CHUNMIAO ZHENG, PH.D.

Chair Professor of Water and Environment

Contact Information:
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[Overview] Chunmiao Zheng is a hydrogeologist and environmental engineer whose work has advanced contaminant-transport modeling, groundwater-surface water interactions, and sustainable water management. He is Chair Professor and Vice President at the Eastern Institute of Technology (EIT), Ningbo, and Director of the Shenzhen Institute of Sustainable Development at the Southern University of Science and Technology (SUSTech). He previously served as the George Lindahl III Endowed Professor at the University of Alabama and as Founding Director of the Institute of Water Sciences at Peking University. A Fellow of the American Geophysical Union (AGU), he received the Prince Sultan Bin Abdulaziz International Prize for Water (2024), the O.E. Meinzer Award (2013), and the M. King Hubbert Award (2013). He is the developer of the MT3D/MT3DMS solute-transport models, adopted in more than 100 countries, and the author or co-author of over 500 peer-reviewed papers and six books, with more than 36,000 citations on Google Scholar.

Education

1985-1988	Ph.D., Hydrogeology; minor in Civil and Environmental Engineering, University of Wisconsin-Madison, WI, USA.
1983-1984	Postgraduate Studies in Geology and Applied Mathematics, Chengdu University of Technology (formerly Chengdu College of Geology), China.
1979-1983	B.S., Geology, specializing in Hydrogeology, Chengdu University of Technology (formerly Chengdu College of Geology), China.

Employment History

2022-present	Chair Professor and Vice President (Global Engagement & Engineering), Eastern Institute of Technology, Ningbo, China.
2022-present	Chair Professor and Director, Shenzhen Institute of Sustainable Development, Southern University of Science and Technology, Shenzhen, China.
2015-2022	Chair Professor and Vice Provost of Global Strategies (2018-22), Founding Dean of the School of Environmental Science and Engineering (2015-18), Southern University of Science and Technology, Shenzhen, China.
2010-2018	Chair Professor and Founding Director, Institute of Water Sciences, Peking University, Beijing, China (on joint appointment after 2015).
1993-2018	George Lindahl III Endowed Professor (2010-18; on leave after 2013), Professor (2002-2010), Associate Professor (1997-2002), Assistant Professor (1993-1997), Department of Geological Sciences, University of Alabama.
1988-1993	Senior Hydrogeologist, S.S. Papadopulos & Associates, Inc., Bethesda, Maryland.

Professional Experience

2018-present	Lindahl Professor Emeritus and Adjunct Professor, Department of Geological Sciences, University of Alabama.
2006-2009	Visiting Professor and Founding Director, Center for Water Research, Peking University, Beijing, China.
2001	Visiting Fellow, University of Sheffield, United Kingdom.

2000 Visiting Associate Professor, Stanford University, Palo Alto, California.
2000 Visiting Scientist, U.S. Geological Survey, Menlo Park, California.
1995 Visiting Fellow, Australian Nuclear Science & Technology Organization, Sydney.
1991 Assistant Professional Lecturer, George Washington University, Washington, D.C.

Awards and Honors

2024 **Prince Sultan Bin Abdulaziz International Prize for Water (PSIPW)** (Groundwater category); PSIPW is a leading, global scientific award focusing on cutting-edge innovation in water research (https://www.psipw.org)
2024 **Highly Cited Researchers 2024**, Clarivate (https://clarivate.com/highly-cited-researchers/)
2019 **Fellow**, American Geophysical Union (AGU) (https://eos.org/agu-news/2019-class-of-agu-fellows-announced)
2014 **Distinguished Alumni Award**, Department of Geoscience, University of Wisconsin-Madison, WI.
2013 **O.E. Meinzer Award,** Hydrogeology Division, Geological Society of America (https://www.geosociety.org/awards/13speeches/meinzer.htm)
2013 **M. King Hubbert Award,** National Ground Water Association. (https://www.ngwa.org/members/awards/m-king-hubbert-award-recipients)
2012 **Distinguished Lecturer for Hydrology Section**, AOGS-AGU (WPGM) Joint Assembly, Singapore.
2009 **Birdsall-Dreiss Distinguished Lecturer**, Hydrogeology Division, Geological Society of America (https://community.geosociety.org/hydrodivision/aboutus/birdsall-lectures/past)
2008 **DuPont Lecturer**, University of Delaware, DE.
2005 **Oliver Lectureship in Hydrogeology**, Jackson School of Geosciences, University of Texas at Austin, TX.
1999 **Fellow**, Geological Society of America.
1998 **John Hem Excellence in Science and Engineering Award**, National Ground Water Association.

