

July 31, 2009

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### **Experience**

- 2009 – present Associate Professor, School of Civil and Construction Engineering, Oregon State University, Corvallis.
- 2009 – present Associate Head, School of Civil and Construction Engineering
- 2004 – 2009 Assistant Professor, School of Civil and Construction Engineering, Oregon State University, Corvallis.
- 2001 – 2004 Assistant Professor (Senior Research), Department of Civil, Construction, and Environmental Engineering, Oregon State University, Corvallis.
- 2001 – present joint appointment (same rank), College of Oceanic & Atmospheric Sciences
- 1999 – 2001 Assistant Research Scientist, Cooperative Institute for Limnology and Ecosystems Research, University of Michigan, Ann Arbor.
- 1999 – 2001 Research Engineer, Veridian Systems Division (formerly ERIM International), Ann Arbor, MI.

### **Education**

- Ph.D., Civil Engineering, University of Delaware, 1999.  
Thesis: *Rip current dynamics and nearshore circulation* (Advisor: R.A. Dalrymple)
- M.C.E., Civil Engineering, University of Delaware, 1996.  
Thesis: *The measurement and analysis of wave groups in the surf zone* (Advisor: R.A. Dalrymple)
- B.S., Earth & Atmospheric Sciences (Geophysics), Purdue University, 1993.

### **Awards & Outreach**

- 2007 Editors' Citation for Excellence in Refereeing, *JGR-Oceans* (cited by Jim Kirby)
- 2002 Editors' Citation for Excellence in Refereeing, *JGR-Oceans* (cited by John Klinck)
- Featured in *Taking Risks, Making Commitments* ("Exploring Beach Recovery"), DVD and booklet, Oregon Sea Grant, 2007. (<http://seagrant.oregonstate.edu/communications/special.html>)
- Interviewed: *The Daily Barometer* ("World's largest wave basin built at OSU", Sept. 30, 2003)
- Awarded National Research Council Research Associateship, 1999 (declined)
- E.C. Davis Fellowship, University of Delaware, Sept. 1993 – Aug. 1994

### **Professional Service**

- Reviewer: *ASEE Conference Proceedings, Coastal Engineering, Coastal Engineering Journal, Continental Shelf Research, Estuarine Coastal and Shelf Science, IEEE (Geoscience and Remote Sensing Letters, IGARSS 2008, Trans. Geosci. and Remote Sensing), J. Atmos. & Ocean. Tech., J. Coastal Res., J. Fluid Mechanics, AGU (Geophys. Res. Letters, J. Geophysical Research – Oceans) J. Hydraulic Research, J. Hydro-environment Research, J. Wtrwy., Port, Coastal, Ocean Eng., Marine Geophysical Researches, Sensors*, and J. Wiley & Sons.
- Proposal reviewer: The National Science Foundation (Physical Oceanography, CAREER, MRI), Sea Grant (California, Delaware, Maryland, Texas), Research Council of Norway, USACE-Engineering Research and Development Center..

- Member, Tidal Hydraulics Committee, ASCE 2006-present; Secretary, Ocean Marine and Coastal Engineering Division, ASEE 2006-present; Member, Science Advisory Team—Columbia River Mouth Beneficial Projects (Lower Columbia River Solutions Group), 2008-present.
- Society memberships: American Geophysical Union 1996-present, American Society of Civil Engineers 2005-present, American Society of Engineering Education 2001-present, Association of Coastal Engineers 2002-present, Coasts Oceans Ports and Rivers Institute 2002-present.
- Program Committee Member: Atmospheric and Oceanic Propagation of Electromagnetic Waves IV, *SPIE International Symposium* (Photonics West), 2010; Co-Convener and Chair, Nearshore and Shelf Processes Special Session in Honor of Dr. Thomas Kinder, *AGU Fall Meeting*, 2001; Session Chair: *Waves 2001, Coastal Dynamics 2005*.

