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### **RESEARCH INTERESTS**

Investigating the interaction of physical hydrological systems and ecosystems in the context of surface water – groundwater interactions and climate change in the cryosphere using a combination of in-situ data collection networks, time-series analysis, and physically based deterministic modeling.

### **EDUCATION**

**University of Colorado, Boulder, CO**

Doctorate of Philosophy in Civil Engineering, focus in Water Resources, 2016 (expected)

Advisor: Michael N. Gooseff

**The Pennsylvania State University, State College, PA**

Masters of Science in Civil Engineering, focus in Water Resources, 2012

Advisor: Michael N. Gooseff

Bachelor of Civil Engineering, focus in Water Resources, 2010

### **EMPLOYMENT HISTORY**

**Institute of Arctic and Alpine Research**

Research Assistant, 2015 – 2016

**Department of Civil Engineering, Colorado State University**

Research Assistant, 2013 – 2015

**Department of Civil and Environmental Engineering, The Pennsylvania State University**

Research Assistant, 2010 - 2013

### **AWARDS AND HONORS**

**\* American Geophysical Union Horton (Hydrology) Research Grant**

Awarded December 2015, \$10,000

**University of Colorado, United Government of Graduate Students Travel Grant**

Awarded October 2015, \$300

**American Geophysical Union 2014 Fall Meeting Outstanding Student Paper Award**

### **RESERCH EXPERIENCE**

- Development, implementation, and maintenance of long-term hydrological observational networks
- Modeling reactive solute transport in streams and rivers with OTIS (USGS One-Dimensional Transport with Inflow and Transient Storage model).
- Land-surface moisture and energy balance modeling with NCAR Community Land Model
- Numerical modeling of permafrost thermodynamics with UAF Geophysical Institute Permafrost Laboratory (GIPL) Model
- Numerical model development with MATALB
- Four field seasons with the McMurdo Dry Valleys Long-Term Ecological Research Project.
  - (Nov. – Feb. 2012-13) Member of Stream Team, maintained a 19-site stream gauge network, frequently sampled stream chemistry and discharge
  - (Jan. 2014) Designed and constructed a 5-site active layer monitoring network, completed January glacier mass balance measurements
  - (Nov. 2014) Maintained 5-site active layer monitoring network, completed November glacier mass balance measurements
  - (Jan – Feb. 2016) Designed and implemented a groundwater sampling network for Horton Research Grant Project, collected stream algae samples, completed January glacier mass balance measurements
- Three field seasons (Jun. – Sept. 2010-12) with NSF funded Changing Seasonality in Arctic Stream Networks Project

- Designed and conducted nutrient enrichment injection experiments
- Designed and implemented a 3-stream surface water and groundwater monitoring networks

### **TEACHING EXPERIENCE**

- **Surface Water – Groundwater Interactions**, Colorado State University, 2015, Substitute Instructor
- **Groundwater Hydrology**, Colorado State University, 2014, Substitute Instructor
- **Open Channel Hydraulics**, The Pennsylvania State University, 2011 & 2012, Substitute Instructor
- **Hydrogeophysics Field Methods**, The Pennsylvania State University, 2011, field instructor

### **REFEREED JOURNAL ARTICLES**

**Wlostowski**, A. N., M. N. Gooseff, and T. Wagener (2013), Influence of constant rate versus slug injection experiment type on parameter identifiability in a 1-D transient storage model for stream solute transport, *Water Resour. Res.*, 49, 1184–1188, doi:10.1002/wrcr.20103.

**Wlostowski**, A., M. N. Gooseff, D. M. McKnight, C. Jaros, and W. B. Lyons (2016a), Patterns of hydrologic Connectivity in the McMurdo Dry Valleys, Antarctica: a synthesis of 20 years of hydrologic data, *J. Hydrol.*, *in press*, doi:10.1002/hyp.10818.

**Wlostowski**, A. N., M. N. Gooseff, D. McKnight, and B. Lyons (2016b), Continuous modeling of hyporheic exchange explains chemostasis in glacial meltwater streams, Antarctica, *In-Review Water Resour. Res.*

**Wlostowski**, A. N., M. N. Gooseff, W. B. Bowden, and W. M. Wollheim (2016c), Stream tracer breakthrough curve decomposition into mass fractions: A simple framework to analyze and compare conservative solute transport processes, *Limnol. Oceanogr. Methods*, *In-Review*.

