Amalia Kokkinaki

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Education

Ph.D. Civil Engineering, University of Toronto, 2007 - present (current GPA 3.95/4.00)
Advisor: Dr. Brent E. Sleep

M.A.Sc. Civil Engineering, University of Toronto, 2005 - 2007 (GPA 4.00/4.00)
Thesis title: *"Modelling of Enhanced Anaerobic Biodegradation of Trichloroethene"*
Advisor: Dr. Brent E. Sleep

B.Sc. Environmental Engineering, Technical University of Crete, 2000 - 2005 (GPA 9.32/10)
Thesis title: *"Mobility of Copper in Greenhouse Soils"*
Advisor: Dr. Nikolaos N. Nikolaidis

Research Interests

My research interests are in the area of hydrogeology and specifically on numerical modelling of groundwater flow and transport and remediation methods. Currently, my research focuses on the impact of soil heterogeneity on the effectiveness of groundwater remediation techniques and the related processes. I am primarily interested in the use of inverse modelling techniques for the characterization of highly heterogeneous systems and particularly in statistical methods that can integrate data of various types and scales. My research interests also include multi-phase flow and transport in soil, dispersion/diffusion processes as well as bioremediation of organic compounds.

Publications

Journals

Kokkinaki, A., Tzoraki, O., Tyrovola, K. and Nikolaidis, N., (2007) Mobility of copper in greenhouse soils, Journal of Hazardous Materials, 149(3):557-61

Conferences

Kokkinaki, A., Sleep, B., (2011) Mass transfer limited enhanced bioremedation at DNAPL source zones: A numerical study., AGU Fall meeting, Oral Presentation, *Control ID 1196839*, San Francisco, California, USA

Kokkinaki, A., Sleep, B,. Roberts, J. and Dworatzek, S. (2011) Numerical Modelling of DNAPL enhanced biodegradation under non-equilibrium mass transfer conditions., 5^{th} European Bioremediation Conference, Platform presentation, Chania, Greece

Kokkinaki, A., Sleep, B., Chambers, J., Cirpka, O. and Nowak, W. (2010) On the value of incorporating spatial statistics in large-scale geophysical inversions: the SABRe case., AGU Fall meeting, Poster presentation, San Francisco, California, USA

Kokkinaki, A., Sleep, B.E., Dearden, R. and Wealthall G. (2009) Identification of preferential groundwater flow pathways from local tracer breakthrough curves., AGU Fall Meeting, Poster presentation, San Francisco, California

Kokkinaki, A., Sleep, B.E., Bartlett, C.L., Harkness, M., Mack, E.E. and Dworatzek, S., (2008) Simulation of TCE DNAPL (Dense Non Aqueous Phase Liquid) distribution and TCE anaerobic reductive dechlorination in soil columns., Poster presentation, 6^{th} International Battelle Conference, Monterey, California

Kokkinaki, A., Sleep, B.E., Bartlett, C.L., Kouznetsova, I., Gerhard, J.I., Mao, X., Robinson, C. and Barry, D.A. (2008) Multi-scale modelling of enhanced anaerobic bioremediation of Trichloroethene., Platform presentation, 6^{th} International Battelle Conference, Monterey, California

Kokkinaki, A., Tzoraki, O., Tyrovola, K. and Nikolaidis, N., (2006) Mobility of copper in greenhouse soils, Poster presentation, 8^{th} International Conference on Protection and Restoration of the Environment, Chania, Greece

Technical reports

Kokkinaki, A., Sleep, B.E., Bartlett, C.L., Kouznetsova, I., Gerhard, J.I., Robinson, C. and Barry, D.A. (2009). Insights and modelling tools for designing and improving chlorinated solvent bioremediation applications, CL:AIRE Research Bulletin.