### **Refereed Journal Publications**

1. Chen, Q., Dalrymple, R.A., Kirby, J.T., Kennedy, A.B., and M.C. Haller, Boussinesq modeling of a rip current system, *J. Geophys. Res.*, 104 (C9), 20,617—20,637, **1999**.
2. Haller, M.C., Putrevu, U., Oltman-Shay, J., and R.A. Dalrymple, Wave group forcing of low frequency surf zone motion, *Coastal Engineering Journal*, Vol. 41, No. 2, 121-136, **1999**.
3. Haller, M.C. and R.A. Dalrymple, Rip current instabilities, *J. Fluid Mech.*, 433, 161-192, **2001**.
4. Haller, M.C., R.A. Dalrymple, and I.A. Svendsen, Experimental study of nearshore dynamics on a barred beach with rip channels, *J. Geophys. Res.*, 107 (C6), 3061, doi:10.1029/2001JC000955, **2002**.
5. Haller, M.C. and D.R. Lyzenga, Comparison of radar and video observations of shallow water breaking waves, *IEEE Trans. Geosci. Remote Sens.*, vol. 41, pp. 832—844, Apr. **2003**.
6. Haas, K.A., I.A. Svendsen, M.C. Haller, and Q. Zhao, Quasi 3-D modeling of rip current systems, *J. Geophys. Res.*, 108 (C7), 3217, doi:10.1029/2002JC001355, **2003**.
7. Suh, K.-D., T.-H. Jung, and M.C. Haller, Long waves propagating over a circular bowl pit, *Wave Motion*, 42, 143—154, **2005**.
8. Haller, M.C. and H.T. Özkan-Haller, Waves on unsteady currents, *Physics of Fluids*, **19**, 126601, **2007**. (See also Publisher's Note: *Physics of Fluids*, **20**, 039901, 2008)
9. Catalán, P.A. and M.C. Haller, Remote sensing of breaking wave phase speeds with application to non-linear depth inversions, *Coastal Engineering*, **55**, 93—111, **2008**.
10. Michalsen, D., M.C. Haller, and K.-D. Suh, Wave reflection from nearshore depressions, *J. Waterway, Port, Coastal, and Ocean Engineering*, 134(1), 1-11, **2008**.
11. Plant, N.G., K.T. Holland, and M.C. Haller, Ocean wavenumber estimation from wave-resolving time series imagery, *IEEE Trans. Geosci. Remote Sens.*, vol. 46, pp. 2644—2658, Sept. **2008**.
12. van Dongeren, A., N. Plant, A. Cohen, D. Roelvink, M.C. Haller, and P. Catalán, Beach Wizard: Nearshore bathymetry estimation through assimilation of model computations and remote observations, *Coastal Engineering*, **55**, 1016—1027, **2008**.
13. Haller, M. C., and P. A. Catalán, Remote sensing of wave roller lengths in the laboratory, *J. Geophys. Res.*, 114, C07022, doi:10.1029/2008JC005185, **2009**.
14. Lee, C., J.-S. Jung, and M.C. Haller, Asymmetry in directional spreading function of random waves due to refraction, in press *J. Waterway, Port, Coastal, and Ocean Engineering*, **2009**.
15. Guannel, G., H. T. Özkan-Haller, M. C. Haller, J. T. Kirby, and J. Magalen, Observations of large scale sand bar movement in a large wave flume, in preparation for *Marine Geology*, 2008.
16. Catalán, P.A., M.C. Haller, R.A. Holman, and W.J. Plant, Optical and microwave detection of surf zone breaking waves, in preparation for *IEEE Trans. Geosci. Remote Sens.*, 2009.

### **Published Discussions**

1. Haller, M.C. and P.A. Catalán, Discussion of “A simple method to determine breaker height and depth for different deepwater wave height/length ratios and sea floor slopes”, by J.P. Le Roux [Coastal Engineering 54 (2007) 271-277], *Coastal Engineering*, **55**, 181-184, **2008**.
2. Haller, M.C. and P.A. Catalán, Response to reply by J.P. Le Roux, *Coastal Engineering*, **55**, 820-822, **2008**.

