

ALBERT J. HERMANN

**Joint Institute for the Study of the Atmosphere and Ocean
University of Washington, Seattle WA 98195**

Email: hermann@pmel.noaa.gov

Web: <http://www.pmel.noaa.gov/people/hermann>

ACADEMIC TRAINING

Cornell University	Ecological Modeling	B.Sc.Eng.	1977
University of Florida	Systems Ecology	M.Sc.	1980
University of Washington	Physical Oceanography	Ph.D.	1988
Woods Hole Oceanographic Institution	Physical Oceanography	Postdoctoral Investigator	1989-1991

Thesis title: Orographically trapped coastal wind events and their oceanic response: a study in nonlinear adjustment

PROFESSIONAL APPOINTMENTS AND EXPERIENCE

Affiliate Associate Professor, School of Oceanography, University of Washington, 10/03 – present.
Senior Research Oceanographer, Joint Institute for the Study of the Atmosphere and Ocean, University of Washington, 02/91-present.

Activities: Development and testing of physical models and their coupling with biological models for application to fisheries oceanography in the Gulf of Alaska, Bering Sea, and Pacific Northwest. Development of visualization techniques for immersive 3D display of model output.

Postdoctoral Investigator, Woods Hole Oceanographic Institution, Dept. of Physical Oceanography, 01/89-01/91.
Activities: Development and testing of oceanic circulation models. Numerical modeling of gravitational adjustment related to deep convection in the coastal and open ocean.

Pre-doctoral Research Associate, University of Washington, School of Oceanography. 09/82 - 12/88.
Activities: Interpretation and synthesis of physical and biological data from upwelling experiments in the Pacific Northwest. Numerical modeling of geophysical fluid phenomena near boundaries. Three months of cumulative seagoing experience.

Faculty Research Assistant, University of Maryland, Center for Environmental and Estuarine Studies, 03/80 - 08/82.
Activities: Numerical modeling of estuarine ecosystems and coastal plain hydrology.

PROFESSIONAL SERVICE

President, Eastern Pacific Ocean Congress (EPOC), 09/08-11/12
Session chair for PICES, AGU, EPOC annual meetings
Northeast Pacific GLOBEC Executive Committee
NSF panelist, NSF proposal reviews, journal article reviews (JPO, DSR, CSR, JGR, others)
PhD committee member

REFEREED PUBLICATIONS

Submitted/in review:

Richar, J. I., G. H. Kruse, E. Curchitser and A. J. Hermann. Patterns in connectivity and retention of simulated Tanner crab (*Chionoecetes bairdi*) larvae in the eastern Bering Sea

Rooper, C. N., M. Zimmerman, M. M. Prescott and A. J. Hermann. Predictive models of coral and sponge distribution, abundance and diversity in bottom trawl surveys of the Aleutian Islands, Alaska. Marine Ecology Progress Series, in review.

Parada, C., B. Ernst, S. Hinckley, J.M. Orensanz, D.A. Armstrong, E.N. Curchitser and A.J. Hermann. Patterns of connectivity and potential settlement regions of snow crab (*Chionoecetes opilio*) larvae in the eastern Bering Sea, in revision.

Gibson, G. A., A. J. Hermann, K. Hedstrom and E. Curchitser. Response of Euphausiid production to 'cold' and 'warm' years in the Bering Sea, in revision.

Published/in press:

Coyle, K. O., G.A. Gibson, K. Hedstrom, A.J. Hermann, and R.R. Hopcroft. 2013. Zooplankton biomass, advection and production on the northern Gulf of Alaska shelf from simulations and field observations. *Journal of Marine Systems*, 128:185-207, doi:10.1016/j.jmarsys.2013.04.018.

Hermann, A. J., G. A. Gibson, N. A. Bond, E. N. Curchitser, K. Hedstrom, W. Cheng, M. Wang, P. J. Stabeno, L. Eisner, K. D. Cieciel. 2013. A multivariate analysis of observed and modeled biophysical variability on the Bering Sea shelf: multidecadal hindcasts (1970-2009) and forecasts (2010-2040). *Deep Sea Research II*, 94:121-139, doi:10.1016/j.dsr2.2013.04.007

Coyle, K., W. Cheng, S.L. Hinckley, E.J. Lessard, T. Whitley, A.J. Hermann and K. Hedstrom. 2012. Model and field observations of effects of circulation on the timing and magnitude of nitrate utilization and production on the northern Gulf of Alaska shelf. *Progress in Oceanography*, 103:16-41, doi:10.1016/j.pocean.2012.03.002.

Cheng, W., A. Hermann, K. Coyle, E. Dobbins, N. Kachel, and P. Stabeno. 2012. Macro- and micro-nutrient flux to a highly productive submarine bank in the Gulf of Alaska: a model-based analysis of daily and interannual variability. *Progress in Oceanography*, 101:63-77, doi:10.1016/j.pocean.2012.01.001.

Williams, W., T. Weingartner, and A. Hermann. 2010. Idealized 2-dimensional modeling of a coastal buoyancy front under downwelling-favourable wind-forcing with application to the Alaska Coastal Current. *Journal of Physical Oceanography* 40(2): 279-294.

Brickman, D., B. Ådlandsvik, U. H. Thygesen, C. Parada, K. Rose, A. J. Hermann and K. Edwards. 2009. Particle Tracking. In: *Manual of Recommended Practices for Modelling Physical – Biological Interactions during Fish Early Life*, pp. 9 – 19. Ed. by E. W. North, A. Gallego, and P. Petitgas. ICES Cooperative Research Report No. 295. 111 pp.

Di Lorenzo, E., J. Fiechter, N. Schneider, P. J. S. Franks, S. J. Bograd, A. M. Moore, A. C. Thomas, W. Crawford, A. Peña and A. J. Hermann. 2009. Nutrient and Salinity Low-Frequency Variations in the central and eastern North Pacific. *Geophysical Research Letters* 36 (L14601), doi:10.1029/2009GL038261.

Hinckley, S., J.M. Napp, A.J. Hermann and C. Parada. 2009. Simulation of physically-mediated variability in prey resources for a larval fish - a 3-dimensional NPZ model *Fisheries Oceanography*, 18(4), 201–223.

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel and E. L. Dobbins. 2009. A comparison of remote versus local influence of El Nino on the coastal circulation of the Northeast Pacific. *Deep Sea Research II*, doi:10.1016/j.dsr2.2009.02.005.

Hermann, A.J., S. Hinckley, E. L. Dobbins, D. B. Haidvogel, N. A. Bond, C. Mordy, N. Kachel and P. J. Stabeno. 2009. Quantifying cross-shelf and vertical nutrient flux in the Gulf of Alaska with a spatially nested, coupled biophysical model. *Deep Sea Research II*, 56:2474-2486, doi:10.1016/j.dsr2.2009.02.008.

Dobbins, E. L., A. J. Hermann, P. J. Stabeno, N. A. Bond and R. C. Steed. 2009. Modeled transport of freshwater from a line-source in the coastal Gulf of Alaska. *Deep Sea Research II*, doi:10.1016/j.dsr2.2009.02.004

Hinckley, S., K. O. Coyle, G. Gibson, A. J. Hermann, and E. L. Dobbins. 2009. A biophysical NPZ model with iron for the Gulf of Alaska: Reproducing the differences between an oceanic HNLC ecosystem and a classical northern temperate shelf ecosystem. *Deep Sea Research II*, doi:10.1016/j.dsr2.2009.03.003

Hermann, A.J. and C. W. Moore. 2009 Visualization in fisheries oceanography: new approaches for the rapid exploration of coastal ecosystems. In: B.A. Megrey and E. Moksness (eds.), *Computers in Fisheries Research*, 2nd ed., DOI 10.1007/978-1-4020-8636-6_10, Springer Science and Business Media B.V.