Employment

University of Toronto — Toronto, Canada
Research Assistant — 09/2005 - now
Since 2005, I have been working as a research assistant at the University of Toronto under the supervision of Dr. Brent E. Sleep. My work has been part of an international collaborative research and development project, known as the SABRe (Source Area in situ Bioremediation) project and involves conducting numerical simulations of laboratory and field experiments, data analysis and interpretation and literature surveys, compiling the corresponding reports and presenting the results in scientific venues.

University of Toronto — Toronto, Canada
Teaching Assistant — 09/2005 - now
During my graduate studies, I have worked as a teaching assistant for eight academic terms. My duties as a teaching assistant include conducting tutorials, marking assignments and exams, invigilating exams, as well as consulting students on course-related work.

University of Toronto — Toronto, Canada
Course Instructor — 01/2010 - 04/2010
During the 2010 winter term, I worked as the instructor of an undergraduate course (CME263: Probability and statistics for civil engineers) at the department of Civil Engineering at the University of Toronto. My duties included preparing lectures, assignments, exams and marking student's work as well as conducting the lectures and mentoring the students on problems related to the course.

University of Toronto — Toronto, Canada
Course Instructor — 09/2008 - 12/2008
During the 2008 fall term, I worked as the instructor of a graduate level course (CIV:1504: Probability and statistics for civil engineers) at the department of Civil Engineering. My duties included preparing lectures, assignments, exams and marking student's work as well as conducting the lectures and mentoring the students on research problems related to the course.

Technical University of Crete — Chania, Greece
Research/Laboratory Assistant — 06/2004 - 09/2004
This work experience was obtained during the summer term of the fourth year of my undergraduate studies. My duties involved laboratory work and computer modelling with geochemical software.

Teaching Experience

CIV1504: Probability ans Statistics for Civil Engineers (teaching assistant) - *Fall 2010, Fall 2011*

CIV549: Groundwater Flow and Contamination (teaching assistant) - *Fall 2009*

CIV1504: Probability ans Statistics for Civil Engineers (instructor) - *Fall 2008*

CIV 263: Probability Theory for Civil Engineering (instructor) - *Winter 2010*

CIV 263: Probability Theory for Civil Engineering (teaching assistant) - *Winter 2006 - 2009, 2011*

CIV 261: Engineering Math I (teaching assistant) - *Fall 2007*

CIV 550 : Water Resources Engineering (teaching assistant) - *Fall 2006*

Honors and Grants

University of Toronto — Toronto, Canada
Queen Elizabeth II Graduate Scholarship in Science and Technology — 09/2011 - 09/2012
Position: PhD student at the University of Toronto.

University of Toronto — Toronto, Canada
Doctoral Completion Award — 09/2011 - 09/2012
Position: PhD student at the University of Toronto.

University of Toronto — Toronto, Canada
Ontario Graduate Scholarship — 09/2010 - 09/2011
Position: PhD student at the University of Toronto.

University of Toronto — Toronto, Canada
Research Fellowship — 09/2006 - 09/2011
Position: MASc and PhD student at the University of Toronto.

University of Toronto — Toronto, Canada
Connaught Scholarship — 09/2005 - 09/2006
Prestigious entrance award intended to attract excellent international doctoral-stream students.
Position: MASc student at the University of Toronto.

Technical University of Crete — Athens, Greece
Technical Chamber of Greece award — 09/2001 - 08/2005
Academic award for top GPA in each of the years at the department of Environmental Engineering.

Technical University of Crete — Athens, Greece
Greek State Scholarship Foundation award — 09/2001 - 08/2005
Academic award for top GPA in each of the years at the department of Environmental Engineering.

Memberships

Canadian Geophysical Union

American Geophysical Union

Association of Environmental Engineering and Science Professors

Skills

Language skills: English (fluent), Greek (native), German (adequate)

Computer skills: Fortran, Matlab, Maple, Modflow, GMS, MINEQL+, SGEMS, Surfer

Operating Systems: Windows, Linux, Unix, MacOS