

PUBLICATIONS RECORD

The University of British Columbia - Department of Civil Engineering

Date: 19 April 2011

Initials: 

SURNAME: Lawrence

FIRST NAME: Gregory

MIDDLE NAME(S): Allan

REFEREED PUBLICATIONS

Journal Papers

51. **Atwater, J.F.** and G.A. Lawrence. 2011. Regulatory, design and methodological impacts in determining tidal-in-stream power resource potential. *Energy Policy*, 39(3), 1694-1698. (March 2011)
- 50¹. Weinfurter S., **E.W. Tedford**, M.C.J. Penrice, W.G. Unruh and G.A. Lawrence. 2011. Measurement of stimulated Hawking emission in an analogue system. *Physical Review Letters*. (Jan 2011)
49. **Carpenter, J.R.**, N.J. Balmforth and G.A. Lawrence. 2010. Identifying unstable modes in stratified shear layers. *Physics of Fluids*, 22, 054104, 1-13. (May 2010)
48. **Carpenter, J.R.**, **E.W. Tedford**, **M. Rahmani**, and G.A. Lawrence. 2010. Holmboe wave fields in simulation and experiment. *Journal of Fluid Mechanics*, 648: 205-223. (April 2010)
47. Atwater, J.F. and G.A. Lawrence. 2010. Power potential of a split tidal channel. *Renewable Energy*, 35(2): 329-332. (Feb. 2010)
46. Tedford, E.W., J.R. Carpenter, R. Pawlowicz, R. Pieters and G.A. Lawrence. 2009. Observation and analysis of shear instability in the Fraser River estuary. *Journal of Geophysical Research-Oceans*, November 2009, 114 (C11006): 14 pp.
45. Tedford, E.W., R. Pieters and G.A. Lawrence. 2009. Symmetric Holmboe instabilities in a laboratory exchange flow. *Journal of Fluid Mechanics*, 636: 137-153.
44. Li, S.S. and G.A. Lawrence. 2009. Unsteady two-layer hydraulic exchange flows with friction. *Journal of Fluid Mechanics*, 633: 99-114.
43. Pieters, R. and G.A. Lawrence. 2009. Effect of salt exclusion from lake ice on seasonal circulation. *Limnology and Oceanography*, 54(2): 401-412.

¹ Chosen as an "Editor's Selection". *Physical Review Letters* is the most prestigious Physics journal with an impact factor of 7.328. This paper has been reported on in *New Scientist*, *Physics Today*, *Science Direct* and

42. Matzinger, A., R. Pieters, K.I. Ashley, G.A. Lawrence and A. Wuest. 2007. Effects of impoundment on nutrient pathways and lake productivity. *Limnology and Oceanography*, 52(6): 2629-2640.
41. Carpenter, J.R., G.A. Lawrence and W.D. Smyth. 2007. Evolution and mixing of asymmetric Holmboe instabilities. *Journal of Fluid Mechanics*, 583: 103-132.
- 40² Smyth, W.D., Carpenter, J.R. and G.A. Lawrence. 2007. Mixing in symmetric Holmboe waves. *Journal of Physical Oceanography*, 137(6): 1566-1583.
39. Jamali, M. and G.A. Lawrence. 2006. Viscous wave interaction due to motion of a surface wave over a sediment bed. *Journal of Offshore Mechanics and Arctic Engineering*, 128: 276-279.
38. Fisher, T. S. R. and G. A. Lawrence. 2006. Treatment of acid rock drainage in a meromictic mine pit lake, *Journal of Environmental Engineering, ASCE*, 132(4): 515-526.
37. Gu, L. and G. A. Lawrence. 2005. Analytical solutions for frictional two-layer exchange flows, *Journal of Fluid Mechanics*, 542: 1-17
36. Jamali, M, G. A. Lawrence and K. Maloney. 2005. Dispersion in varying-geometry rivers with application to methanol releases. *Journal of Hydraulic Engineering, ASCE*, 131(5): 390-396.
35. Stevens, C.L., T.S.R. Fisher and G.A. Lawrence. 2005. Turbulent layering beneath the pycnocline in a strongly stratified pit lake. *Limnology and Oceanography*, 50(1): 197-206.
34. Stevens, C.L., G.A. Lawrence and P.F. Hamblin. 2004. Horizontal dispersion in the surface layer of a long narrow lake. *Journal of Environmental Engineering and Science*, 3(5): 413-417.
33. Goater, A. and G.A. Lawrence. 2004. Dispersion of heavy particles in an isolated pancake-like vortex. *Journal of Environmental Engineering and Science*, 3(5): 403-411.
32. Lawrence, G.A., R. Pieters, L.J. Zaremba, E. Tedford, L. Gu, S. L. Greco and P.F. Hamblin. 2004. Summer exchange between Hamilton Harbour and Lake Ontario. *Deep Sea Research II*, 51: 475-487.
31. Macdonald, R.H., G.A. Lawrence, and T.P. Murphy, 2004, Operation and Evaluation of Hypolimnetic Withdrawal in a Shallow Eutrophic Lake, *Lake and Reservoir Management*,: 20(1): 39-53.
30. Jamali, M., G. A. Lawrence, and B. Seymour. 2003. A note on the resonant interaction between a surface wave and two interfacial waves. *Journal of Fluid Mechanics*, 491: 1-9.
29. Crusius, J., R. Pieters, A. Leung, P. Whittle, T. F. Pedersen, G. A. Lawrence and J. J. McNee. 2003. A tale of two pit lakes: Initial results of a three year study of the Main Zone and Waterline pit lakes near Houston, British Columbia, Canada. *Mining Engineering*, 55(2): 43-48.
28. Jamali, M., B. Seymour and G. A. Lawrence. 2003. Asymptotic analysis of surface-interfacial wave interaction. *Physics of Fluids*, 15(1): 47-55.