González-Pinzón, R., A. S. Ward, C. E. Hatch, A. N. **Wlostowski**, K. Singha, M. N. Gooseff, R. Haggerty, J. W. Harvey, O. A. Cirpka, and J. T. Brock (2015), A field comparison of multiple techniques to quantify groundwater – surface-water interactions, *Freshw. Sci.*, 34(August 2014), 139–160, doi:10.1086/679738.

McKnight, D. M., K. Cozzetto, J. D. S. Cullis, M. N. Gooseff, C. Jaros, J. C. Koch, W. B. Lyons, R. Neupauer, and A. **Wlostowski** (2015), Potential for real-time understanding of coupled hydrologic and biogeochemical processes in stream ecosystems: Future integration of telemetered data with process models for glacial meltwater streams, *Water Resour. Res.*, 51, 1–28, doi:10.1002/2015WR017198.A.

Gooseff, M. N., A. N. **Wlostowski**, D. M. McKnight, and C. Jaros (2016), Hydrologic connectivity and implications for ecosystem processes - Lessons from naked watersheds, *Geomorphology*.

**Wlostowski**, A. N., E. M. Smull, and J. Quebbeman (2016c), Water resources in a changing climate, *Eos (Washington. DC)*, 97, doi:10.1029/2016E0043385.

**Wlostowski**, A. N., S. Saia, and C. Morris (2016d), Student and Early Career AGU Members Sound off on the “Softer Side” of Scientific Careers, *Eos*, *In-Review*.

### **CONFERENCE PRESENTATIONS (first author only)**

**Wlostowski**, A. N., M. N. Gooseff, W. B. Bowden, W. M. Wollheim, C. Treat, and B. L. McGlynn (2010), Channel water balances in Arctic tundra streams, in *American Geophysical Union Fall Meeting*, San Francisco, CA. Poster presentation.

**Wlostowski, A. N., M. N. Gooseff, W. B. Bowden, and W. M. Wollheim (2011),** What are the controls on surface and hyporheic transient storage in Alaskan tundra streams?, in *American Geophysical Union Fall Meeting*, San Francisco, CA. Oral presentation.

**Wlostowski, A. N., M. N. Gooseff, and E. M. Smull (2012),** Spatial and temporal controls on streamflow generation in a high arctic catchment: how does water accumulate along the valley floor?, in *LTER All Scientist Meeting*, Estes Park, CO. Poster presentation.

**Wlostowski, A. N., E. M. Smull, M. N. Gooseff, W. B. Bowden, W. M. Wollheim, and K. A. Whittinghill (2013c),** Spatial and temporal controls on streamflow generation in a high arctic catchment: How does water accumulate along the valley floor?, in *European Geophysical Union Spring Meeting*, Vienna, Austria. Oral presentation.

**Wlostowski, A. N., M. N. Gooseff, D. M. McKnight, C. Jaros, and W. B. Lyons (2013a),** Hydrologic connectivity in the McMurdo Dry Valleys of Antarctica: System function and changes over two decades, in *American Geophysical Union Fall Meeting*, San Francisco, CA. Oral presentation.

**Wlostowski, A. N., M. N. Gooseff, and D. M. McKnight (2014),** How do hyporheic zones mediate stream solute loads? Using Antarctic glacial melt streams to simplify the problem, in *American Geophysical Union Fall Meeting*, San Francisco, CA. Oral presentation.

**Wlostowski, A. N., and M. N. Gooseff (2015),** Climate sensitivity of the abiotic soil environment in the McMurdo Dry Valleys, Antarctica, in *American Geophysical Union Fall Meeting*, San Francisco, CA. Poster presentation.

#### **Professional Service**

- American Geophysical Union Hydrology Student Subcommittee (H3S) student member. Co-organized two Pop-Up sessions and the Student and Early Career Conference at the 2015 AGU Fall Meeting.

#### **Professional Society Membership**

- American Geophysical Union
- Geological Society of America