Primary Research Interests

- Impacts of global change and emerging contaminants on groundwater sustainability
- Integrated studies of hydrologic and ecological processes at watershed scales
- Surface water-groundwater interactions and their ecological and environmental effects
- Effects of physical and chemical heterogeneities on contaminant transport and remediation
- Novel technologies for green environmental remediation and nature-based carbon sequestration

Professional Affiliations

- American Geophysical Union (AGU, Fellow)
- National Ground Water Association (NGWA)
- Geological Society of America (GSA, Fellow)
- International Association of Hydrological Sciences (IAHS)
- Chinese Society for Environmental Sciences (CSES, Fellow)

Teaching and Mentoring

- Established and advanced hydrogeology and environmental science & engineering programs across four institutions in the United States and China: the University of Alabama, Peking University, Southern University of Science and Technology (SUSTech), and the Eastern Institute of Technology (EIT), Ningbo.

- Designed and delivered more than 10 distinct undergraduate and graduate courses in hydrogeology, groundwater flow and contaminant transport modeling, geostatistics, integrated hydrologic/environmental systems, water resources management, hydrogeological field techniques, and quantitative analysis.
- Supervised and mentored over 120 graduate students and postdoctoral researchers (more than half of whom are women), many of whom have advanced to leadership roles in academia, government, and industry worldwide.

10 Representative Papers over the Past Five Years (*corresponding author)

Author or co-author of more than 500 peer-reviewed journal articles and six books:
Publication profiles (details available at):

Google Scholar: https://scholar.google.com/citations?hl=en&user=g0FPeQsAAAAJ
Web of Science: https://www.webofscience.com/wos/author/record/I-5257-2014
Scopus: https://www.scopus.com/authid/detail.uri?authorId=59377651000
ORCID: https://orcid.org/0000-0001-5839-1305

