JANET G. HERING

Eawag, Swiss Federal Institute for Aquatic Science & Technology CH-8600 Dübendorf, Switzerland

(tel-secy) +41-(0)58-765-5002 (tel-direct) +41-(0)58-765-5001 (FAX) +41-(0)58-765-5398 (e-mail) Janet.Hering@eawag.ch

EDUCATION

Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution Joint Program, Cambridge, MA, Ph.D. in Oceanography, May1988.

Harvard University, Cambridge, MA, A.M. in Chemistry, January 1981. Cornell University, Ithaca, NY, A.B. in Chemistry, June 1979.

PROFESSIONAL EXPERIENCE

Eawag, Swiss Federal Institute of Aquatic Science & Technology, Director (2007-present)

- Swiss Federal Institute of Technology, Lausanne, Professor of Environmental Chemistry, School of Architecture, Civil and Environmental Engineering (ENAC) (2010-present)
- Swiss Federal Institute of Technology, Zürich, Professor of Environmental Biogeochemistry, Department of Environmental Science (D-UWIS) (2007-present)
- **California Institute of Technology**, Environmental Science & Engineering Department, Visiting Associate (2009-2011), Professor (2002-2008), Associate Professor (1996-2002); Executive Officer, Keck Laboratories for Bioengineering, Environmental Science & Engineering, and Materials Science (2003-2006).
- **University of California, Los Angeles**, Civil and Environmental Engineering Department, Adjunct Professor (1997-1999), Associate Professor (1995-1996), Assistant Professor (1991-1995).
- **Institute for Water Resources and Water Pollution Control (EAWAG)**, Duebendorf, Switzerland, Chemistry Department, Postdoctoral Researcher (1988-1991).
- **Massachusetts Institute of Technology**, Cambridge, MA, Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Department of Civil Engineering, Research and Teaching Assistant (1982-1988).
- Harvard University, Cambridge, MA, Chemistry Department, Research and Teaching Assistant (1979-1981).

Cornell University, Ithaca, NY, Chemistry Department, Teaching Assistant (1978-1979).

Mobil Oil Research and Development Corporation, Princeton, NJ, Summer Research Intern (Summer 1978).

RESEARCH INTERESTS

Sustainable management of water resources, supply and infrastructure

- Biogeochemical cycling of trace metals and metalloids: microbial redox cycling; field studies of metal redox cycling, mobilization, and sequestration
- Mineral weathering and reactions at mineral surfaces: mechanisms and kinetics of dissolution and precipitation reactions; macroscopic, spectroscopic, and modeling studies of sorption processes
- Water treatment processes for removal of inorganic contaminants: role of sorption in contaminant removal; design of novel sorbents

SELECTED ACTIVITIES

2016 to present member, Swiss National Science Foundation Council.

- 2016 to present jury member, Microbials program, Gebert Rüf Foundation, Switzerland.
- 2015 to present member, U.S. National Academy of Engineering
- 2015 recipient, IUPAC 2015 Distinguished Women in Chemistry or Chemical Engineering Awards, awarded at the 45th World Chemistry Congress, 9-14 August, Busan, South Korea.
- **2015** chair, evaluation committee for Programme area 2 Water resources (2007-2014) at the Geological Survey of Denmark and Greenland (GEUS), 26-29 May, Copenhagen, Denmark.
- **2013 to present** member, scientific advisory board, AquaDiva, Friedrich-Schiller-Universität Jena, Germany.
- 2010 to present Member, Board of Reviewing Editors, Science

2009 to present Chair, 2008-2009, Member, Advisory Board, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany.

