewings, J. A. Lerczak, and J. A. Barth. 2021. The Evolution of a Northward-Propagating Buoyant Coastal Plume After a Wind Relaxation Event. *J. Geophys. Res.* 126, DOI: 10.1029/2021JC017720.
- Haney, S., A. Simpson, J. M. McSweeney, A. F. Waterhouse, M. Haller, J. A. Lerczak, J. A. Barth, L. Lenain, A. Palocz, K. Adams, and J. A. MacKinnon. 2021. Lifecycle of a Submesoscale Front BIRTHED FROM A NEARSHORE INTERNAL BORE. *J. of Phys. Oceanog.* 51(11), 3477-3493, DOI: 10.1175/JPO-D-21-0062.1.
- Orben, R. A., Peck-Richardson, A. G., G. Wilson, D. Ardağ, and J. A. Lerczak. 2021. Cormorants are helping characterize coastal ocean environments. *Eos*, 102, DOI:10.1029/2021EO163427.
- Spydell, M. S., S. H. Suanda, D. J. Grimes, J. Becherer, J. M. McSweeney, C. Chickadel, M. Moulton, J. Thomson, J. Lerczak, J. Barth, J. MacMahan, J. Colosi, R. Romeiser, A. F. Waterhouse, J. Calantoni, and F. Feddersen. 2021. Internal bore evolution across the shelf near Pt. Sal, California, Interpreted as a Gravity Current. *J. Phys. Oceanogr.*, 51(12), 3629-3650, DOI: 10.1175/JPO-D-21-0095.1.
- Becherer, J., J. N. Moum, J. Calantoni, J. A. Colosi, J. A. Barth, J. A. Lerczak, J. M. McSweeney, J. A. MacKinnon, and A. F. Waterhouse. 2021. Saturation of the internal tide over the inner continental shelf, Part II: Parameterization. *Journal of Phys. Oceanogr.*. <https://doi.org/10.1175/JPO-D-21-0047.1>.
- Becherer, J., J. N. Moum, J. Calantoni, J. A. Colosi, J. A. Barth, J. A. Lerczak, J. M. McSweeney, J. A. MacKinnon, and A. F. Waterhouse. 2021. Saturation of the internal tide over the inner continental shelf, Part I: Observations. *Journal of Physical Oceanography*. <https://doi.org/10.1175/JPO-D-20-0264.1>.
- Kumar, N., J. A. Lerczak, and co-authors. 2020. The Inner-Shelf Dynamics Experiment. *Bulletin of the American Meteorological Society*, <https://doi.org/10.1175/BAMS-D-19-0281.1>.
- McSweeney, J. M., J. A. Lerczak, J. A. Barth, J. Becherer, J. A. MacKinnon, A. F. Waterhouse, J. A. Colosi, J. H. MacMahan, F. Feddersen, J. Calantoni, A. Simpson, S. Celona, M. Haller, E. Terrill. 2020. Alongshore Variability of Shoaling Internal BORES on the Inner Shelf. *J. Phys. Oceanogr.*, <https://doi.org/10.1175/JPO-D-20-0090.1>.
- Lemagie, E., J. Lerczak. 2020. The Evolution of a Buoyant River Plume in Response to a Pulse of High Discharge from a Small Midlatitude River. *J. Phys. Oceanogr.*, <https://doi.org/10.1175/JPO-D-19-0127.1>.