

Scientific Program

Sunday, July 10, 2011

6-8 PM: Welcome Mixer at Emma's Backporch (in the Lounge) 2084 Old Lakeshore Road, Burlington.

Monday, July 11, 2011

8.30- 9.00 AM Registration at CCIW

9.00- 9.15 AM

- Welcome by Dr. John Lawrence, Director, AEMRD, Environment Canada
- Opening Remarks by Prof. Kevin Hall, Vice-President, University of Guelph

9.15-10:00 Invited: Stephen Monismith: Flows and Turbulence in a Tropical Lake
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10-0-10.20 Coffee Break

Session 1: Chair- Bertram Boehrer

10.20-10.45 J. Lacy: A field study of the influence of the eelgrass <i>Zostera marina</i> on wave velocities
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10.45-11.10 M. Ghisalberti: Physical interactions between suspended particles and biological collectors

11.10-11.35 M Downing-Kunz: Between floating macrophytes and environmental flows
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11.35-12.00 C. Noß: Mixing of stratified waters by <i>Daphnia magna</i>

12:00-1:00 Lunch Eric Segal: Nortek Instruments
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Session 2 Chair- Andreas Lorke

1-1:25 B. Boehrer: Calculating electrical conductance at low pH

1:25-1:50 R. Pawlowicz: Chemical composition and conductivity/temperature/salinity/density relationships in freshwaters and seawaters

1:50-2:15 M. Lepparanta: The role of ice season in the physical and ecological conditions in Lake Vanajavesi, southern Finland
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2:15-2:40 Santiago Moreira: Density calculation based on the specific chemical composition using temperature and conductance
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2:40-3.05 R. Roman-Botero: Relevance of inflow temperature variations over the daily cycle on tropical reservoirs physical limnology.

3:05-3:20 Coffee Break

Session 3 Chair- Charles Lemckert

3:20-3:45 M.J. Lilover Estimates of tidal currents from direct current measurements in the non-tidal Baltic Sea

3:45-4:10 Y. Lu: Layered and Weak Mixing in Stratified Yellow Sea in late summer
4.10-4:35 W. Wagner: Thermal variability within a complex branching estuarine system
4:35-5.00 R.Mulligan: Sediment resuspension and transport in a large, shallow estuary

Bus departs at 5.30 PM from CCIW for Conference Dinner (6-9PM)

Tuesday, July 12, 2011

Session 4 Chair- Leon Boegman

8.30-9:15 Invited: Sally McIntyre: Mixing Dynamics in Lakes across Latitudes
9:15-9:40 A. Lorke: Effects of lock operation and ship traffic on sediment oxygen uptake in impounded rivers
9:40-10.05 J. Kreling: The influence of flooding events of the river Rhine on the anoxic hypolimnion of a river-connected lake
10.05-10:20 Coffee Break

Session 5 Chair- A. Wuest

10.20-10.45 C. Lemckert: Occasional enhanced loss of nutrient material through water supply reservoir overflows
10.45-11.10 A.T. King: Some new methods for estimating hydraulic residence time from passive tracer release studies
11.10-11.35 A. Mack: Methane emissions from rivers – Results from sampling a 93-km longitudinal transect of the river Saar, Germany
11.35-12.00 D. Bouffard: Impact of small scale physical processes on the oxygen depletion in central Lake Erie
12:00-1:00 PM Lunch Mike Head- Precision Measurements Engineering

Session 6 Chair- Myriam Bormans

1-1:25 A. Wuest: Particle- and temperature-related effects by a possible extension of the Grimsel pump-storage scheme on downstream Lake Brienz
1:25-1:50 R. Pieters: Flow and productivity in Kinbasket and Revelstoke reservoirs
1:50-2:15 S. Piccolroaz: A simplified model for deep water renewal in Lake Baikal
2:15-2.40 M. Wells: How the physical dispersion of ballast water influences the risk of aquatic invasive species establishment – field observations and modelling

Poster Session- Chair- Joe Ackerman

2:40-3:10 Poster Highlights(2-3 min for each poster presenter)
3:10-4:00 Refreshments & continuation of poster session

Wednesday, July 13, 2011

Session 7: Chair- Marek Stastna

8.30-9.15 Invited: Kevin Lamb : Internal Solitary Waves in Oceans and Lakes-theory, modelling and observations.
9.15-9.40 M. Preusse: Seasonal variation of solitary waves
9.40-10.05 Christopher Subich: Shear instabilities in internal solitary waves
10.05-10.20 Coffee Break

Session 8: Chair- Adolf Stips

10.20-10.45 M .Stastna: Flow in porous sediments induced by steady and unsteady internal waves
10.45-11:10 D. Wain: Internal wave driven transport of fluid away from the boundary of a lake
11-10-11.35 M. Coman: Shear induced convection above three sites with different slopes in the near shore benthic region of Lake Opeongo, Canada.
11.35-12.00 N. Demchenko: The permeability of the thermal bar for horizontal mixing
12.05-1:00 Lunch Mark Visit-RBR Limited