Haidvogel, D. B., H. Arango, W. P. Budgell, B. D. Cornuelle, E. Curchitser, E. Di Lorenzo, K. Fennel, W. R. Geyer, A. J. Hermann, L. Lanerolle, J. Levin, J. C. McWilliams, A. J. Miller, A. M. Moore, T. M. Powell, A. F. Shchepetkin, C. R. Sherwood, R. P. Signell, John C. Warner, J. Wilkin. 2008. Regional Ocean Forecasting in Terrain-following Coordinates: Model Formulation and Skill Assessment. *J. Comput. Phys.* 227: 3595-3624.

Stockhausen, W. T., and A. J. Hermann. 2007. Modeling larval dispersion of rockfish: A tool for marine reserve design? In: J. Heifetz, J. DiCosimo, A.J. Gharrett, M.S. Love, T. O'Connell, and R. Stanley (eds.), *Biology, assessment, and management of North Pacific rockfishes*. Alaska Sea Grant College Program, University of Alaska Fairbanks, in press. AK-SG-07-01.

Williams, W., T. Weingartner, and A. Hermann. 2007. Idealized Modeling of Seasonal Variation in the Alaska Coastal Current *J. Geophys. Res.*, 112, C07001, doi:10.1029/2005JC003285.

Powell, T. M., C. V. W. Lewis, E. N. Curchitser, D. B. Haidvogel, A. J. Hermann, and E. L. Dobbins, 2006. Results from a three-dimensional, nested biological-physical model of the California Current System: Comparisons with Statistics from Satellite Imagery, *J. Geophys. Res.*, 111, C07018, doi:10.1029/2004JC002506.

Curchitser, E. N., D. B. Haidvogel, A. J. Hermann, E. L. Dobbins, and T. M. Powell, 2005. Multi-scale modeling of the North Pacific Ocean I: Assessment and analysis of simulated basin-scale variability (1996-2003). *J. Geophys. Res.*, 110, C11021, doi:10.1029/2005JC002902.

Stabeno, P. J., N. A. Bond, A. J. Hermann, C. W. Mordy and J. E. Overland. 2004. Meteorology and Oceanography of the Northern Gulf of Alaska. *Cont. Shelf Res.* 24: 859-897.

Hermann, A.J., D. B. Haidvogel, E. L. Dobbins, and P. J. Stabeno. 2002. Coupling Global and Regional Circulation Models in the Coastal Gulf of Alaska. *Prog. Oceanog.* 53: 335-367 (<http://www.pmel.noaa.gov/~hermann/globec-2001/ms.pdf>).

Weingartner, T., B. Finney, L. Halderson, P. Stabeno, J. Napp, S. Strom, R. Brodeur, M. Dagg, R. Hopcroft, A. Hermann, S. Hinckley, T. Royer, T. Whitlege, K. Coyle, T. Kline, E. Lessard, D. Haidvogel, E. Farley and C. Lee. 2002. The Northeast Pacific GLOBEC Program: Coastal Gulf of Alaska. *Oceanography Magazine* 15:30-35.

Hermann, A. J., P. J. Stabeno, D. B. Haidvogel and D. L. Musgrave. 2002. A regional tidal/subtidal circulation model of the southeastern Bering Sea: Development, sensitivity analyses and hindcasting. *Deep-Sea Res. II (Topical Studies in Oceanography)* 49: 5495-5967. (<http://www.pmel.noaa.gov/~hermann/sebscc-2001/ms.pdf>).

Hermann, A. J., S. Hinckley, B. A. Megrey and J. M. Napp. 2001. Applied and theoretical considerations for constructing spatially explicit Individual-Based Models of marine larval fish that include multiple trophic levels. *ICES J. Mar. Sci.* 58: 1030-1041 (<http://www.pmel.noaa.gov/~hermann/doc/ices/icesweb.htm>).

Hinckley, S., Hermann, A. J., Meir, K. L. and B. A. Megrey. 2001. The importance of spawning location and timing to successful transport to nursery areas: a simulation modeling study of Gulf of Alaska walleye pollock. *ICES J. Mar. Sci.* 58:1042-1052.

Hermann, A. J. and P. J. Stabeno. 1996. An eddy resolving model of circulation on the western Gulf of Alaska shelf. I. Model development and sensitivity analyses. *J. Geophys. Res.* 101: 1129-1149.

Stabeno, P. J. and A. J. Hermann. 1996. An eddy resolving model of circulation on the western Gulf of Alaska shelf.

II. Comparison of results to oceanic observations. *J. Geophys. Res.* 101: 1151-1161.

Hermann, A. J., S. Hinckley, B. A. Megrey and P. J. Stabeno. 1996. Interannual variability of the early life history of walleye pollock near Shelikof Strait, as inferred from a spatially explicit, individual-based model. *Fish. Oceanogr.* 5 (Suppl. 1): 39-57.

Hermann, A. J., W. C. Rugen, P. J. Stabeno and N. A. Bond. 1996. Physical transport of young walleye pollock larvae (*Theragra chalcogramma*) near Shelikof Strait as inferred from a hydrodynamic model. *Fish. Oceanogr.* 5 (Suppl. 1): 58-70.

Hinckley, S., A. J. Hermann and B. A. Megrey. 1996. Development of a spatially explicit, individual-based model of marine fish early life history. *Mar. Ecol. Prog. Ser.* 139: 47-68.

Stabeno, P. J., A. J. Hermann, N. A. Bond and S. J. Bograd. 1995. Modeling the possible impact of climate change on the survival of larval walleye pollock (*Theragra chalcogramma*) in the Gulf of Alaska. *Can. Spec. Pub. Fish. Aquat. Sci.* 121: 719-727.

Kemp, W. M., W. R. Boynton and A. J. Hermann. 1995. Ecosystem modeling and energy analysis of submerged aquatic vegetation in Chesapeake Bay. *In: C. A. S. Hall, ed., Maximum Power: The Contribution of H. T. Odum to Ecology, Energy, and Engineering*, University Press of Colorado.

Kemp, W. M., W. R. Boynton and A. J. Hermann. 1995. Simulation models of an estuarine macrophyte ecosystem. *In: B. Patten and S. Jorgensen, eds., Complex Ecology: The Part-Whole Relation in Ecosystems*, Prentice-Hall.

Hermann, A. J. and H. M. Hsu. 1993. A vertical coordinate mapping technique for semi-spectral primitive equation models of oceanic circulation. *Journal of Atmospheric and Oceanic Technology* 10: 381-396.

Hermann, A. J. and W. B. Owens. 1993. Energetics of gravitational adjustment for mesoscale chimneys. *Journal of Physical Oceanography* 23: 346-371.

Hermann, A. J. and W. B. Owens. 1991. Modeling the geostrophic adjustment and spreading of waters formed by deep convection. *In: P. C. Chu and J. C. Gascard, eds., Deep Convection and Deep Water Formation in the Oceans.*, Elsevier Publishers.

Hermann, A. J., B. M. Hickey, C. F. Mass and M. D. Albright. 1990. Orographically- trapped coastal wind events in the Pacific Northwest and their oceanic response. *J. Geophys. Res.* 95:13169-13193.

Kemp, W. M., W. R. Boynton and A. J. Hermann. 1989. Simulation models of an estuarine macrophyte ecosystem: community dynamics and resource management. *In: B. C. Patten and S. E. Jorgensen, eds., Progress in Systems Ecology*, John Wiley.

Hermann, A. J., P. B. Rhines and E. R. Johnson. 1989. Nonlinear Rossby adjustment in a channel: beyond Kelvin waves. *J. Fluid Mech.* 205: 469 - 502.

Hermann, A. J., B. M. Hickey, M. L. Landry and D. F. Winter. 1989. Coastal Upwelling Dynamics. *In: B. M. Hickey and M. R. Landry, eds., Coastal Oceanography of Washington and Oregon*, Elsevier Publishers.

