

MAKSYM GUSYEV

PhD Candidate

Groundwater Lab # 426

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EDUCATION

- 2004 – present* **PhD Candidate** in Environmental Science Program.
School of Public and Environmental Affairs, Indiana University,
Bloomington, IN.
Defense of my dissertation is scheduled on November 2009.
- 2002 – 2004* **Master Degree** in Environmental Science with dual concentration in
Water Resources and Toxicology and Risk Assessment.
School of Public and Environmental Affairs, Indiana University,
Bloomington, IN.
- 1995 – 2001* **Engineer Diploma** in Ecology and Environmental Protection
Bachelor's Degree in Chemical Engineering
Chemical Department, National Polytechnic University of Ukraine
(NPUU), Ukraine.

AWARDS

- 2002 –2004* **Edmund S. Muskie Fellow**
Fellowship program sponsored by U.S. Department of State.

INVITED PRESENTATIONS

- April 2009* “Landscape Scale Regional Modeling with Local Details”, Department of
Engineering, Churchill College, University of Cambridge, UK

TEACHING EXPERIENCE

School of Public and Environmental Affairs, IU, Bloomington

- Spring 2009* **Associate Instructor**, scheduled to teach the course,
“Introduction to Environmental Sciences” (E272). Undergraduate course.
- Fall 2008* **Associate Instructor**, taught half of the course,
“Introduction to Environmental Sciences” (E272). Undergraduate course.
- Spring 2008* **Associate Instructor**
“Introduction to Groundwater Hydrology” (E411). Undergraduate course.
- Fall 2004, 2005,
2006, 2007* **Teaching Assistant**
“Groundwater Flow Modeling” (E554). Graduate course.

LECTURES

In E554 “Groundwater Flow Modeling” class, guest lectures on following topics:

- Method of Images and Superposition;
- Incorporating Vertical hydraulic Conductivity into 2-D Models;
- Line-sink and Line-doublet in Analytic Element Method;
- Analytic Element Method and GLOW demonstrations;
- Finite-Differences and MODFLOW demonstration;

PROFESSIONAL EXPERIENCE

Fall 2008 – present **Researcher**, Groundwater Lab, *School of Public and Environmental Affairs, Indiana University, Bloomington.*
Investigating groundwater table fluctuations due to changes in precipitation and groundwater withdrawals at the Sheyenne National Grassland, North Dakota, USA.

Fall 2004 – present **Research Assistant**, Groundwater Lab, *School of Public and Environmental Affairs, Indiana University, Bloomington.*
New theory and modeling technology development in Groundwater Hydrology.

October 2006 – August 2007 **Consultant**, *Haitjema Consulting, Bloomington, IN*
Forensic investigation of wetlands' functions and hydrology destroyed in *Rapano's Case (U.S. v Rapano's)*.

November 2004- May 2005 **Researcher**, Parliamentary Development Project for Ukraine, *School of Public and Environmental Affairs, Indiana University, Bloomington.*
Investigated and summarized environmental laws and regulations on solid waste management in the USA.

May – August 2003 **Intern/Consultant**, *White Bluff Steam Electric Station, Entergy Arkansas Inc., AR, USA.*
Evaluation and improvement of Steam Electric Station water treatment system and groundwater investigation in the White Bluff Area, Arkansas.

1998 - 2002 **Vice-president and Coordinator**, Non-Governmental Organization "Ukrainian Youth Environmental League", *Kiev, Ukraine.*
Responsible for strategic planning and projects development; organizational development; financial and administrative management.

2001 – 2002 **Researcher and Specialist**, *Laboratory of National Water Company "ECOSOFT", Kiev, Ukraine.*
Water quality data analysis; development and implementation of engineering solutions related to the water purification quality problems.

PAPERS IN PRESS(1)

Haitjema H.M., **Gusyev M.** and M. Wilsnack. (2009) "*Truncating cross-sectional groundwater models under wetlands*", *Journal of Hydrologic Engineering*, October 2009.

PAPERS IN REVIEW (1)

Henk Haitjema, Daniel Feinstein, Randy Hunt, and **Maksym Gusyev.** "A *Hybrid Finite Difference and Analytic Element Model for detailed surface – groundwater modeling on a regional scale*". The manuscript is resubmitted in *Ground Water*, October 2009.

PAPERS IN PREPARATION (1)

Gusyev M. and H.M. Haitjema. "An exact solution to a line-sink in a leaky aquifer", The manuscript will be submitted to *Advances in Water Resources* in November 2009.

CONFERENCE PROCEEDINGS (1)

Gusyev M. and H.M. Haitjema. (2006). "A new Formulation for Conjunctive Flow in Wetlands and Underlying Aquifer". Proceedings 5th International Conference on the Analytic Element Method (ICAEM), Manhattan, KS, May 14-17.

CONFERENCE PRESENTATIONS (3)

"Replacing upper MODFLOW layers with an analytic element model: An alternative to grid refinement". H.M. Haitjema, R. Hunt, D. Feinstein, **M. Gusyev**, Feature Presentation for the "MODFLOW and More 2008: Ground Water and Public Policy Conference Proceedings", International Ground Water Modeling Center (IGWMC), Colorado School of Mines, May 18-21, 2008.

Gusyev M. and H.M. Haitjema. (2007). "Poster: An exact solution to a line-sink in a leaky aquifer", *Eos Trans. American Geophysical Union*, 88 (52), Fall Meeting Suppl., Abstract H13B-1254.

Gusyev M. and H.M. Haitjema. (2006). "A new Formulation for Conjunctive Flow in Wetlands and Underlying Aquifer". 5th International Conference on the Analytic Element Method (ICAEM), Manhattan, KS, May 14-17.

OTHER PUBLICATIONS (2)

H.M. Haitjema and **M. Gusyev** (2006). "Source Water Protection in the USA: Ensuring Clean Drinking Water", Investigation Report to Seoul University, South Korea.

Thesis for Engineer Diploma (2001): "Contamination of Fe, Mn, N and C in Kiev and Kanev man-made seas". (In Ukrainian)

SERVICES

Peer Reviewer in Journal of Hydrology

PROFESSIONAL SOCIETIES

American Geophysical Union (AGU)
Indiana Water Resources Association (IWRA)
European Geophysical Union (EGU)
Society of Wetland Scientists (SWS)

COMPUTER SKILLS

Programming Fortran, MATLAB, Python, Visual C++, and Visual Basic.
Proficient with Groundwater Vistas, GFLOW, ArcView/ArcGIS, R, SAS/SPSS, Surfer, LaTeX, and Microsoft Office.

LANGUAGES

English Fluent
Russian, Ukrainian Native
Japanese Basic

NATIONALITY Ukrainian

AGE 30