### **Published Conference Proceedings**

1. Haller, M.C. and R.A. Dalrymple, Looking for wave groups in the surf zone, *Coastal Dynamics '95: Proceedings*, pp.81-92, Gdynia, Poland, **1995**.
2. Haller, M.C., R.A. Dalrymple, and I.A. Svendsen, Rip channels and nearshore circulation, *Coastal Dynamics '97: Proceedings*, pp.594-603, Plymouth, U.K., **1997**.
3. Haller, M.C., R.A. Dalrymple, and I.A. Svendsen, Experimental modeling of a rip current system, *Waves 1997: Proceedings*, pp.750-764, Virginia Beach, VA, **1997**.
4. Haas, K.A., I.A. Svendsen, and M.C. Haller, Numerical modeling of nearshore circulation on a barred beach with rip channels, *Coastal Engineering 1998: Proc. of 26<sup>th</sup> Intl. Conf.*, ASCE, Copenhagen, Denmark, pp.801—814, **1998**.
5. Haller, M.C., U. Putrevu, J. Oltman-Shay, and R.A. Dalrymple, Low frequency surf zone response to wave groups., *Coastal Engineering 1998: Proc. of 26<sup>th</sup> Intl. Conf.*, ASCE, Copenhagen, Denmark, pp.1124—1137, **1998**.
6. Haller, M.C. and D.R. Lyzenga, Remote sensing of shallow water breaking waves, *Proceedings of the Fourth International Symposium Waves 2001*, ASCE, San Francisco, CA, pp. 241—250, **2001**.
7. Haller, M.C. and H.T. Özkan-Haller, Wave breaking and rip current circulation, *Coastal Engineering 2002: Proc. of 28<sup>th</sup> Intl. Conf.*, ASCE, Cardiff, Wales, pp.705—717, **2002**.
8. Suh, K.D., T.H. Jung, and M.C. Haller, Analytic solution for transformation of long waves propagating over a circular bowl pit, *Proceedings of the Korean Society of Civil Engineering* (in Korean), (CD-ROM), Kangwon-do, Korea, **2004**.
9. Catalán, P. and M.C. Haller, Nonlinear phase speeds and depth inversion, *Proceedings of Coastal Dynamics 2005* (CD-ROM), Barcelona, Spain, ASCE, **2005**.
10. Haller, M.C. and P. Catalán, Measurement of shallow water breaking wave rollers, *Proceedings of Coastal Dynamics 2005* (CD-ROM), Barcelona, Spain, ASCE, **2005**.
11. Haller, M.C. and A. Baptista, NANOOS-Pilot: A collection of ocean observing tools for improving ocean safety and coastal design, Paper 2006-2316, *2006 ASEE Annual Conference Proceedings* (peer reviewed), Chicago, IL, **2006**.
12. Cobo, P.T., J.T. Kirby, M.C. Haller, H.T. Özkan-Haller, and J. Magalen, Model simulations of bar evolution on a large-scale laboratory beach, *Proceedings of Coastal Engineering: 30<sup>th</sup> Intl. Conf.*, ASCE, San Diego, CA, pp. 2566—2578, **2006**.
13. Cohen, A., A. van Dongeren, D. Roelvink, N. Plant, S. Aarninkhov, M. Haller, and P. Catalan, Nowcasting of coastal processes through assimilation of model computations and remote observations, *Proceedings of Coastal Engineering: 30<sup>th</sup> Intl. Conf.*, ASCE, San Diego, CA, pp. 3207—3219, **2006**.
14. Kirby, J.T., H.T. Özkan-Haller, and M.C. Haller, Seiching in a large wave flume, *Proceedings of Coastal Engineering: 30<sup>th</sup> Intl. Conf.*, ASCE, San Diego, CA, pp.1159—1171, **2006**.
15. Maddux, T.B., E.A. Cowen, D.L. Foster, M.C. Haller, and T.P. Stanton, The Cross-Shore Sediment Transport Experiment (CROSSTEX), *Proceedings of Coastal Engineering: 30<sup>th</sup> Intl. Conf.*, ASCE, San Diego, CA, pp. 2547—2559, **2006**.
16. Dalon, M., M.C. Haller, and J. Allan, Morphological characteristics of rip current embayments on the Oregon coast, *Proceedings of Coastal Sediments '07*, ASCE, pp. 2137—2150, **2007**.
17. Guannel, G., H. T. Özkan-Haller, M.C. Haller, and J.T. Kirby, Influence of velocity moments on sand bar movement during CROSSTEX, *Proceedings of Coastal Sediments '07*, ASCE, pp. 28-41, **2007**.