Bayley, S. E., J. Zoltek, Jr., A. J. Hermann, T. J. Dolan and L. Tortorria. 1985. Experimental manipulation of nutrients and water in a freshwater marsh: Effects on biomass, decomposition, and nutrient accumulation. *Limnol. Oceanogr.* 30: 500 - 512.

Dolan, T. J., A. J. Hermann, S. E. Bayley and J. Zoltek, Jr. 1984. Evapotranspiration of a Florida, U.S.A., freshwater wetland. *J. Hydrol.* 74: 355 - 371.

Kemp, W. M., W. R. Boynton and A. J. Hermann. 1983. A simulation modeling framework for ecological research in complex systems: the case of submerged vegetation in upper Chesapeake Bay. *In: K. W. Turgeon, ed., Marine Ecosystem Modeling*, U. S. Dept. of Commerce NOAA publication # S/T 83-38.

Dolan, T. J., S. E. Bayley, J. Zoltek, Jr. and A. J. Hermann. 1981. Phosphorous dynamics of a Florida freshwater marsh receiving treated wastewater. *J. Appl. Ecol.* 18: 205 - 219.

Boynton, W. R., W. M. Kemp, A. J. Hermann and others. 1981. An analysis of energetic and economic values associated with the decline of submerged macrophytic communities in Chesapeake Bay. *In: W. J. Mitsch and R. W. Bosserman, eds., Energy and Ecological Modeling*. Int. Soc. Ecol. Modl. Publ., Copenhagen.

TECH REPORTS

Horne, P.J., I.C. Kaplan, K.N. Marshall, P.S. Levin, C.J. Harvey, A.J. Hermann, and E.A. Fulton. 2010. Design and parameterization of a spatially explicit ecosystem model of the central California Current. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-104, 140 p.

Brand, E. J., I. C. Kaplan, C. J. Harvey, P. S. Levin, E. A. Fulton, A. J. Hermann, J. C. Field. 2007. [A spatially explicit ecosystem model of the California Current's food web and oceanography](#). U.S. Dept. of Commerce, NOAA Tech. Memo., NMFS-NWFSC-84, 145 p.

Hermann, A. J. and D. L. Musgrave. 2006. Evaluation of ocean circulation models for the Bering Sea and Aleutian Islands Region. North Pacific Research Board Project 402 Final Report (http://doc.nprb.org/web/04_prjs/f0402_final_report.pdf)

WORKSHOPS ORGANIZED

North Pacific Research Board workshop on “Evaluation of ocean circulation models for the Bering Sea and Aleutian Islands Region”, with Dr. David Musgrave (U Alaska Fairbanks), 3-4 Feb 2005, Seattle, WA.

Pacific Northwest Modeling Workshop, with Drs. Barbara Hickey and Parker MacReady (University of Washington), 10 Jan 2003, Seattle, WA.

Regional Ocean Modeling System User’s workshop, with Dr. Hernan Arango (Rutgers Univeristy) and Dr. Tal Ezer (Princeton University), 4-6 Aug 2003, Seattle, WA.

SYMPOSIA/CONFERENCES ORGANIZED

Co-Convenor of session on “Coupled Biophysical Processes, Fisheries Resources, and Climate Variability in Coastal Ecosystems of the Northeast Pacific Ocean”, for 2002 Ocean Sciences Meeting, Honolulu, Hawaii., Feb. 11-15, 2002.

Co-Convener of session on “Lagrangian Parcel Trajectories, Retention and Tracking”, for Eastern Pacific Ocean Conference (EPOC), Stanford Sierra Camp, Fallen Leaf Lake, CA, Sep. 23-26, 2001.

Co-Convenor of symposium on “Subarctic Gyre processes and their interaction with coastal and transition zones: physical and biological relationships and ecosystem impacts”, for North Pacific Marine Science Organization (PICES) 9th annual meeting, Hakodate, Hokaido, Japan, 20-28 October 2000.

TEACHING

“Regional Oceanographic Modeling”, 1st Summer School of Geophysics, Department of Geophysics, Faculty of Mathematics and Physical Sciences, Universidad de Concepcion, January 6-10, 2014, Concepcion, CHILE

CITATIONS AND AWARDS

NOAA Bronze Medal, 2002 (group award to Fisheries Oceanography Coordinated Investigations)
NOAATECH Grid Computing Award, 2004 (with Christopher Moore and Dan Schaffer)
NOAATECH 3D Visualization Award, 2004 (with Christopher Moore)

COLLABORATORS AND OTHER AFFILIATIONS

Collaborators

J. Allen (OSU), D. Armstrong (UW-SAFS), H. Batchelder (UC-Berkeley), N. Bond (UW-JISAO), K. Coyle (UAF), E. Curchitser (Columbia-LDEO), E. Dobbins (UW-JISAO), G. Egbert (OSU), B. Ernst (UC, Chile), D. Haidvogel (Rutgers), S. Hinckley (NMFS), A. Kurapov (OSU), G. Kruse (UAF), C. Ladd (UW-JISAO), C. Lewis (UC-Berkeley), B. Megrey (NMFS), R. Miller (OSU), C. Moore (UW-JIASO), C. Mordy (UW-JISAO), D. Musgrave (UA-Fairbanks), J. Napp (NMFS), J. Overland (PMEL), L. Orensanz (UW-SAFS), C. Parada (UW-JISAO), T. Powell (UC-Berkeley), P. Rand (Wild Salmon Center), N. Soreide (PMEL), P. Stabeno (PMEL), W. Stockhausen (NMFS), W. Williams (U Victoria)

Graduate and Postdoctoral Advisors

PhD co-chairs: Drs. Barbara M. Hickey and Peter B. Rhines, University of Washington
Postdoctoral sponsor: Dr. Breck Owens, Woods Hole Oceanographic Institution

Students Advised

William J. Williams, University of Alaska Fairbanks (doctoral committee)
Elaina M. Jorgensen, University of Washington, Seattle (doctoral committee)

FUNDED PROJECTS

Key:

NSF = National Science Foundation

NPRB = North Pacific Research Board

NOAA = National Oceanic and Atmospheric Administration

IERP = Integrated Ecosystem Research Program

FATE = Fisheries and the Environment program

HPCC = High Performance Computing and Communications incubator program

Funded projects where Hermann was lead or co-Principal Investigator of proposal:

NOAA-FATE, Jun 2012 - Jun 2014. Development of a Prediction System for the California Current Integrated Ecosystem Assessment.

NSF PLR-1107250, \$467,207, Sep 2011 - Aug 2013. Collaborative Research: Impact of sea-ice on bottom-up and top-down controls of crustacean zooplankton and the mediation of carbon and energy flow in the eastern Bering Sea.

NPRB GOA IERP project G84, \$999,995, May 2010 - Feb 2015. Exploring temporal and spatial variability in Gulf of Alaska groundfish dynamics with integrated biophysical models.

Washington Sea Grant project R/COCC-1, Feb 2010 - Jan 2012. Projections of Ocean Properties Along the Washington Coast Related to Environmental Health.

NPRB project 814, \$248,190, 1 Aug, 2008 - 15 Apr, 2012. Recruitment Mechanisms for Tanner Crab in the Eastern Bering Sea.

NSF OCE-0732534, \$802,861, Aug 2007-2011. Downscaling global climate projections to the ecosystems of the Bering sea with nested biophysical models.

NOAA-FATE, FY2007. Developing recruitment forecasts for age structured flatfish stock assessments in the eastern Bering Sea based on models of larval dispersal.

NSF OCE-0624490, \$1,023,000, 2006-2009. US-GLOBEC NEP Phase IIIb-CGOA: Synthesis of biophysical observations at multiple trophic levels using spatially nested, data-assimilating models of the Coastal Gulf of Alaska. (lead PI: A. Hermann)

NPRB Project 624, \$294,515, 1 July, 2006 - 31 May, 2010. Modeling transport and survival of larval crab: Investigating the contraction and variability in snow crab stocks in the Eastern Bering Sea using Individual-Based Models

NPRB Project 614, \$256,648, 1 May, 2006 - 31 May, 2010. Optimization of a nutrient-phytoplankton-zooplankton ecological model for quantifying physical and biological interactions on the Gulf of Alaska shelf.

