

Biographical Sketch: Ming-Kuo Lee

Robert B. Cook Professor, Hydrogeologist/Geochemist
Department of Geosciences, Auburn University

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A. Professional Preparation

Ph.D, Geology, 1993, University of Illinois at Urbana-Champaign

M.S., Geology, 1990, University of Illinois at Urbana-Champaign

B.S., Geology, 1984, National Taiwan University

B. Appointment

8/2010-present Robert Cook Professor, Department of Geosciences, Auburn U.

8/2006-present Professor, Department of Geology & Geography, Auburn University

5/2007-8/2007 Summer Research Faculty, National Cheng Kung University, Taiwan

8/2000-8/2006 Asso. Professor, Department of Geology & Geography, Auburn University

5/2001-8/2001 Summer Research Faculty, Institute of Earth Sciences, Academia Sinica,
Taiwan

5/1999-8/1999 Summer Research Faculty, Computational Science and Engineering
Program, Florida State University

8/1995-8/2000 Assistant Professor, Department of Geology, Auburn University

1/1994-8/1995 Visiting Assistant Professor, Department of Geology, Temple University

1/1993-1/1994 Post-doctorate Fellow, ARCO Exploration and Production Technology

C. Publications (*Denotes Student Co-author)

Relevant Products

Wang, Y., Gu, B., **Lee, M.-K.**, Jiang, S., Xu, Y., 2014, Isotopic evidence for anthropogenic impacts on aquatic food dynamics and mercury cycling in a subtropical wetland ecosystem system in US, *Science of the Total Environment*, 487, 557-564.

Lee M.-K., Natter, M., Keevan, J., Guerra, K., Saunders, J.A., Uddin, A., Humayun, M., Wang, Y., Alison R. Keimowitz, A.R., 2013, Assessing effects of climate change on biogeochemical cycling of trace metals in alluvial and coastal watersheds, *British Journal of Environmental and Climate Change*, 3, 44-66.

Lee, M.-K., Marllin S., Fielman, K., Marzen, L., Lin, Y., Birkhead, R., Miller, C., Norgaard, P., Obley, M., Cox, J., Steltenpohl, L., Wheelles, E., Wooten, M., 2012, Bring global climate change education to Alabama Classroom, *Handbook for Climate Change Mitigation*, Springer, pp. 1983-2028.

Natter*, M., Keevan*, J., Keimowitz, A.R., Okeke, B., Wang, Y., Son, A., and **Lee, M.-K.** 2012, Level and degradation of Deepwater Horizon spilled oil in coastal marsh sediments and pore-water, *Environmental Science and Technology*, 46, 5744-5755.

Lee, M.-K., Griffin*, J., Saunders, J.A., Wang, Y., Jean, J., 2007, Reactive transport of trace elements and isotopes in Alabama coastal plain aquifers, *Journal of Geophysical Research*, 112, G02026, doi:10.1029/2006JG000238.

Other Products

- Looper*, J., Cotto, A., Kim, B., **Lee, M.-K.**, Liles, M.R., Ní Chadhain, S.N., and Son, A., 2013, Microbial community analysis of Deepwater Horizon oil-spill impacted sites along the Gulf Coast using functional and phylogenetic markers, *Environmental Science: Processes and Impact*, 15, 2068-2079.
- Al Lawati W.M., Jean, J., Kulp, T., **Lee, M.-K.**, Polya, D., van Dongen. B.E., 2012. Characterization of organic matter associated with groundwater arsenic in reducing aquifers of Southwestern Taiwan. *Journal of Hazardous Materials*. <http://dx.doi.org/10.1016/j.jhazmat.2012.08.007>.
- Reza, A.H.M.S., Jean, J.-S., **Lee, M.-K.**, Liu, C.-C., Bundschuh J., Yang H.-J., Lee, J.-F, Lee C.-Y., 2011. Implications of organic matter on arsenic mobilization into groundwater: Evidence from northwestern (Chapai-Nawabganj), central (Manikganj) and southeastern (Chadpur) Bangladesh. *Water Research*, 44, 5556-5574.
- Nath B., Jean, J., **Lee, M.-K.**, Liu, C.-C., 2008, Geochemistry of high arsenic groundwater in Chia-Nan plain, Southwestern Taiwan: Possible sources and reactive transport of arsenic, *J. of Contaminant Hydrology*, 99, 85-96.
- Penny*, E., **Lee, M.-K.**, and Morton, C., 2003, Groundwater and microbial processes of the Alabama coastal plain aquifers, *Water Resources Research*, v. 39(11), 1320, 17 pp, doi:10.1029/2003WR001963.

D. Synergistic Activities

- Developed high school and middle school educational modules for NASA Innovations in Climate Education (NICE) Project, <https://fp.auburn.edu/asim/AU/index.asp>
- NSF Program Panelists: 2012, 2013
- Project director, Water Education for Alabama Black Belt (WET) Outreach Program, 2006-present
- Developed groundwater bioremediation technologies (Lee, M.-K., Saunders, J.A., and Nichol, S., 2008, Method and system for forming an *in-situ* groundwater filter, US Patent # 7,341,664)
- Invited keynote speaker, 2005 Gordon Conference on Inorganic Geochemistry.

E. Collaborators & Other Affiliations

Collaborators

Ni-Bin Chang (UCF), Guoxiang Chi (U. of Regina), Xing Fang (Auburn), Munir Humayun (FSU), Jiin-Shuh Jean (NCKU, Taiwan), Alison Keimowitz (Vassar College), Yingru Li (Auburn), Ben Okeke (AUM), James Saunders (Auburn), Ahjeong Son (Auburn), Yang Wang (FSU), Lorraine Wolf (Auburn), Ashraf Uddin (Auburn), Don Zhao (Auburn).

Graduate Advisors

Craig Bethke (U. of Illinois)

Thesis Major Advisor & Postgraduate Sponsor (18 thesis completed)

Pat Baird	Lee Beasley	James Griffin	Kirsten Guerra
Jennifer Hansom	Jeff Keevan	Tasaneeya Kosuwan	Chris Marlow
Jeremy McCartha	Robert Monrreal	Mike Natter	Christian Osgood
Elizabeth Penny	Benjamin Spratling	Jamey Turner	Daphne Williams
Alex Wood	Brian Woodall		