18. Lee, C., M.C. Haller, and J.-S. Jung, Asymmetry in directional distribution due to refraction of real sea waves, *Proceedings of Coastal and Ocean Engineering in Korea*, Mokpo, Korea, pp. 176-179, **2008**.
19. Catalán, P., M. Haller, R. Holman, and W. Plant, Surf zone breaking wave identification using marine radar, To appear in: *Proceedings of Coastal Engineering: 31<sup>st</sup> Intl. Conf.*, ASCE, **2008**.
20. Guannel, G., H. T. Özkan-Haller, and M.C. Haller, Modeling undertow over a barred laboratory beach, To appear in: *Proceedings of Coastal Engineering: 31<sup>st</sup> Intl. Conf.*, ASCE, **2008**.
21. Shi, F., J.T. Kirby, M. Haller, and P. Catalán, Modeling of surf zone bubbles using a multiphase VOF model, To appear in: *Proceedings of Coastal Engineering: 31<sup>st</sup> Intl. Conf.*, ASCE, **2008**.
22. Lee, C., J.-S. Jung, and M.C. Haller, Asymmetry in directional spreading function of sea waves due to refraction, to appear in *Proceedings of Offshore Mechanics and Arctic Engineering Conference*, (peer reviewed), **2009**.

### **Technical Reports**

- Haller, M.C. and R.A. Dalrymple, Rip current dynamics and nearshore circulation, Center for Applied Coastal Research, *Res. Rep. CACR-99-05*, Center for Applied Coastal Research, University of Delaware, (also *Ph.D. Thesis*), 1999.
- Haller, M.C., R.A. Dalrymple, and I.A. Svendsen, Experiments on rip currents and nearshore circulation: Data report, *Res. Rep. CACR-00-04*, Center for Applied Coastal Research, University of Delaware, 2000.

### **Abstract Proceedings**

- Haller, M.C., R.A. Dalrymple, and I.A. Svendsen, Experimental investigation of nearshore circulation in the presence of rip channels, *Trans. Amer. Geophys. Union Fall Meeting, EOS suppl.*, p.394, 1996.
- Haller, M.C. and R.A. Dalrymple, Rip current instabilities. *Trans. Amer. Geophys. Union Fall Meeting, EOS suppl.*, p.401, 1998.
- Haller, M.C., Forcing of nearshore currents on a longshore varying bathymetry, *Trans. Amer. Geophys. Union Fall Meeting, EOS suppl.*, p.512, San Francisco, CA, 1999.
- Haller, M.C. and D.R. Lyzenga, Radar backscatter from surf zone waves, *Trans. Amer. Geophys. Union Fall Meeting, EOS suppl.*, F610, San Francisco, CA, 2000.
- Catalan, P.A., E. Crawford, and M.C. Haller, Depth inversion using nonlinear dispersion equation and hybrid measurements, *AGU Ocean Sciences Meeting*, Portland, OR, 2004.
- Michalsen, D. and M.C. Haller, Shoreline response near steep bathymetric features, *AGU Ocean Sciences Meeting*, Portland, OR, 2004.
- Baptista, A., Y. Zhang, P. Turner, M. Zulauf, G. Kaminsky, B. Grantham, J. Allan, J. Newton, A. Devol, P. MacCready, S. Rumrill, M. Haller, T. Ozkan-Haller, G. Gelfenbaum, P. Ruggiero, NANOOS-Pilot technologies: a national role?, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.
- Catalán, P.A. and M.C. Haller, Comparison of shallow water wave breaking models to remote sensing data, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.
- Guannel, G., H.T. Özkan-Haller, J. Magalen, M.C. Haller, J.T. Kirby, and P.T. Cobo, Evaluation of boundary layer models in the mobilization and onshore transport of sediments, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.
- Maddux, T., E. Cowen, D. Foster, M. Haller, T. Stanton, CROSSTEX: A Large-Scale Laboratory Study of Cross-Shore Sediment Transport, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.
- Magalen, J., M.C. Haller, H.T. Özkan-Haller, J.T. Kirby, G. Guannel, and P.T. Cobo, Testing energetics-based models for onshore sediment transport, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.
- Miller, J., M. Haller, and J. Magalen, Design of large scale experiments on onshore bar migration, *AGU Ocean Sciences Meeting*, Honolulu, HI, 2006.