NSF OCE-0435592, \$182,000, 2005-2008. Collaborative Research: US-GLOBEC NEP Phase IIIa-CCS: Effects of Meso- and Basin Scale Variability on Zooplankton Populations in the CCS Using Data-Assimilative, Physical/Ecosystem Models.

NPRB Project 523, \$131,251, 1 July, 2005-30 June, 2008. Walleye Pollock Recruitment and Stock Structure in the Gulf of Alaska: An investigation using a suite of biophysical and individual-based models

NPRB Project 402, \$74,949, 1 May, 2004 - 30 Dec, 2005. Evaluation of ocean circulation models for the Bering Sea and Aleutian Islands Region

NOAA-FATE, FY2002 - FY2004. Multi-decadal simulations of circulation and walleye pollock in the Northern Gulf of Alaska

NSF OCE-0113461, \$1,068,000, 2001-2006. GLOBEC 2000: Nested Interdisciplinary Models for the Gulf of Alaska.

NSF OCE-9711329, \$497,000, 1997-2001. Coupled Biophysical Models for the Coastal Gulf of Alaska.

Funded projects where Hermann was lead or co-author of proposal:

NOAA-HPCC, \$ 125,000, FY 2011. Using HPCC Techniques to Power User Tools for Ecosystem Models: the Bering Sea example (lead PI: K. Aydin).

NOAA-HPCC, \$43,688, FY 2010. A portable immersive high-definition display system for HPC model output (lead PI: P. Stabeno).

NOAA-HPCC, \$59,230, FY 2009. Pocket visualization of ocean data and model output through the web (lead PI: P. Stabeno).

NOAA-HPCC, \$56,000, FY 2007. A Virtual Globe for the Interactive Display of OPeNDAP Data (lead PI: N. Soreide)

NOAA-HPCC, \$75,700, FY 2005. Parallel Analytical Visualization Grid Service (lead PI: N. Soreide).

NOAA-HPCC, \$39,800, FY 2004. Personal Access Grid nodes for Immersive Collaboration (lead PI: P. Stabeno).

PRESENTATIONS (Conferences, Workshops, and Public Outreach) since 1999

- A. J. Hermann, D. B. Haidvogel (presenter), E. L. Dobbins, P. J. Stabeno, and D. Musgrave. "Simulation of the Southeastern Bering Sea and Gulf of Alaska Using Coupled Regional/Basin-Scale Models", Sigma Coordinate Ocean Model Users Meeting, Bar Harbor, ME, 20-22 September 1999.
- A. J. Hermann, E. L. Dobbins (presenter), D. B. Haidvogel, S. Hinckley, P. J. Stabeno and P. S. Rand. "Hydrodynamic modeling of the Coastal Gulf of Alaska, with particular reference to the Sitka Eddy". Eastern Pacific Ocean Conference (EPOC), Sierra Camp Conference Center, CA, 5-8 October 1999.
- A. J. Hermann, P. Rand, E. L. Dobbins, D. B. Haidvogel, and P. J. Stabeno. "Interannual modeling of circulation and salmon in the Coastal Gulf of Alaska". North Pacific Marine Science Organization (PICES) 8th annual meeting, Vladivostok, Russia, 8-17 October 1999.
- A. J. Hermann, D. B. Haidvogel, P. J. Stabeno, S. Hinckley and D. Musgrave. "Interannual modeling of tidal and subtidal dynamics on the Southeastern Bering Sea shelf". North Pacific Marine Science Organization (PICES) 8th annual meeting, Vladivostok, Russia, 8-17 October 1999.
- A. J. Hermann, N. N. Soreide, and C. Moore. "Low-cost stereoscopic virtual reality for physical and biological model visualization". North Pacific Marine Science Organization (PICES) 8th annual meeting, Vladivostok, Russia, 8-17 October 1999.
- A. J. Hermann, S. Hinckley, E. L. Dobbins, D. B. Haidvogel, P.S. Rand and P. J. Stabeno. "Coupled Circulation-NPZ-Salmon modeling for the Coastal Gulf of Alaska". American Geophysical Union Ocean Sciences Meeting, San Antonio, Texas, January 24-28, 2000.
- A. J. Hermann, S. Hinckley, E. L. Dobbins, D. B. Haidvogel, P.S. Rand and P. J. Stabeno. "Cross-shelf transport of plankton and salmon in the Coastal Gulf of Alaska". Beyond El Nino: A Conference on Pacific Climate Variability and Marine Ecosystems Impacts from the Tropics to the Arctic, La Jolla, California, March 23-26, 2000.
- A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, S. Hinckley, P. Rand, and P. J. Stabeno. "Local and remote influences on cross-shelf transport in the Coastal Gulf of Alaska." PICES 9th annual meeting, Future University, Hakodate, Hokkaido, Japan, October 20-28, 2000.
- A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, S. Hinckley, P. Rand, and P. J. Stabeno "The relative importance of local and remote influences on cross-shelf transport in the Coastal Gulf of Alaska." Eastern Pacific Ocean Conference 2000, Dunsmuir Lodge, Vancouver Island, September 27-30, 2000.
- A. J. Hermann, D. B. Haidvogel, E. L. Dobbins and P. J. Stabeno, "Coupled Global and Regional Circulation Models for the Coastal Gulf of Alaska". Second joint biannual Terrain-following modeling communities (POM, ROMS, SCRUM, SPEM) meeting, Boulder, Colorado (USA), August 20-22, 2001.
- A. J. Hermann, P. J. Stabeno, and M. Spillane. "Lagrangian Statistics of Eddies in the Alaska Coastal Current". Eastern Pacific Ocean Conference (EPOC), Stanford Sierra Camp, Fallen Leaf Lake, CA, Sep. 23-26, 2001.
- A. J. Hermann, P. J. Stabeno, and M. Spillane. "Twenty Years of Eddies in the Alaska Coastal Current", North Pacific Marine Science Organization (PICES) 10th Annual Meeting, Victoria Conference Centre, Victoria, B.C., October 5-13, 2001.
- A. J. Hermann and C. Moore (presenter). "Low-cost interactive stereo visualization on the desktop". NOAA Tech 2002, Silver Spring, MD, October 23-25, 2001.
- A. J. Hermann, "Modeling of Waters Adjacent to Prince William Sound". Physical Oceanography in PWS: Measures and Models (sponsored by Exxon Valdez Oil Spill Council), Anchorage, AK, Nov. 5-6, 2001.
- A. J. Hermann, D. B. Haidvogel, E. L. Dobbins and P. J. Stabeno. "Visualization of Regional Circulation Models for the Coastal Gulf of Alaska." GLOBEC NEP Scientific Investigators Workshop, Seattle, WA, November 2001.

A. J. Hermann, P. J. Stabeno, D. B. Haidvogel, N. Kachel and E. L. Dobbins. "Spatial and temporal structure of shelf circulation in the Northern Gulf of Alaska". 2002 Ocean Sciences Meeting, Honolulu, Hawaii., Feb. 11-15, 2002.

N. Bond, A. Hermann, G. Johnson, C. Mordy, J. Overland, P. Stabeno (presenter). "Climate Variability: Physical Environment on Regional to Local Scales". Steller Sea Lion Coordinated Research Program, Anchorage, Alaska, March 18-20, 2002.

A. J. Hermann, C. W. Moore, N. N. Soreide (presenter), and P. J. Stabeno. "Continuous VRML output from regional circulation models: a rapid model diagnostic, analysis, and educational tool". High Performance Computing and Communications FY2001 proposal review. Charleston, SC, May 14-16 2002.

