

Department of Civil and Environmental Engineering
200 College Avenue, 113 Anderson Hall
Tufts University, Medford, Massachusetts 02155

Phone: 617.627.4286
Fax: 617.627.4646
andrew.ramsburg@tufts.edu

Education:

Georgia Institute of Technology	Environmental Engineering	Ph.D.	2002
Georgia Institute of Technology	Environmental Engineering	M.S.	1999
Georgia Institute of Technology	Chemical Engineering	B. ChE.	1997

Professional Appointments:

2006-present	Assistant Professor	Tufts University
2004-2006	Research Assistant Professor	Tufts University
2002-2003	Post-Doctoral Research Fellow	University of Michigan

Selected Publications (from over 25):

† advisee, * corresponding author

Long, T.[†] and C.A. Ramsburg*. 2011. Encapsulation of nZVI Particles Using a Gum Arabic Stabilized Oil-in-Water Emulsion. *Journal of Hazardous Materials*, Vol. 189, no. 3, 801-808. doi: 10.1016/j.jhazmat.2011.02.084

Ramsburg, C.A.* , J.A. Christ, S.R. Douglas[†], and A. Boroumand[†]. 2011. Analytical Modeling of Degradation Product Partitioning Kinetics in Source Zones Containing Entrapped DNAPL, *Water Resources Research*, Vol. 47, no. 3, W03507, doi:10.1029/2010WR009958

Ramsburg, C.A.* , C.E. Thornton[†], and J.A. Christ. 2010. Degradation Product Partitioning in Source Zones Containing Chlorinated Ethene DNAPL. *Environmental Science & Technology*. Vol. 44, no. 23, 9105-9111. doi: 10.1021/es102536f

Berge, N.D.[†] and C.A. Ramsburg*. 2010. Iron-Mediated Trichloroethene Reduction within Non-Aqueous Phase Liquid. *Journal of Contaminant Hydrology*. Vol. 118, no. 3-4, 105-116. doi: 10.1016/j.jconhyd.2010.07.006

Christ, J.A.* , C.A. Ramsburg, K.D. Pennell and L.M. Abriola. 2010. Predicting DNAPL Mass Discharge from Pool-Dominated Source Zones. *Journal of Contaminant Hydrology*. Vol. 114 no. 1-4, 18-34. doi: 10.1016/j.jconhyd.2010.02.005

Berge, N.D.[†] and C.A. Ramsburg*. 2009. Oil-in-Water Emulsions for Encapsulated Delivery of Reactive Iron Particles. *Environmental Science and Technology*. Vol. 43, no. 13, 5060-5066. doi: 10.1021/es900358p

Crocker, J.J.[†], N.D. Berge[†], and C.A. Ramsburg*. 2008. Encapsulated Delivery of Reactive Iron Particles using Oil-in-Water Emulsions. *In: GQ07: Securing Groundwater Quality in Urban and Industrial Environments*, Ed. Trefry, M.G., IAHS Publication No. 324, pp. 242-249. ISBN:978-1-901502-79-4

Li, Y., L.M. Abriola, T.J. Phelan, C.A. Ramsburg, and K.D. Pennell*. 2007. Experimental and Numerical Validation of the Total Trapping Number for Prediction of Entrapped

DNAPL Mobilization. *Environmental Science and Technology*. Vol. 41, no. 23, 8135-8141. doi: 10.1021/es070834i

Christ, J.A.* , C.A. Ramsburg, K.D. Pennell, and L.M. Abriola. 2006. Estimating Mass Discharge from DNAPL Source Zones using Upscaled Mass Transfer Coefficients: An Evaluation using Multiphase Numerical Simulations. *Water Resources Research*, Vol. 42, W11420, doi:10.1029/2006WR004886

Ramsburg, C.A., K.D. Pennell, L.M. Abriola* , G. Daniels, C.D. Drummond, M. Gamache, H-L. Hsu, E.A. Petrovskis, K.M. Rathfelder, J.L. Ryder, and T.P. Yavaraski. 2005. A Pilot-Scale Demonstration of Surfactant-Enhanced PCE Solubilization at the Bachman Road Site: (2) System Operation and Evaluation. *Environmental Science and Technology*. Vol. 39, no. 6, 1791-1801. doi: 10.1021/es049563r

Christ, J.A., C.A. Ramsburg, L.M. Abriola* , K.D. Pennell, and F.E. Löffler. 2005. Coupling Aggressive Mass Removal with Microbial Reductive Dechlorination for Remediation of DNAPL Source Zones – A Review and Assessment. *Environmental Health Perspectives*, Vol. 113, no. 4, 465-477. doi:10.1289/ehp.6932