1. Kuang, X., J. Liu*, B.R. Scanlon, J.J. Jiao, S. Jasechko, M. Lancia, B.K. Biskaborn, Y. Wada, H. Li, Z. Zeng, Z. Guo, Y. Yao, T. Gleeson, J.-P. Nicot, X. Luo, Y. Zou, **C. Zheng***, 2024, The changing nature of groundwater in the global water cycle, ***Science***, 383, eadf0630, https://doi.org/10.1126/science.adf0630.
2. Yu, J., Y. Tian*, X. Wang, T. Sun, M. Lancia, C.B. Andrews, **C. Zheng***, 2024, Integrated modeling of flow, soil erosion, and nutrient dynamics in a regional watershed: Assessing natural and human-induced impacts, ***Water Resour. Res.*,** 60(9), https://doi.org/10.1029/2024WR037531.
3. Pang, M., E. Du*, **C. Zheng***, 2024, Contaminant transport modeling and source attribution with attention-based graph neural network, ***Water Resour. Res.*,** 60(6), e2023WR035278, https://doi.org/10.1029/2023WR035278.
4. Ma, R., K. Chen, C.B. Andrews, S.P. Loheide, A.H. Sawyer, X. Jiang, M.A. Briggs, P.G. Cook, S.M. Gorelick, H. Prommer, B.R. Scanlon, Z. Guo, **C. Zheng***, 2024, Methods for quantifying interactions between groundwater and surface water, ***Annual Review of Environment and Resources*,** 49: 623-653, https://doi.org/10.1146/annurev-environ-111522-104534.
5. Chen, K., X. Chen, J.C. Stegen, J.A. Villa, …, E.E. Roden***, C. Zheng***, 2023, Vertical hydrologic exchange flows control methane emissions from riverbed sediments, ***Environ. Sci. Technol.*,** 57(9), 4014–4026, https://doi.org/10.1021/acs.est.2c07676.
6. Dai, Y., S. Yang, D. Zhao, C. Hu, W. Xu, D.M. Anderson, Y. Li, X. Song, D.G. Boyce, L. Gibson, **C. Zheng,** L. Feng, 2023, Coastal phytoplankton blooms expand and intensify in the 21st century, ***Nature*,** 615 (7951), 280-284, https://doi.org/10.1038/s41586-023-05760-y.
7. Lin, S., H. Zhang, C. Wang, X.-L. Su, Y. Song, P. Wu, Z. Yang, M.-H. Wong, Z. Cai*, and **C. Zheng***, 2022, Metabolomics reveal nanoplastic-induced mitochondrial damage in human liver and lung cells, ***Environ. Sci. Technol.***, 56 (17), 12483-12493, https://doi.org/10.1021/acs.est.2c03980.
8. Yin, M., R. Ma, Y. Zhang*, K. Chen, Z. Guo, **C. Zheng***, 2022, A Dual heterogeneous domain model for upscaling anomalous transport with multi-peaks in heterogeneous aquifers, ***Water Resour. Res.***, 58(4), e2021WR031128, https://doi.org/10.1029/2021WR031128.
9. Feng, Y., Z. Zeng*, T.D. Searchinger, A.D. Ziegler, …, **C. Zheng***, 2022, Doubling of annual forest carbon loss over the tropics during the early twenty-first century, ***Nature Sustainability*,** 5, 444-451, https://doi.org/10.1038/s41893-022-00854-3.
10. Yao, Y., **C. Zheng***, C. B. Andrews, B. R. Scanlon, X. Kuang, Z. Zeng, S. Jeong, 2021, Role of groundwater in sustaining northern Himalayan rivers, ***Geophysical Research Letters***, 48, e2020GL092354, https://doi.org/10.1029/2020GL092354.

Major Books and Computer Software

1. National Research Council (NRC), 2012, *Challenges and Opportunities in the Hydrologic Sciences*, The National Academies Press, Washington, D.C., 188 pp. (Chunmiao Zheng was a member of the NRC committee that authored this consensus study report, available at https://doi.org/10.17226/13293).
2. Zheng, C. and G.D. Bennett, 2009, *Applied Contaminant Transport Modeling,* Chinese Edition, Higher Education Press, Beijing, China, in collaboration with John Wiley & Sons, New York, 417 pp.
3. Committee on Chinese Groundwater Science, 2009, *Challenges and Opportunities in Chinese Groundwater Science*, Science Press, Beijing, China, 200 pp. (Chunmiao Zheng was chair of the committee that authored this book report.)
4. Zheng, C., and G.D. Bennett, 2002, *Applied Contaminant Transport Modeling, Second Edition*, John Wiley & Sons, New York, 621 pp. (Available at the Wiley website).
5. Zheng, C., and G.D. Bennett, 1995, *Applied Contaminant Transport Modeling: Theory and Practice*, Van Nostrand Reinhold (now John Wiley & Sons), New York, 440 pp.
6. Zheng, C., and P.P. Wang, 1999, *MT3DMS: A Modular 3-D Multi-species Transport Model for Simulation of Advection, Dispersion and Chemical Reactions of Contaminants in Groundwater Systems; Documentation and User's Guide,* Contract Report SERDP-99-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS, 169 pp. (Available at https://web.archive.org/web/20170129200934/http://hydro.geo.ua.edu/mt3d/).
7. Zheng, C., 1990, *MT3D: A Modular 3-D Transport Model for Simulation of Advection, Dispersion and Chemical Reactions of Contaminants in Groundwater Systems*, Report to the United States Environmental Protection Agency, 170 pp.