2008 to present member, GAIA Advisory Board

Reviewer: Environmental Science and Technology, Geochimica et Cosmochimica Acta, Deep-Sea Research, Journal of Environmental Engineering ASCE, Colloids and Surfaces, Journal of Physical Chemistry, Journal of the American Water Works Association, Nature, Separation Science and Technology, Water Environment Research, U.S. National Science Foundation, U.S. Department of Energy, U.S. Department of Defense, U.S. Environmental Protection Agency, ACS/Petroleum Research Fund, Swiss National Science Foundation

SELECTED RECENT PUBLICATIONS

Research publications

- Senn, A.C., Kaegi, R., Hug, S.J., Hering, J.G., Mangold, S. and Voegelin, A. (2015) "Composition and structure of Fe(III)-precipitates formed by Fe(II) oxidation in water: Interdependent effects of phosphate, silicate and Ca", *Geochim. Cosmochim. Acta*, 162: 220-246, DOI: 10.1016/j.gca.2015.04.032.
- Kunz, N., Fischer, M., Ingold, K., Hering, J.G., (2015) "Why do some water utilities recycle more than others? A Qualitative Comparative Analysis in New South Wales, Australia", *Environ. Sci. Technol.* 49: 8287–8296, DOI: 10.1021/acs.est.5b01827.
- Rudolf von Rohr, M., Hering, J.G., Kohler, H.-P.E., von Gunten, U. (2014) "Column studies to assess the effects of climate variables on redox processes during riverbank filtration", *Water Research*, 61: 263-275, DOI: 10.1016/j.watres.2014.05.018.
- Diem, S., Rudolf von Rohr, M., Hering, J.G., Kohler, H.P., Schirmer, M., von Gunten, U. (2013) "Dynamics of NOM degradation during riverbank filtration and its role in a changing climate", *Water Research*, 47: 6585-6595, dx.doi.org/10.1016/j.watres.2013.08.028.
- Farnsworth, C.E., Voegelin, A. and Hering, J.G. (2012) "Manganese oxidation induced by water table fluctuations in a sand column", *Environ. Sci. Technol.* 46: 277-284, DOI: 10.1021/es2027828.

Reviews, synthesis and perspectives

- Hering, J.G., Sedlak, D.L., Tortajada, C., Biswas, A.K., Niwagaba, C. and Breu, T. (2015) "Local perspectives on water" *Science*, 349:479-480, DOI: 10.1126/science.aac5902 (policy forum)
- Hering, J.G. (2015) "Do We Need More Research or Better Implementation through Knowledge Brokering?" *Sustainability Science*, DOI: 10.1007/s11625-015-0314-8.
- Tilley, E., Trande, L., Lüthi, C., Mosler, H.-J., Udert, K.M. Gebauer, H. and Hering, J.G. (2014) "Looking beyond technology: an integrated approach to water, sanitation and hygiene in low income countries" (Feature), *Environ. Sci. Technol.*, 48: 9965-9970, DOI: 10.1021/es501645d
- Hering, J.G., Dzombak, D.A., Green, S.A., Luthy, R.G. and Swackhamer, D. (2014) "Engagement at the Science–Policy Interface" (Viewpoint) *Environ. Sci. Technol.*, 48: 11031–11033, DOI: 10.1021/es504225t
- Hering, J.G., Waite, T.D., Luthy, R., Drewes, J., and Sedlack, D. (2013) "A Changing Framework for Urban Water Systems", *Environ. Sci. Technol.*, 47: 10721-10726, dx.doi.org/10.1021/es4007096.
- Hering, J.G. and Ingold, K.M. (2012) "Water Resources Management: What Should Be Integrated?", *Science*, 336: 1234-5.
- Hering, J.G., Hoffmann, S., Meierhofer, R., Schmid, M., and Peter, A. (2012) "Assessing the Societal Benefits of Applied Research and Expert Consulting in Water Science and Technology", *GAIA*, 21 (2) 95-101.
- Hering, J., Hoehn, E., Klinke, A., Maurer, M., Peter, A., Reichert, P., Robinson, C., Schirmer, K., Schirmer, M., Stamm, C., and Wehrli, B. (2012) "Moving Targets, Long-Lived Infrastructure, and Increasing Needs for Integration and Adaptation in Water Management: An Illustration from Switzerland", *Environ. Sci. Technol.*, 46: 112-118, DOI: 10.1021/es202189s.

Books

Morel, F.M.M. and J.G.Hering (1993) *Principles and Applications of Aquatic Chemistry*, Wiley-Interscience, New York, 588 pp.