Ramsburg, C.A.* , L.M. Abriola, K.D. Pennell, F.E. Löffler, M. Gamache, B.K. Amos, and E.A. Petrovskis. 2004. Stimulated Microbial Reductive Dechlorination following Surfactant Treatment at the Bachman Road Site. *Environmental Science and Technology*, Vol. 38, no. 22, 5902-5914. doi: 10.1021/es049675i

Ramsburg, C.A. and K.D. Pennell*. 2002. Density-Modified Displacement for DNAPL Source Zone Remediation: Density Conversion and Recovery in Heterogeneous Aquifer Cells. *Environmental Science and Technology*. Vol. 36, no.14, 3176-3187. doi: 10.1021/es011403h

Ramsburg, C.A. and K.D. Pennell*. 2001. Experimental and Economic Assessment of Two Surfactant Formulations for Source Zone Remediation at a Former Dry Cleaning Facility. *Ground Water Monitoring and Remediation*. Vol. 21 no. 4, 68-82. doi: 10.1111/j.1745-6592.2001.tb00643.x

Selected Awards and Honors

2007 Editors' Citation for Excellence in Refereeing for *Water Resources Research*
Outstanding Student Paper Award (as advisor of J.J. Crocker), Joint Assembly, AGU 2007
Project of the Year Award (as a co-investigator), SERDP Project ER-1293, 2006
Best Ph.D. Thesis Award, Georgia Institute of Technology Chapter of Sigma Xi, 2003
Michigan Teaching Fellow, Center for Research on Teaching and Learning, U of M 2003

Selected Research Projects

Exploration of the Mechanisms Controlling Emulsion-Based Alkalinity Release during Subsurface Remediation, National Science Foundation Award CMMI-1000714, April 2010 – March 2013, PI

Pharmaceutical Biotransformation during Nitrification: Gaining Mechanistic Insight by Understanding the Microbial Community, Tufts University, Faculty Research Awards Committee, October 2010 – September 2011, PI

Multi-modal, Shape-based Inverse Methods for the Characterization of DNAPL Source Zone Architecture, National Science Foundation Award EAR-0838313, February 2009 – January 2012, co-PI with Eric L. Miller (PD, Tufts), and Linda M. Abriola (Tufts)

Metric Identification and Protocol Development for Characterizing DNAPL Source Zone Architecture and Associated Plume Response, Strategic Environmental Research and Development Program Project ER-1612, April 2008 – December 2012, co-PI with Linda M. Abriola (PD, Tufts), John A. Christ (United States Air Force Academy), Eric L. Miller (Tufts), and Kurt D. Pennell (Tufts)

Exploration of the Interplay between Contaminant Partitioning and Biotransformation in Multiphase Porous Media, National Science Foundation Award EAR-0711344, September 2007 – August 2010, PI with John A. Christ (co-PI, United States Air Force Academy),

Development and Optimization of Targeted Nanoscale Iron Delivery Approaches for Treatment of NAPL Source Zones, Strategic Environmental Research and Development Program Project ER-1487, April 2006 – December 2010, co-PI with Linda M. Abriola (PD, Tufts), and Kurt D. Pennell (Tufts)

Representative Service Activities

Associate Editor, *Vadose Zone Journal*, 2011-2013

Associate Editor, *Environmental Engineering, Engineering Pathway*, 2007-2010

Review Panels: NSF (CBET), EPA (STAR Graduate Fellowship & SBIR), DOE, SERDP, Premier Award

Organizational Service: Unsaturated Zone Committee (AGU), Education Committee (AEESP), Student Services Committee (AEESP)

University Service: Graduate Studies Committees (SOE & CEE), Campus Planning and Development Committee, Bioengineering Program Committee

Reviewer for: *Environmental Science & Technology*, *Water Resources Research*, *Advances in Water Resources*, *Ground Water*, *Journal of Contaminant Hydrology*, *Chemical Engineering Journal*, *Journal of Environmental Engineering*, *Journal of Hazardous Materials*, *Vadose Zone Journal*, *Chemosphere*, *Journal of Geotechnical and Geoenvironmental Engineering*, *Environmental Engineering Science*, *Environmental Progress*

Professional Affiliations

American Chemical Society (ACS), American Geophysical Union (AGU), American Institute of Chemical Engineers (AIChE), American Society for Engineering Education (ASEE), Association of Environmental Engineering and Science Professors (AEESP), International Society for Porous Media (InterPore), International Water Association (IWA), National Ground Water Association (NGWA)

Professional Certifications

Engineer in Training (EIT), Georgia

HAZWOPER, 40-Hour Certification (May 2000 – present)