A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, S. Hinckley, K. Hedstrom, D. Musgrave, E. Curchitser, H. Batchelder, C.A. Edwards, and T.M. Powell. "Coupled biophysical models of transport in coastal downwelling and upwelling environments". 2nd GLOBEC Open Science Meeting, 'Comparative Ecosystems and Climate Change' 15-18 October 2002, Qingdao, P. R. China (Invited talk)

A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, P. B. Stabeno. "Interannual variability of SST and cross-shelf transport in the coastal Northeast Pacific". 2nd GLOBEC Open Science Meeting, 'Comparative Ecosystems and Climate Change' 15-18 October 2002, Qingdao, P. R. China (Poster)

A. J. Hermann, C. Moore, Nancy N. Soreide. "Recent advances in immersive visualization of ocean data: Virtual Reality through the web on your laptop computer". PICES 11th annual meeting, 18-26 October 2002, Qingdao, P. R. China.

D. D. Righi, P. J. Stabeno and A. J. Hermann. "Transports on the Shelf of the Southeastern Bering Sea". AGU 2002 Fall Meeting, 6-10 December 2002, San Francisco, CA.

A. J. Hermann, C. Moore and N. N. Soreide. "Recent Advances in Immersive Visualization of Ocean Data: Virtual Reality Through the Web on Your Laptop Computer". AGU 2002 Fall Meeting, 6-10 December 2002, San Francisco, CA.

A.J. Hermann, D. Haidvogel, E. L. Dobbins, P. J. Stabeno, D. Musgrave, K. Hedstrom "Spatially nested circulation modeling of the Coastal Gulf of Alaska: inferences from results in the vicinity of Kodiak Island". Marine Science in the Northeast Pacific: Science for Resource Dependent Communities, 13-17 January 2003, Anchorage, AK.

P. Stabeno, N. Bond, A. Hermann, N. Kachel, C. Mordy and S. Salo. "Physical and chemical measurements along the GOA shelf". Marine Science in the Northeast Pacific: Science for Resource Dependent Communities, 13-17 January 2003, Anchorage, AK.

A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, S. Hinckley, P. J. Stabeno, D. Musgrave, K. Hedstrom. "Nested biophysical modeling of the Coastal Gulf of Alaska: inferences from recent circulation results". U.S. GLOBEC NEP-CGOA SI Meeting 13-17 January 2003, Anchorage, AK

A. J. Hermann, D. B. Haidvogel, E. L. Dobbins, S. Hinckley, P. J. Stabeno, D. Musgrave, K. Hedstrom. "Nested biophysical modeling of the Coastal Gulf of Alaska: inferences from circulation results". U.S. GLOBEC NEP-CGOA SI Meeting, 13-17 January 2003, Anchorage, AK (poster)

N. A. Bond, R. Steed, A. J. Hermann, D. Righi and P. J. Stabeno, "Diagnosis of Coastal GOA Air-Sea Interactions Using a High Resolution NWP Model". U.S. GLOBEC NEP-CGOA SI Meeting, 13-17 January 2003, Anchorage, AK

E. L. Dobbins, C. V. W. Lewis, S. Hinckley and A. J. Hermann. "Comparison of physical-biological models of the California Current System and the Coastal Gulf of Alaska". U.S. GLOBEC NEP-CGOA SI Meeting, 13-17 January 2003, Anchorage, AK (poster)

K. Hedstrom, D. Musgrave, A. J. Hermann, and E. L. Dobbins. "Modeled Lagrangian Drifters in the Gulf of Alaska". U.S. GLOBEC NEP-CGOA SI Meeting, 13-17 January 2003, Anchorage, AK (poster)

S. Hinckley, A. Hermann and E. Dobbins. "Progress in 3-dimensionalization of the GLOBEC CGOA NPZ model and other aspects of CGOA NPZ modeling". U.S. GLOBEC NEP-CGOA SI Meeting 13-17 January 2003, Anchorage, AK (poster)

D. L. Musgrave, K. Hedstrom, A. J. Hermann and D. B. Haidvogel. "Comparison of the Coastal Gulf of Alaska Circulation (3-km grid) to GLOBEC data". U.S. GLOBEC NEP-CGOA SI Meeting 13-17 January 2003, Anchorage, AK (poster)

P. Stabeno, N. Bond, A. Hermann and N. Kachel. "Along-shelf and cross-shelf flow on the GOA shelf". U.S. GLOBEC NEP-CGOA SI Meeting 13-17 January 2003, Anchorage, AK (poster)

A. J. Hermann, D. B. Haidvogel, C. Moore, N. Bond, E. L. Dobbins, and E. Curchitser. "Coupled biophysical models for coastal downwelling and upwelling environments". NCSA/Alliance All-Hands Meeting, April 30-May 2 2003, Urbana, IL.

A. J. Hermann. "Strategies for coupling physical and biological models: examples of Lagrangian and Eulerian approaches for the Coastal Gulf of Alaska". Prince William Sound Nowcast-Forecast Workshop, 16-17 June 2003, Anchorage, AK (Invited)

A. J. Hermann. "Nesting, nudging, and coupling of physical and biological models: the quest for simple robust methods in a complex world". Gordon Conference on Coastal Ocean Modeling, 22-27 June 2003, Colby-Sawyer College, New London NH. (Invited)

A. J. Hermann. "Nesting and Coupling of Physical-Biological Models" (Invited). 2003 Terrain-Following Ocean Models Users Workshop, 4-6 Aug. 2003, PMEL/NOAA, Seattle, WA.

A. J. Hermann, E. L. Dobbins, N. Bond, R. Steed and P. J. Stabeno. Variability in Shelf Transports in the Gulf of Alaska. "Variability in shelf transports in the Gulf of Alaska, Part IV: Response to Mesoscale Forcing using the Regional Ocean Modeling System (ROMS)". Fifth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, 5-8 Aug 2003, Seattle, WA. (Extended abstract published)

A.J. Hermann, E.L. Dobbins, C. Moore, D.B. Haidvogel, E.N. Curchitser and K. Hedstrom. "Immersive Visualization of Mesoscale Processes in the Northeastern Pacific". Eastern Pacific Oceanography Conference (EPOC), Sep 24 2003, Catalina Island CA

A. J. Hermann and C. Moore. "Immersive,3D Visualization of the North Pacific". UW Oceanography Open House, Oct 17-18 2003, Seattle WA

A. J. Hermann and C. Moore. "Low-cost Immersive Technology for Collaborative Examination of Model Output". NOAA Tech, October 21-22 2003, Washington DC

A. J. Hermann and J. Mark. "El Nino in 3D". Whittier Elementary School, Nov. 3 2003, Seattle WA

A. J. Hermann. "Nested Modeling of the NE Pacific Ocean". Regional meeting of the Puget Sound Chapter of the American Meteorological Society, 25 Nov. 2003, Seattle WA.

A.J. Hermann, "Spatially Nested Bio-Physical Modeling of the Northeast Pacific". Departmental Seminar, Department of Environmental and Biomolecular Systems, Oregon Graduate Institute School of Science & Engineering, Oregon Health Sciences University, 5 Dec. 2003, Portland OR

A. J. Hermann and C. W. Moore. "Exploring the Virtual Atmosphere and Ocean in 3D". 3rd Annual Weatherfest of the American Meteorological Society, 11 Jan 2004, Seattle, WA.