Major Committees and Editorial Boards

2025-present	Board of Directors, The Groundwater Project, Ontario, Canada
2024-present	Steering Group, GEWEX Groundwater Network, International GEWEX Project Office, Fairfax, Virginia
2023-2025	Hydrology Section Fellows Committee, Hydrology Section, American Geophysical Union (AGU)
2021-present	Founding Editor-in-Chief, *Sustainable Horizons*, an international open-access journal in partnership with Elsevier
2019-present	Advisory Panel, Section on Environmental Earth Science, National Natural Science Foundation of China
2016-present	Associate Editor, *Vadose Zone Journal*
2015-present	Associate Chair, Steering Committee, Major Research Program "Runoff Change in the Headwater Region of China's Southwestern Rivers and Their Adaptive Management", National Natural Science Foundation of China
2013-2018	Deputy Editor-in-Chief, *Acta Geologica Sinica* (English Edition)
2010-2018	Member, Steering Committee, Major Research Program "An Integrated Study of Ecohydrological Processes in the Heihe River Basin", National Natural Science Foundation of China
2010-2015	Associate Editor, *Water Resources Research*
2009-2013	Blue Ribbon Panel on "Challenges and Opportunities in the Hydrologic Sciences", National Research Council, Washington, D.C.
2007-2014	Associate Editor, *Journal of Hydrology*
2007-2013	President-elect and President, International Commission on Groundwater, International Association of Hydrological Sciences (IAHS)
2005-2015	Standing Committee on Hydrologic Science, National Research Council, Washington, D.C.
2005-2007	Treasurer, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), Washington, D.C.

2004-2008	Science and Technology Center Site Review Team, National Science Foundation, United States
2003-2007	Associate Editor, *Hydrogeology Journal*, International Association of Hydrogeologists (IAH) and Geological Society of America (GSA)
1998-2010	Associate Editor and Software Column Editor (2002-2010), *Ground Water* (now *Groundwater*), National Ground Water Association

Selected Professional Activities (since 2000)

2025	Invited Speaker, American Geophysical Union Fall Meeting, New Orleans, USA, December 15-19, 2025.
2025	Plenary Speaker, 4th Conference on New Technology and Methodology for Groundwater Pollution Prevention and Control, Chengdu, August 24-26, 2025.
2025	Plenary Speaker, International Groundwater Forum 2025, Chengdu, July 12-13, 2025.
2025	Invited Speaker, Earth Science and Engineering Colloquium, Nanjing University, Nanjing, March 6, 2025.
2025	University Distinguished Visiting Professor Appointment and Inaugural Lecture, Shanghai Jiao Tong University, Shanghai, February 28, 2025.
2024	Scientific Committee, IAH 2024 World Groundwater Congress, Davos, Switzerland, September 8-13, 2024.
2024	Invited Speaker, Recent Advances in Modeling Groundwater Dynamics, Google/Alphabet-wide Modeling Talk Series, August 27, 2024.
2024	Organizing Committee and Keynote Speaker, GEWEX Groundwater Workshop, Hokkaido University, Sapporo, Japan, July 6-7, 2024.
2024	Organizing Committee and Keynote Speaker, MODFLOW and More 2024, Princeton University, NJ, June 2-5, 2024.
2024	Plenary Speaker, HIC 2024 – 15th International Conference on Hydroinformatics, Beijing, May 27-30, 2024.
2024	Plenary Speaker, First National Congress on Groundwater Resources and Eco-Environment, Wuhan, April 12-15, 2024.
2023	Keynote Speaker, First IAHR International Conference on Global Water Security, Changzhou, October 30-November 1, 2023.
2023	Chair, First International Conference on Eco-geology and Environment, sponsored by Chinese Society for Environmental Sciences, Chengdu, October 27-31, 2023.
2022	Chair, Plenary Keynote Session, 49th IAH Congress, International Association of Hydrogeologists, Wuhan, China, September 19-22, 2022.
2022	Distinguished Lecturer, Recent Advances in Groundwater Research and Groundwater Management Challenges under Global Change, Center for International Collaboration, Ministry of Water Resources of China, June 28, 2022.
2022	Distinguished Lecturer, Advances in Groundwater Modeling, Technical Center for Soil, Agriculture, and Rural Ecology and Environment, Ministry of Ecology and Environment, June 4, 2022.
2022	Distinguished Lecturer, Contaminant transport in heterogeneous aquifers: A critical review of mechanisms and numerical methods of non-Fickian dispersion, Chinese Research Academy of Environmental Science, January 14, 2022.
2021	Conference Chair, International Conference on Sustainable Technology and Development 2021, Sponsored by Elsevier and Southern University of Science and Technology, Shenzhen, October 31-November 2, 2021.
2021	Invited Panelist, Times Higher Education (THE) Asia Summit, Session on "Close integration with industry is essential to problem-solving and producing world-leading research. How is this best achieved?" June 2, 2021.