Session 9: Chair- Jinyu Sheng

1-1:25 C. Troy: Near-inertial Poincare waves in Lake Michigan
1:25-1:50 R. Velapour: Poincaré Waves in the Central Basin of Lake Erie
1:50-2:15 G. Arhonditsis: Integration of Bayesian inference techniques with mathematical modelling
2:15-2:40 A. Thompson: Detroit River Phosphorus Loading Determination
2:40-3:05 Y. Huang: Hydrothermal and Water Quality Model Calibration and Application to Evaluation of Land Use Change and Watershed Management Programs
3:05-3:30 A. Forrest: Along-shore currents as a potential mechanism for invasive species transport in Lake Tahoe, CA-NV USA
Bus departs at 3.45 PM from CCIW for wineries and Niagara Falls trip (4-10 PM)

Thursday, July 14, 2011

Session 10: Chair- Cary Troy

8.30-9.15 Invited: David J Schwab: Applications of Lagrangian (Particle Tracking) Methods in Hydrodynamic Modeling
9.15-9.40 J. Sheng: Numerical Study of Estuarine Circulation and Hydrodynamic Connectivity in the Pearl River Estuary of China using a Nested-Grid Coastal Circulation Model
9:40-10:05 Janos Jozsa: Chaotic advection in wind induced shallow basin flows: a 3D approach
10:05-10:20 Coffee Break

Session 11: Chair- George Arhonditsis

10.20-10.45 Adolf Stips: Climate change, does it happen as abrupt transition or as steady linear process?
10.45-11.10 Xing Fang: Year-round Lake Water Quality Model and Simulations of Minnesota Lakes under future climate scenarios
11.10-11.35 A. Martynov: Empirically-based parametrization of water mixing in 1D lake models, applied to the Great Lakes
11-35-12.00 N. Samal: Impact of climate change on reservoir thermal structures in the New York City Water Supply
12:05-1.00 Lunch Fabian Wolk -Rockland Scientific

Session 12: Chair- Mathew Wells

1.00-1.25 J. Wang: Great Lakes climate and ice research: Diagnosis and modelling
1.25-1:50 J. Shore: Sensitivity of the simulated Kingston-Basin Lake Ontario summer temperature profile from a finite volume model.
1:50-1:15 Carlo Scalo: Large-eddy simulation of oxygen transfer to organic sediment beds
2.15-2:40 L. F. Leon: Summary of Hydrodynamic and thermal modeling in the Laurentian and Polar Great Lakes
2:40-3:00 Coffee Break

Session 13: Chair- Janos Jozsa

3:00-3:25 F. Dupont: A NEMO-based modelling system for the Great Lakes
3:25-3:50 D. Steinmoller: The impact of numerical method choice on solutions to a dispersive shallow water model
3:50-4:15 W. Liu: Kelvin wave propagation around Point Pelee in Lake Erie
4:15-4:30 Closing Remarks (Alfred Wuest)

Poster Session (Tuesday PM)

1. Anton Baglaenko, Marek Stastna, Models of damping in layered models of lake dynamics: the effect on nonlinear steepening and wavetrain formation
2. Cossu, Remo and Wells, Mathew, Experimental Modeling of Flow Structures and Sedimentation processes in submarine Channels under the influence of Coriolis forces
3. A.J. Kettle and C. Hughes, Seasonal stratification of a shallow groundwater lake and groundwater input
4. H. Kheyrollah Pour and C.R. Duguay, Lake surface temperature of large northern lakes: A comparison between 1-D model simulations and MODIS satellite retrievals
5. Oveysy, A: Three-dimensional simulation of nutrient transport in the Bay of Quinte
6. Pernica, P. and Wells, M. Mixing and stratification in the epilimnion of Lake Opeongo
7. Amanjot Singh, Kate Hays, Jon Clayton, Paul Tripodo, Dan Banks, Jeff Wilson, Tatiana Koveshnikova, Jesse deJaeger, Dave Maunder, and Bruce Pinchin, Lake Ontario Integrated Shoreline Strategy: Objectives and Approach
8. Shiliang Shan and Jinyu Sheng, Application of a Nested-grid Ocean Circulation Model for Investigating Circulation, Flushing Time and Dispersion in Halifax Harbour and Adjacent Waters
9. Eric Siegel and Peter Rusello, High Resolution Doppler Profiler Measurements of Mean and Turbulent Velocities from Profiling Platforms
10. Yajun Sun and Mathew Wells, Dye release study on the physical mixing patterns in the St. Clair River, Ontario.
11. Quanrong Wang and Zhonghua Tang, A solution of transient groundwater flow response to tidal fluctuation in an aquifer-aquitard system considering the aquitard storage
12. Shastri Paturi, Leon Boegman, Sean Watt, Ram Yerubandi, Modelling the transport of municipal, industrial and tributary discharges in eastern Lake Ontario and upper St. Lawrence River
13. Josef Ackerman,
14. Jun Zhao, Numerical Study of Dispersion and Hydrodynamic Connectivity of Near-Surface Waters in Lake Huron
15. Padala Chittibabu, Yerubandi R. Rao , Modeling of October 2010 Storm Surge in Lake Winnipeg
16. Alexandrine Pannard, <u>Myriam Bormans</u> , Yvan Lagadeuc, Effects of small scale turbulence on the production of TEP (transparent exopolymeric particles) in freshwater cyanobacteria