A. J. Hermann and C.W. Moore. "Commodity Passive Stereo Graphics for Collaborative Display of Ocean Model Output". 20th Conference on Interactive Information Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology (84th AMS annual meeting), 12-15 Jan 2004, Seattle, WA. (Extended abstract published)

E. L. Dobbins, S. Hinckley, A.J. Hermann. "Inclusion of Copepod Diapause and Iron in a Biophysical Model of the Gulf of Alaska – What Have We Learned about Cross-Shelf Transport"? American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

N. A. Bond, A.J. Hermann, R.C. Steed, P.J. Stabeno. "Shelf Transports in the Gulf of Alaska: Using a Mesoscale NWP Model to Diagnose Air-Sea Interactions". American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

A. J. Hermann, E.L. Dobbins, S. Hinckley, S. Moore, D.B. Haidvogel, E.N. Curchitser and K. Hedstrom. "Immersive Visualization of Mesoscale Physics and Biology in the Northeastern Pacific. American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

E. N. Curchitser, D.B. Haidvogel, A.J. Hermann, E.L. Dobbins, K. Hedstrom, D. Musgrave. "Simulation of Basin-Scale Physical Events in the North Pacific Ocean During the 1997-2003 Period". American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

T. M. Powell, C.V. Lewis, E.N. Curchitser, E.L. Dobbins, D.B. Haidvogel, A. J. Hermann. "Statistics of Near Surface Biological and Physical Quantities: Calculations with a 3D Biological-physical Model of the California Current System". American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

A.J. Hermann, D.B. Haidvogel N. A. Bond, P.J. Stabeno, E.L. Dobbins, E.N. Curchitser, K. Hedstrom, D.L. Musgrave. "Analysis of Transport in the Gulf of Alaska with Nested Circulation Models: Sensitivity to Mesoscale Forcing". American Geophysical Union Ocean Sciences meeting, 26-30 Jan. 2004, Portland, OR.

A. J. Hermann. "Immersive Visualization of Mesoscale Physics in the Northeastern Pacific". PMEL FOCI seminar, 18 Feb. 2004, Seattle, WA.

S. Hinckley and A. Hermann. "What Can We Learn About Transport of Nutrients onto the GOA Shelf: New Results from a Biophysical NPZ Model Which Includes Iron". PMEL FOCI seminar, 25 Feb. 2004, Seattle, WA.

A. J. Hermann. "The Ocean in 3D". Whittier Elementary School science fair, 25 Mar. 2004, Seattle, WA.

S. Hinckley and A. Hermann, "Recent Results from NEP-GLOBEC NPZ Models", GLOBEC biological modeler's workshop, 26 Mar. 2004, Anacortes, WA.

A. J. Hermann and E. L. Dobbins, "Recent Experience with ROMS in NEP-GLOBEC Simulations", Pacific Northwest ROMS user meeting, 19 Apr. 2004, University of Washington, Seattle, WA.

Hermann, A. J. "ROMS GLOBEC work in the Gulf of Alaska". Development Workshop of a Real-Time, Operational Prince William Sound Ocean Forecasting System. Sep 7-8, 2004, Anchorage, AK.

Hermann, A. J., S. Hinckley, E. L. Dobbins, and D. B. Haidvogel. "Quantifying cross-shelf and vertical nutrient flux in the Gulf of Alaska with a spatially nested, coupled biophysical model". 51st Eastern Pacific Ocean Conference (EPOC), Sep. 22-25, 2004. Dunsmuir Lodge, Vancouver Island, Canada.

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel, E. L. Dobbins, S. Hinckley and C. W. Moore. "Immersive Visualization of the circulation and biology of the Northeast Pacific using spatially nested ROMS output". 2004 ROMS/TOMS European Workshop. CNR-ISMAR, October 18-20, 2004, Venice, Italy.

Curchitser, E., D. Haidvogel, A. J. Hermann, E. Dobbins and T. Powell, A numerical simulation of large-scale physical events in the North Pacific ocean during the 1997-2003 period. North Pacific Marine Science Organization (PICES) 13th annual meeting, Oct. 14-24, 2004, Honolulu, Hawaii, USA.

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel and E. L. Dobbins, "A comparison of remote versus local influence of El Niño on the coastal circulation of the Northeast Pacific", North Pacific Marine Science Organization (PICES) 13th annual meeting, Oct. 14-24, 2004, Honolulu, Hawaii, USA.

Hermann, A. J., S. Hinckley, E. L. Dobbins and D. B. Haidvogel, "Quantifying cross-shelf and vertical nutrient flux in the Gulf of Alaska with a spatially nested, coupled biophysical model", North Pacific Marine Science Organization (PICES) 13th annual meeting, Oct. 14-24, 2004, Honolulu, Hawaii, USA.

Curchitser, E. , D. Haidvogel, A. J. Hermann, S. Hinckley and E. L. Dobbins. "Modeling of Physics and Lower Trophic Levels", U.S. GLOBEC NEP California Current Scientific Investigators' Meeting, Nov. 15-16, 2004, CH2M Hill Alumni Center, Oregon State University, Corvallis, Oregon.

Hermann, A. J., S. Hinckley, E. L. Dobbins and D. B. Haidvogel, "Quantifying cross-shelf and vertical nutrient flux in the Gulf of Alaska with a spatially nested, coupled biophysical model", FOCI seminar, Dec. 8, 2004, Alaska Fisheries Science Center, Seattle, WA.

Moore, C. W., A. J. Hermann, and E. L. Dobbins. "Serving and Rendering Cluster-Based Ocean Model Output on a Geowall Using the Live Access Server", Fall Meeting of the American Geophysical Union, Dec 13-17, 2004, San Francisco, CA USA.

Hermann, A. J., S. Hinckley, D. B. Haidvogel and E. L. Dobbins, "Physical and Lower Trophic Level Modeling in the CGOA", U.S. GLOBEC NEP CGOA Scientific Investigator Meeting, Jan. 31 – Feb. 2, 2005, Pacific Marine Environmental Laboratory, Seattle, WA

Hermann, A. J., "Extant ocean circulation models of the Bering Sea and Aleutian Island Region – A summary of models at PMEL", Workshop to Evaluate Ocean Circulation Models for the Bering Sea and Aleutian Island Regions, February 3-4, 2005, Pacific Marine Environmental Laboratory (PMEL), Seattle, Washington

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel, E. L. Dobbins, "A comparison of remote versus local influence of El Nino on the coastal circulation of the Northeast Pacific", Physical Oceanography Seminar, College of Oceanic and Atmospheric Sciences, Oregon State University, Feb 15, 2005, Corvallis, OR USA

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel, E. L. Dobbins, S. Hinckley and C. W. Moore, "Immersive visualization of the circulation and biology of the Northeast Pacific using spatially nested models", Physical Oceanography Seminar, College of Oceanic and Atmospheric Sciences, Oregon State University, Feb 16, 2005, Corvallis, OR USA

Curchitser , E., A. Hermann , K. Hedstrom, and P. Budgell, "Coupled sea-ice/ocean numerical simulations of the Bering Sea for the period 1996-2003", Climate Variability and Sub-Arctic Marine Ecosystems, May 16-20, 2005, Victoria, BC, Canada.

Hermann, A., M. Dorn and S. Hinckley, "Multi-decadal simulations of circulation and walleye pollock in the Northern Gulf of Alaska", Fisheries and the Environment (FATE) Science Meeting, Jun. 8-9, 2005, Seattle, WA.

Hermann, A. J., "A Brief History of IBM/NPZ/Hydrodynamic Modelling in FOCI", Centre de Recherche Halieutique (CRH) seminar, June 23, 2005, Sete, France.

Hermann, A. J. "Immersive visualization techniques for the exploration of hydrodynamic and biological model output", Fisheries Oceanographic Modeling Workshop, Centre de Recherche Halieutique (CRH), , June 24, 2005, Sete, France.

Hermann, A. J., S. Hinckley, E. L. Dobbins, D. B. Haidvogel, and N. A. Bond, "Downwelling winds, upwelling response: Quantifying cross-shelf and vertical nutrient flux in the Gulf of Alaska with a spatially nested, coupled biophysical model", Advances in Marine Ecosystem Modelling Research symposium, Jun. 27-29, 2005, Plymouth Marine Laboratory, Plymouth, UK

Hermann, A. J., S. Hinckley, C. Parada, E. Dobbins, C. W. Moore and D. B. Haidvogel, "Immersive visualization: a modern approach for the rapid exploration of coastal ecosystem model dynamics", Advances in Marine Ecosystem Modelling Research symposium, Jun. 27-29, 2005, Plymouth Marine Laboratory, Plymouth, UK

Dobbins, E. L., A. J. Hermann, S. Hinckley, P. Stabeno, and N. Kachel, "Investigating the causes and limits of increased productivity over Portlock Bank, Alaska, with a 3D bio-physical model", Advances in Marine Ecosystem Modelling Research symposium, Jun. 27-29, 2005, Plymouth Marine Laboratory, Plymouth, UK

Hermann, A. J., E. N. Curchitser, D. B. Haidvogel and E. L. Dobbins, "A comparison of remote versus local influences on the coastal circulation of the Northeast Pacific", 52nd Annual Eastern Pacific Ocean Conference, September 27-30 2005, Stanford Sierra Camp, Fallen Leaf Lake, CA USA.

