

**CONTACT
INFORMATION**

Jason.H.Davison@gmail.com
226-600-9740
JasonDavison.com

2535 SW 27th Avenue
Cape Coral, Florida 33914

EDUCATION**University of Waterloo**

Ph.D. Earth and Environmental Sciences, June 2017

Thesis: Incorporating Advanced Surface/Subsurface Processes in Mesoscale Climate Models

Advisors: Edward A. Sudicky and John C. Lin

Committee: David L. Rudolph and Young-Jin Park

Stanford University

M.S. Civil and Environmental Engineering, March 2011

Program: Environmental Fluid Mechanics and Hydrology

Research: Investing Heterogeneity with the L1-Norm

Advisor: Peter K. Kitanidis

Georgia Institute of Technology

B.S. Civil and Environmental Engineering, August 2008

EMPLOYMENT

Aquanty, Post-Doctoral Scientist, 2016–Current

University of Waterloo, Sessional Instructor, 2016–Current

University of Waterloo, Graduate Research Assistantship, 2011–2016

Stanford University, Graduate Research Assistantship, 2010–2011

Tetra Tech, Project Engineer, 2008–2009

TEACHING**University of Waterloo**

Instructor, Earth 458 Physical Hydrogeology, 2016 Fall and Spring

Co-Instructor, Earth 458 Physical Hydrogeology, 2013 Fall and Spring

Lead Teaching Assistant, Earth 458 Physical Hydrogeology, 2011–2015

Lead Teaching Assistant, Earth 458L Physical Hydrogeology Lab, 2011–2015

Stanford University

Teaching Assistant, CEE 101B Mechanics of Fluids, 2010

LEADERSHIP

Farvolden Committee, University of Waterloo, 2016–Current

Science on Google, Earth Science Moderator, 2012–Current

Earth Science Graduate Association, University of Waterloo, Vice President, 2013–2014

American Society of Civil Engineers, Georgia Tech, Vice President, 2007–2008

GRANTS

Industrial Research Assistance Program, 2017–2018

Biomass Accumulation Modeling: Principal Investigator, \$65,000

Ontario Centres of Excellence, TalentEdge Fellowship Program, 2016–2018

Great Lakes Modeling: Principal Investigator, \$126,000

AWARDS/HONORS

World Water Day Poster Award, University of Waterloo, 2016

Graduate Scholarship, University of Waterloo, 2013–2015

Steven Fritz Memorial Scholarship, University of Waterloo, 2013

Outstanding Poster Award, School of Engineering, Stanford, 2011

ASCE Member of the Year, Georgia Tech, 2008

Deans List, Georgia Tech, 2005–2008

Tower Award, Georgia Tech, 2005–2008

Eagle Scout, Boy Scouts of America, 2004

RESEARCH SKILLS	<p>Weather Research and Forecasting HydroGeoSphere MODFLOW AutoCAD ArcGIS MATLAB, R, and Fortran Spanish</p>
PROFESSIONAL SOCIETY	<p>American Geophysical Union European Geophysical Union International Association of Hydrogeologists</p>
CURRENT STUDENTS	<p>Shengde Yu, University of Waterloo, 2016–2017 Undergraduate Thesis: <i>Investigating Diffusion Coefficients in the Paris Basin</i> Yale Wang, University of Waterloo, 2016–2017 Undergraduate Thesis: <i>The Impacts of Climate Change on Groundwater</i></p>
PUBLICATIONS	<p>Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2017, <i>Full Coupling Between the Atmosphere, Surface and Subsurface for Integrated Hydrologic Simulation</i>, (Submitted to Journal of Advances in Modeling Earth Systems).</p> <p>Miller, K. L., S. J. Berg, J. H. Davison, E. A. Sudicky, P. A. Forsyth, 2017, <i>Efficient Uncertainty Quantification in Fully-Integrated Surface and Subsurface Hydrologic Simulations</i>, (Submitted to Advances in Water Resources).</p> <p>Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2017, <i>Fully Integrated California Basin Model</i>, (In preparation to submit to Water Resource Research).</p> <p>Chen, J., J. H. Davison, E. A. Sudicky, H. Hwang, Y. J. Park, S. Berg, S. Frey, R. Peltier, 2017, <i>Blueprint for Climate-Driven Simulation of Coupled Surface-Subsurface Hydrology at the Continental Scale: A Canadian Example</i>, (In preparation to submit to Water Resource Research).</p> <p>Davison, J. H., 2016, <i>Incorporating Advanced Surface and Subsurface Processes in Mesoscale Climate Models</i>, University of Waterloo, PhD Thesis.</p> <p>Fatichi S., E. R. Vivoni, F. Ogden, V. Y. Ivanov, B. Mirus, D. Gochis, C. W. Downer, M. Camporese, J. H. Davison, B. Ebel, N. Jones, J. Kim, G. Mascaro, R. Niswonger, P. Restrepo, R. Rigon, C. Shen, M. Sulis, and D. Tarboton, 2016, <i>An overview of motivations and challenges for distributed process-based modeling in hydrology</i>, Journal of Hydrology.</p> <p>Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2015, <i>Coupled Atmospheric, Land Surface, and Subsurface Modeling: Exploring Water and Energy Feedbacks in Three-Dimensions</i>, Advances in Water Resources.</p>
CONFERENCE PRESENTATIONS	<p>Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2016, <i>Fully Integrated Atmospheric, Surface, and Subsurface Model of the California Basin</i>, American Geophysical Union Fall Meeting.</p> <p>Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2016, <i>Integrated Hydrological Model of the California Basin</i>, The XXI International Conference Computational Methods in Water Resources.</p>