2021 Distinguished Lecturer, Challenges and Opportunities for Environmental Water Sciences in China, Yangtze Institute for Conservation and Development, Hohai University, Nanjing, May 14, 2021.

2020 Invited Panelist, Dialogue with Vice Minister of Science and Technology of China on the trend of international research collaboration, Beijing, December 2, 2020.

2020 Masters Lecture Series, 50 Years of Contaminant Transport Modeling, Westlake University, Hangzhou, China, October 12, 2020.

2020 Invited Speaker, Forum on the Future of Sino-US Research Collaboration, National Natural Science Foundation of China, Beijing, September 24-25, 2020.

2019 Invited Panelist, US-China Environment and Sustainability Forum at the University of Michigan, October 1-2, 2019.

2019 Co-organizer and Keynote speaker, "MODFLOW and More 2019: Groundwater Modeling and Beyond", Golden, Colorado, June 2-6, 2019.

2018-2020 "Paul A. Witherspoon Lecture in Hydrologic Sciences" Award Committee, American Geophysical Union.

2018 Plenary Speaker, RISUD Annual International Symposium 2018 (RAIS 2018), Hong Kong Polytechnic University, June 29-30, 2018.

2018 Keynote Speaker, Computational Methods in Water Resources XXII (CMWR 2018), St. Malo, France, June 3-7, 2018.

2018 Keynote Speaker, China-US Workshop on Soil Contamination Risk Management and Remediation Technology, University of California, Riverside Palm Desert Center in Palm Desert, California, April 3, 2018.

2017 Keynote Speaker, Annual Meeting of Chinese Society for Environmental Sciences, Xiamen, China, October 20-22, 2017.

2017 Organizer, EPRI Workshop on Advanced Hydrogeologic Characterization, Palo Alto, California, August 29, 2017.

2017 Keynote Speaker, 11th International Symposium on Geochemistry of the Earth Surface, Guiyang, China, June 11-16, 2017.

2017 Co-organizer and Keynote speaker, "MODFLOW and More 2017: Modeling for Sustainability and Adaptation", Golden, Colorado, May 21-24, 2017.

2016 Chair, 9th IAHS Groundwater Quality Conference (Groundwater Quality 2016, GQ16), Shenzhen, China.

2016 Advisory Panel, Research Program "GEOCON", Technical University of Denmark, April 25-26, 2016.

2016 Review Panelist, Office of Biological & Environmental Research (BER), Department of Energy, Washington DC, April 4-5, 2016.

2016 Invited Speaker, Joint KAPSARC-NUS Workshop "Emerging Issues Facing the Water-Energy-Food Nexus in the Middle East and Asia", Singapore, Jan. 22, 2016.

2016 Invited Panelist, 9th Rosenberg Forum on International Water Policy, Panama City, January 25-28, 2016.

2015 Scientific Advisory Committee and Keynote Speaker, 42nd Congress of International Association of Hydrogeologists, Rome, Italy, September 13-18, 2015.