Hermann, A. J. and E. L. Dobbins, "The estuarine parameterization problem: sensitivity of ROMS to the specifics of line source buoyancy input in the Coastal Gulf of Alaska", 2005 ROMS/TOMS User Workshop, October 24-26, 2005, Scripps Institution of Oceanography, La Jolla, CA USA.

Hermann, A. J., T. M. Powell, E. L. Dobbins, E. N. Curchitser and D. B. Haidvogel, "A model-based investigation of lower trophic level covariance across the Northeast Pacific on interannual time scales", PICES/GLOBEC Symposium on Climate variability and ecosystem impacts on the North Pacific: A basin-scale synthesis, April 19-21, 2006, Ala Moana Hotel, Honolulu, HI U.S.A.

Hermann, A. J., "Immersive 3D visualization of Lagrangian and Eulerian phenomena in oceanography", University of Washington Physical Oceanography seminar, May 31, 2006, University of Washington, Seattle, WA USA.

Hermann, A. J., "Immersive visualization of oceanographic phenomena", University of Washington College of Ocean and Fishery Sciences Open House, April 22, 2006, University of Washington, Seattle, WA USA.

Hermann, A. J. "3D Astronomy and Oceanography", Whittier Elementary Science Fair, March 28, 2006, Seattle, WA USA.

Hermann, A. J., "Relative merits of Eulerian vs. Individual-Based models of fish dynamics in patchy habitats", Workshop on advancements in modelling physical-biological interactions in fish early-life history: recommended practices and future directions (WKAMF), 3-5 April 2006, IFREMER, Nantes, France.

Hermann, A. J., S. Hinckley, C. Parada, E. Dobbins, C. W. Moore and D. B. Haidvogel, "Immersive visualization: a modern approach for the rapid exploration of Eulerian and Individual-Based models", Workshop on advancements in modelling physical-biological interactions in fish early-life history: recommended practices and future directions (WKAMF), 3-5 April 2006, IFREMER, Nantes, France.

Hermann, A. J. "Relative merits of Eulerian vs. individual-based models of fish dynamics in patchy habitats", 53rd annual Eastern Pacific Ocean Conference, 27-30 September 2006, Timberline Lodge, OR USA.

Hermann, A. J., T. M. Powell, E. L. Dobbins, S. Hinckley, E. N. Curchitser, D. B. Haidvogel and K. Coyle, "A comparison of different NPZ models for the Northeast Pacific", PICES 15th Annual Meeting: Boundary current ecosystems, October 13-22, 2006, Yokohama, Japan.

Parada, C., S. Hinckley, J. Horne, A. Hermann, B. Megrey, and M. Dorn. "Hindcasting walleye pollock recruitment and examining pollock stock structure in the Gulf of Alaska using a biophysical model", Alaska Marine Sciences Symposium, 21-24 Jan, 2007, Anchorage, AK.

Coyle, K. O., S. Hinckley and A. J. Hermann. "Calibration of a nutrient - phytoplankton - zooplankton model for use with a three dimensional physical model to simulate ecological mechanisms on the northern Gulf of Alaska shelf", Alaska Marine Sciences Symposium, 21-24 Jan, 2007, Anchorage, AK.

Hermann, A. J., S. Hinckley, C. Parada, E. Dobbins, C. W. Moore and D. B. Haidvogel, "Immersive visualization: a modern approach for the rapid exploration of Eulerian and Individual-Based models", Gordon Conference on Coastal Ocean Modeling, 17-22 June 2007, Colby-Sawyer College, New London NH.

Hermann, A. J., Christopher W. Moore, Sarah Hinckley, Carolina Parada, Elizabeth L. Dobbins and Dale B. Haidvogel, "Immersive visualization online: A modern approach for the rapid exploration of Eulerian and individual-based models", PICES 16th annual meeting, 26 October -5 Nov, 2007, Victoria, B.C.

Hermann, A. J., Thomas M. Powell, Wei Cheng and Sarah Hinckley, "Performance of NEMURO with the Regional Ocean Modeling System (ROMS) for the Coastal Gulf of Alaska", PICES 16th annual meeting, 26 October -5 Nov, 2007, Victoria, B.C.

Hinckley, S., Carolina Parada, Billy Ernst, Lobo Orensanz, David Armstrong and Albert J. Hermann, "Temperature Effects on Larval Snow Crab Transport and Source-Sink Relationships in the Bering Sea: How Will Larval Settlement Success be affected by Climate Change?", Alaska Marine Sciences Symposium 20-23 Jan, 2008, Anchorage, AK.

Hermann, A. J., Kerim Y. Aydin, Nicholas A. Bond, Wei Cheng, Enrique Curchitser, Georgina Gibson, Katherine S. Hedstrom, and Muyin Wang, "Efficient Strategies for Climate Downscaling in the Bering Sea", Alaska Marine Sciences Symposium 20-23 Jan, 2008, Anchorage, AK.

Kenneth O. Coyle and Albert J. Hermann, "Coupled Physical – Biological Model Simulations of GLOBEC Long-Term Observations along the Seward Line, Northern Gulf of Alaska", Alaska Marine Sciences Symposium 20-23 Jan, 2008, Anchorage, AK.

Hermann, A. J., W. Cheng, S. Hinckley, K. Coyle, J. Fiechter, T. M. Powell, E. N. Curchitser and D. B. Haidvogel, "A Comparison of Lower Trophic Level Models for the Coastal Gulf of Alaska", AGU/Ocean Sciences, 2-7 March, 2008, Orlando, Fla.

Hermann, A. J., "Exploring nutrient flux in the coastal Gulf of Alaska with numerical models", University of Washington Physical Oceanography seminar, 28 May, 2008, Seattle, WA.

Hermann, A. J., J. Sirott and N. N. Soreide, "Immersive multi-scale visualization of downscaling climate models", Easter Pacific Ocean Congress (EPOC), 23-26 Sep, 2008, Stanford Sierra Camp, Fallen Leaf Lake, CA.

Hermann, A. J. and Bernard A. Megrey, "Examining the predictability limits of NPZ-fish dynamics in the Coastal Gulf of Alaska and the Bering Sea using a numerical model", PICES 17th annual meeting, Oct 23-Nov 1, 2008, Dalian, China.

Hermann, A. J., Sarah Hinckley, Elizabeth L. Dobbins, Dale B. Haidvogel, Nicholas A. Bond, Phyllis J. Stabeno and Calvin Mordy, "Significance of curl-driven upwelling to production in the Coastal Gulf of Alaska", PICES 17th annual meeting, 23 Oct – 1 Nov, 2008, Dalian, China.

Hermann, A.J. "Regional modeling of the Coastal Gulf of Alaska; progress and pitfalls", Globec Open Science Meeting, 22-26 Jun, 2009, Victoria BC, CANADA.