² Chosen as a paper of note by the American Meteorological Society; see *Bulletin of the American Meteorological Society*, 88(7): 1020.

27. Zaremba, L. J., G. A. Lawrence and R. Pieters. 2003. Frictional two-layer exchange flow. *Journal of Fluid Mechanics*, 474: 339-354.
26. Lawrence, G. A., and M. R. MacLatchy. 2001. Radially spreading buoyant flows. *Journal of Hydraulic Research*, 39(6): 583-590.
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22. Haigh, S. P., and G. A. Lawrence. 1999. Symmetric and non-symmetric Holmboe instabilities in an inviscid flow. *Physics of Fluids*, 11(6): 1459-1468.
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19. Finnigan, T. D., S. E. Allen, and G. A. Lawrence. 1998. Physical modeling of an outflow event in Howe Sound, British Columbia. *Journal of Geophysical Research - D, Atmospheres*, 103(D4): 3937-3950.
18. Zhu, Z. and G. A. Lawrence. 1998. Non-hydrostatic effects in layered shallow water flows. *Journal of Fluid Mechanics*, 355: 1-16.
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16. Stevens, C. L., and G. A. Lawrence. 1997. Estimation of wind-forced internal seiche amplitudes in lakes and reservoirs, with data from British Columbia, Canada. *Aquatic Sciences*, 58(4): 1-19.
15. Stevens, C. L., and G. A. Lawrence. 1997. The effect of sub-aqueous disposal of mine tailings in standing waters. *Journal of Hydraulic Research*, 35(2): 147-159.
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8. Stevens, C. L., P. F. Hamblin, G. A. Lawrence, and F. M. Boyce. 1995. River-induced transport in Kootenay Lake. *Journal of Environmental Engineering, ASCE*, 121(11): 830-837.
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Journal Papers submitted for publication

1. Rahmani, M., G.A. Lawrence and B.R. Seymour. 2010. Pre-saturation evolution of Kelvin-Helmholtz instabilities. Submitted to the *Journal of Fluid Mechanics*.
2. Pieters, R. and G.A. Lawrence. 2010. Destratification of a pit-lake by sludge inflow. Submitted to *Water Resources Research*, 14 pp.

Journal discussions and closure

3. Lawrence, G. A., M. Jamali, and K. Maloney. 2007. Closure to: Dispersion in varying-geometry rivers with application to methanol releases. *Journal of Hydraulic Engineering, ASCE*, 133(9): 1094-1096.
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1. Lawrence, G. A. 1984. Separation of hydraulic flow over topography. Discussion of a paper by H. E. and R. E. Britter, *Journal of the Hydraulics Division, ASCE*, 110(4): 359-362.

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5. R. Pieters, S. Harris, L. C. Thompson, L. Vidmanic, M. Roushorne, G. A. Lawrence, J. Stockner, H. Andrusak, K. I. Ashley, R. Lindsay, K. J. Hall, and D. Lombard. 2003. Restoration of kokanee in the Arrow Lakes Reservoir, British Columbia: Preliminary results of a fertilization experiment. In: *Nutrients in Salmonid Ecosystems: Sustaining Productivity and Biodiversity*, edited by J. G. Stockner, *American Fisheries Society Symposium* 34: 177-196.
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79. Rueda, F.J., V. Singleton, J. Little and G. Lawrence. 2010. Modeling the fate of oxygen artificially injected into the hypolimnion of a lake with multiple basins: Amisk Lake revisited. *Proc. 6th International Symposium on Environmental Hydraulics (ISEH)*, Athens, Greece. Paper No. 328. 23-25. (June 2010)
78. Lawrence, G.A. and R Pieters. 2009. Meromixis in pit-lakes with ice cover. *Proc. 33rd IAHR 2009 Congress – Water Engineering for a Sustainable Environment*. Vancouver, Canada, 10-14 August 2009.
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73. Pieters, R., M. Rahmani, L. Gu, R. Pawlowicz and G.A. Lawrence. 2007. Turbidity events in a drinking water reservoir. *5th Int'l Symposium on Environmental Hydraulics*, Tempe, Arizona, December 2007, 6 pages.
72. Tedford, E.W., J. R. Carpenter, R. Pawlowicz and G.A. Lawrence. 2007. Application of the Taylor-Goldstein equation to observations made in the Fraser River Estuary. *5th Int'l Symposium on Environmental Hydraulics*, Tempe, Arizona, December 2007, 6 pages.
71. Nassar, Y., R. Pieters, B. Laval and G.A. Lawrence. 2007. Response of the Nechako Reservoir to spring winds. *5th Int'l Symposium on Environmental Hydraulics*, Tempe, Arizona, December 2007, 6 pages.
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