- Andes, L., H.T. Özkan-Haller, M.C. Haller, and J. Brodersen, Wave-current interaction at the mouth of the Columbia River, *EOS Trans. AGU*, 87(52), Fall Meet. Suppl., 2006.
- Guannel, G., H.T. Özkan-Haller, and M.C. Haller, Bar behavior and sediment movement during CROSSTEX, *EOS Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract OS22B-07, 2006.
- Haller, M.C. and P.A. Catalán, Remote Sensing Characteristics of Wave Breaking Rollers, *AGU Fall Meeting*, San Francisco, CA, 2006.
- Shi, F., J.T. Kirby, M.C. Haller, and P. Catalán, Numerical study on surfzone air bubbles using a multiphase VOF model, *AGU Ocean Sciences Meeting*, 2008.
- van Dongeren, A.R., N. Plant, J.A. Roelvink, M.C. Haller, A.B. Cohen, and P. Catalán, Beach Wizard: Bathymetry estimation by remote sensing, *AGU Ocean Sciences Meeting*, 2008.

### **Sponsored Research**

- “Baseline observations and modeling for the Reedsport wave energy site”, Oregon Wave Energy Trust, \$163,351 (Haller portion \$19,884), April-Dec 2009.
- “Northwest National Marine Renewable Energy Center” (Co-I), U.S. Department of Energy, \$13,545,481 (Haller portion, \$467,578), 2008-2013.
- “Multi-sensor remote sensing in the nearshore” (PI), Office of Naval Research, Coastal Geosciences, \$169,821, 2008-2010.
- “Enhancing the Pacific Northwest Regional Coastal Ocean Observing System (RCOOS) of NANOOS” (Co-I), NOAA, \$8.5 million (Haller portion, \$100,000), 2007-2010.

### **Previous Funding** (approximate total \$1,260,000)

- “Collaborative Proposal: CROSSTEX – An Experimental Study of Onshore Bar Movement” (Co-I), The National Science Foundation, \$155,784, 2004-2009.
- “Remote retrievals of hydrography on mud flats in Denied-Areas” (PI), Arete Associates (in support of Phase II-Enhancement STTR, Office of Naval Research), \$75,000, 2007-09/30/2008.
- “Platform for a Physical/Biological Sampling System for the Nearshore Ocean”, Research Equipment Research Fund, Oregon State University, (Co-I) w/P. Ruggiero, Menge, Nash, & Rilov, \$49,814, 07/01/07-06/30/08.
- “Wind/solar off-grid power system for Wave Radar Imaging Station” (PI), College of Engineering ETIC funds, \$13,683, 2008.
- “Integrating Marine Radar Observations into Nearshore Modeling Systems” (PI), Office of Naval Research, Coastal Geosciences, \$120,919, 2005-2007.
- Oregon Sea Grant: "Investigating the Causes of 'Hot Spot' Beach Erosion" (PI), \$160,995, 2005-2007.
- NOAA: “A Pilot Coastal Ocean Observatory for the Estuaries and Shores of Oregon and Washington”, (PI) A. Baptista (OHSU) et al., \$700,000 (M. Haller PI of OSU portion, \$132,475), 2004-2007.
- Funded Collaborator, (PI) Rob Holman, "Secretary of the Navy/Chief of Naval Operations Chairs of Oceanographic Sciences", 1 mm/yr, 2003-2007.
- NSF: “REU-Site: Interdisciplinary Approach to Coastal Processes and Hazard Mitigation” (Co-I), \$287,722, 2003-2006.
- Oregon Sea Grant: "An Experimental Study of Beach Recovery" (Co-I), \$174,674, 2004-2006.
- Oregon Sea Grant: “Project Development Grant: Erosional Hot Spot Modeling” (PI), \$10,000, 2004.
- Office of Naval Research, Coastal Geosciences, “Synoptic Estimates of Waves and Currents via Real-Time Assimilation of In-Situ Observations” (PI), \$78,000, 2002-2004.