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, M. Wang, P. J. Stabeno and Y. Ortiz. "The Bering Sea Integrated Ecosystem Research Program: downscaling climate change to a subarctic region" Eastern Pacific Ocean Congress 2009, 23-26 Sep, 2009, Sydney, BC, CANADA

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, and P. J. Stabeno. "The Bering Sea Integrated Ecosystem Research Program: downscaling climate change to a subarctic region", AGU Ocean Sciences 22-26 Feb, 2010, Portland, OR

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, and P. J. Stabeno. "Simulated modes of biophysical variability on the Bering Sea shelf, PICES symposium on

Climate Change Effects on Fish and Fisheries: Forecasting Impacts, Assessing Ecosystem Responses, and Evaluating Management Strategies”, 25-29 Apr, 2010, Sendai, JAPAN

Hermann, A.J. “Analysis of coupled biophysical modes from downscaling models. Workshop on Global Ocean Ecosystems and Climate”, 23-27Aug, 2010, Friday Harbor Laboratories, Friday Harbor, WA

Hermann, A.J. and C. Moore. “Fast, inexpensive, immersive examination of remotely hosted geophysical data”, Workshop on Global Ocean Ecosystems and Climate, 23-27Aug, 2010, Friday Harbor Laboratories, Friday Harbor, WA

Hermann, A.J. “Regional Modeling of the Gulf of Alaska”, ePOPf West Coast Modeling Workshop, 20-22 Sep, 2010, Portland, OR.

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, and P. J. Stabeno. “Modes of biophysical variability on the Bering Sea shelf” (poster), Eastern Pacific Ocean Congress (EPOC), 22-25 Sep, 2010, Mt. Hood, OR

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, and P. J. Stabeno. INVITED. “Modes of biophysical variability on the Bering Sea shelf”, PICES annual meeting, 23-29 Oct, 2010, Portland, OR

Hermann, A.J. “Fast, inexpensive, immersive examination of remotely hosted geophysical data”, Supercomputing 2010, 14-18 Nov 2010, New Orleans, LA

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, P. J. Stabeno, L. Eisner and M. Janout. “Modeled and observed modes of biophysical variability on the Bering Sea shelf”, Comparative Studies of Climate Effects on Polar and Sub-Polar Ecosystems: Progress in Observation and Prediction, 23-26 May 2011, Seattle, WA

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, P. J. Stabeno, L. Eisner and M. Janout. “Modeled and observed modes of biophysical variability on the Bering Sea shelf”, Advances in Marine Ecosystem Modelling Research (AMEMR) Symposium, 24-30 Jun 2011, Plymouth, UK

Hermann, A.J. and W. Cheng. “Harnessing your GPU for interactive immersive Individual-Based Modeling”, Advances in Marine Ecosystem Modelling Research (AMEMR) Symposium, 24-30 Jun 2011, Plymouth, UK

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, P. J. Stabeno, L. Eisner and M. Janout. “A multivariate EOF analysis of modeled vs. observed modes of biophysical variability on the Bering Sea shelf”, Eastern Pacific Ocean Congress (EPOC), 11-15 Oct 2011, Stanford Sierra Conference Center, Fallen Leaf Lake, CA

Hermann, A.J. and C. Moore. “Harnessing your GPU for interactive immersive Individual-Based Modeling”, Eastern Pacific Ocean Congress (EPOC), 11-15 Oct 2011, Stanford Sierra Conference Center, Fallen Leaf Lake, CA

Hermann, A.J. and C. W. Moore. “Harnessing your GPU for interactive immersive oceanographic modeling”, American Geophysical Union Fall Meeting, 5-9 Dec 2011, San Francisco, CA.

Aydin, K., I. Ortiz, A. Hermann and G. Gibson, “Climate to Fisheries: 40-year Hindcast of Vertically Integrated Model for the Eastern Bering Sea”, Alaska Marine Science Symposium, 16-20 Jan 2012, Anchorage, AK.

Hermann, A. J., C. Ladd, W. Cheng, E.N. Curchitser and K. Hedstrom, “Sources and patterns of interannual oceanic variability of in the Gulf of Alaska”, Alaska Marine Science Symposium, 16-20 Jan 2012, Anchorage, AK.

Hermann, A.J., K. Aydin, N. A. Bond, W. Cheng, E. N. Curchitser, G. Gibson, K. Hedstrom, Y. Ortiz, M. Wang, P. J. Stabeno, L. Eisner and M. Janout. “A Multivariate Analysis Of Observed And Modeled Biophysical Variability

On The Bering Sea Shelf: Multidecadal Hindcasts (1969-2009) And Forecasts (2010-2040)", Alaska Marine Science Symposium, 16-20 Jan 2012, Anchorage, AK.

Richar, J., G. H. Kruse, A. Hermann and E. Curchitser. "Spatio-temporal variability in simulated advection patterns of larval Tanner crab in the eastern Bering Sea", Alaska Marine Science Symposium, 16-20 Jan 2012, Anchorage, AK.

Richar, J., G. H. Kruse, A. Hermann and E. N. Curchitser. "Recruitment mechanisms for eastern Bering Sea Tanner crab—a geospatial approach", Alaska Marine Science Symposium, 16-20 Jan 2012, Anchorage, AK.

Gibson, G. A., Hermann, A. J., Hedstrom, K., Curchitser, E., "Predicting the Impacts of Changing Environmental Conditions on Lower Trophic Level Ecosystem Dynamics in the Bering Sea", Ocean Sciences Meeting, 20-24 Feb 2012, Salt Lake City, UT.

Hermann, A. J., Gibson, G. A., Bond, N. A., Curchitser, E. N., Hedstrom, K., Cheng, W., Wang, M., Stabeno, P. J., Eisner, L., Janout, M., "A Multivariate Analysis of Observed and Modeled Biophysical Variability on the Bering Sea Shelf: Multidecadal Hindcasts (1969-2009) and Forecasts (2010-2040)", Ocean Sciences Meeting, 20-24 Feb 2012, Salt Lake City, UT.

Hermann, A. J., C. Ladd, W. Cheng, E.N. Curchitser and K. Hedstrom. "A model-based examination of multivariate physical modes in the eastern and western Gulf of Alaska", Eastern Pacific Ocean Congress (EPOC), 19-22 Sep 2012, Timberline Lodge, Mt. Hood, OR

Hermann, A. J., Nicholas A. Bond, Georgina A. Gibson, Enrique N. Curchitser, Kate Hedstrom and Phyllis J. Stabeno, "Biophysical frequency response of the Bering Sea to large-scale forcing", PICES annual meeting, 12-21 Oct 2012, Hiroshima, JAPAN.

Ortiz, I., K. Aydin and A. J. Hermann, "20 species, 15 lengths: How fish move driven by happiness as defined by growth and predation", PICES annual meeting, 12-21 Oct 2012, Hiroshima, JAPAN.

Hermann, A. J., C. Ladd, W. Cheng, E. Curchitser and K. Hedstrom, "A model-based examination of multivariate physical modes in the eastern and western Gulf of Alaska". Poster presentation at Alaska Marine Science Symposium, Jan 21-25, 2013, Anchorage, AK.

Hermann, A. J., S. Siedlecki and N. Bond, "Live immersive exploration of biophysical forecasts for the Pacific Northwest". Electronic display at Easter Pacific Ocean Conference, 16-19 Sep 2013, Fallen Leaf Lake, CA

Hermann, A. J., "Physical and biophysical predictability: a matter of scale". Program on Climate Change Summer Institute ("Climate Forcing of Marine Ecosystems: Causes and Consequences"), 11-13 Sep 2013, Friday Harbor, WA.

Hermann, A. J., "A rapid multivariate method for estimating regional forecast uncertainty". PICES annual meeting, 11-20 Oct 2013, Nanaimo, CANADA.

Richar, J. I., G. H. Kruse, A. J. Hermann and E. N. Curchitser. "Effects of shifting population demographics, oceanography, and predation on apparent stock-recruit relationships for Tanner crabs in the eastern Bering Sea". PICES annual meeting, 11-20 Oct 2013, Nanaimo, CANADA.

Hermann, A. J., "A rapid multivariate method for estimating regional forecast uncertainty", Department of Geophysics, Faculty of Mathematics and Physical Sciences, Universidad de Concepcion, Jan 10, 2014, Concepcion, CHILE.