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2015, *A Fully-Integrated Framework for Terrestrial Water Cycle Simulation: Application to the San Joaquin Valley, California*, European Geophysical Union General Assembly.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2014, *Coupled Atmospheric and Hydrologic Modeling*, Knowledge and Models in Climate Science.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2013, *Vegetation Influence on Regional Climate Change: A 3D Integrated Atmospheric-Surface-Subsurface Analysis*, American Geophysical Union Fall Meeting.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2012, *Incorporating atmospheric boundary layer processes in an integrated surface/subsurface flow and transport model*, American Geophysical Union Fall Meeting.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2012, *Formulation and verification of coupled atmospheric and integrated surface/subsurface flow and transport models*, Students of the Water Institute Graduate Section.

CONFERENCE
POSTERS

Sutanudjaja E.H., H.E. Beck, J. Bosmans, N. Chaney, M. Clark, L.E. Condon, C. David, **J.H. Davison**, A. de Roo, P. Döll, N. Drost, S. Eisner, J.S. Famiglietti, M. Flörke, J.M. Gilbert, D.J. Gochis, H. Hendricks-Franssen, R.W. Hut, J. Keune, S. Kollet, R. Kumar, R.M. Maxwell, H. M. Schmied, M. Pan, O. Rakovec, J.T. Reager, L. Samaniego, J. Schellekens, E.A. Sudicky, S. Thober, T. Trautmann, L.P.H. van Beek, N. van de Giesen, E.F. Wood, M.F.P. Bierkens, 2016, *The HyperHydro (H^2) experiment for comparing different large-scale models at various resolutions*, European Geophysical Union General Assembly.

Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2015, *Integrated Hydrosystem Modeling of the California Basin*, American Geophysical Union Fall Meeting.

Davison, J. H., E. A. Sudicky, and J. C. Lin, 2015, *An Examination of the Applicability of Whites 1932 Method to Estimate Actual Evapotranspiration Rates from Diurnal Watertable Fluctuations*, International Association of Hydrogeologists, Waterloo Ontario.

Davison, J. H., H. Hwang, E. A. Sudicky, D.V. Mallia, and J. C. Lin, 2015, *Integrated Atmospheric, Surface, and Subsurface Water Cycle Modeling*, Integrated Hydrosystem Modelling Conference, Tübingen Germany.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2014, *Development of a fully integrated water cycle model: HydroGeoSphere-Weather Research and Forecasting (HGS-WRF)*, American Geophysical Union Fall Meeting.

Davison, J. H., H. Hwang, E. A. Sudicky, and J. C. Lin, 2013, *Integrated Climate and Hydrological Simulations: Evaluation of Sub-Time Stepping*, World Water Day, University of Waterloo, Waterloo Ontario.

Davison, J. H. and P. K. Kitanidis, 2011, *Subsurface Imaging: Challenges of Interpolation with High Resolution Direct Push Methods*, California Water and Environmental Modeling Forum Annual Meeting, Asilomar California.

Davison, J. H. and P. K. Kitanidis, 2011, *L1-Norm Subsurface Imaging for Large Data Sets*, Stanford Opportunity Job Fair, Stanford California.

REFERENCES

Edward A. Sudicky

Department of Earth and Environmental Sciences
University of Waterloo
Professor
Sudicky@sciborg.uwaterloo.ca
519-888-4567, ext. 36271
200 University Ave W
Waterloo, ON N2L 3G1, Canada

John C. Lin

Department of Atmospheric Sciences
University of Utah
Professor
John.Lin@utah.edu
801-581-7530
201 Presidents Cir
Salt Lake City, UT 84112

Steven Berg

Aquanty Inc.
President and CEO
sberg@aquanty.com
519-279-1080
564 Weber Street North, Unit 12
Waterloo, ON, N2L 5C6

David L. Rudolph

Department of Earth and Environmental Sciences
University of Waterloo
Professor
DRudolph@uwaterloo.ca
519-888-4567, ext. 36778
200 University Ave W
Waterloo, ON N2L 3G1, Canada