2015 Organizing Committee, International Conference "MODFLOW and More 2015: Modeling a Complex World", Colorado, May 31-June 3, 2015.

2014 Co-chair and host, US-China EcoPartnership Conference "Water-Energy Nexus: Sustainability and Global Challenges", Beijing, China, April 17, 2014.

2014 Invited Speaker, Faculty Summit, Microsoft Research, Redmond, Washington, July 14-15, 2014.

2013 Chair, International Workshop "Observation and Modeling of Ecohydrological Processes in Inland River Basins: A Vision for Transformative Science", Beijing, China, July 5-8, 2013.

2013 Keynote Speaker, IAH 2013 - 40th Congress of International Association of Hydrogeologists, Perth, Australia, September 15-20, 2013.

2013 Co-chair, MODFLOW and More 2013: Translating Science into Practice, Golden, Colorado, June 2-5, 2013.

2013 Co-chair, International Workshop "Managing River Basins as Coupled Human-Natural Systems", sponsored by US NSF and NSFC, Beijing, May 6-7, 2013.

2013 Invited Panelist, Rosenberg International Forum on Water Policy 8th Biennial Meeting, Aqaba, Jordan, March 22-25, 2013.

2012 Co-organizer, Water Management and Global Challenges: Advances in Technology, Innovation, Health and Policy, Beijing, China, October 15-16, 2012.

2012 Keynote Speaker, The 5th International Workshop on Catchment Hydrological Modeling and Data Assimilation (CAHMDA-V), University of Twente, Enschede, the Netherlands, July 9-13, 2012.

2012 International Expert on Global Water Crisis, 30th Annual Meeting, The InterAction Council, Tianjin, China, May 10-12, 2012.

2011 Organizing Committee, International Conference "MODFLOW and More 2011: Integrated Hydrologic Modeling", Golden, Colorado, June 6-9, 2011.

2011 Chair, Forum on International Water Resources, The 4th World Economic and Environmental Conference, Beijing, China, September 19-21, 2011.

2010 Organizing Committee Chair, International Groundwater Forum 2010, Peking University, Beijing, China, July 8-9, 2010.

2010 Co-Director, International Summer School on International River Basin Management, Peking University, China.

2010 "Humanity 3000" workshop on the world's water crisis, Foundation for the Future, Seattle, Washington.

2009 International Advisory Committee, HydroPredict 2010 International Conference, Prague, Czech Republic.

2009 Keynote Speaker, NovCARE International Conference on Aquifer Characterization, Leipzig, Germany.

2009 Luncheon Speaker, California Biennial Groundwater Conference, Sacramento, CA.

2009 Keynote Speaker, Ground Water Summit, Tucson, Arizona.

2009 International Advisory Committee, "Groundwater Quality 2010" International Conference, Zurich, Switzerland.

2009 Organizing Committee, "ModelCARE 2009" International Conference, China University of Geosciences-Wuhan, China.

2008 Organizing Committee, "MODFLOW and More 2008" International Conference, Golden, Colorado.

2008 Invited Speaker, 33rd International Geological Congress, Oslo, Norway.

2007 Panel of Experts for *The New York Times* on water and environmental issues in China.

2007 International Advisory Committee, "ModelCARE 2007", Copenhagen, Denmark.

2007 International Advisory Panel, "Groundwater Quality 2007", Perth, Australia.

2007 International Advisory Committee, "Water Down Under 2008", Adelaide, Australia.

2006 Organizing Committee, International Conference "MODFLOW and More 2006," Colorado School of Mines, Golden, Colorado.

2006 Panelist, Research Grant Review Panel for Environmental Remediation Programs, Department of Energy, Washington, D.C.

2006 Invited Speaker, Special session on "Innovations in field characterization of physical and chemical heterogeneities," GSA Annual Meeting, Philadelphia.

2006 Invited Seminar Speaker, Department of Hydrology and Water Resources, University of Arizona.

2006 Seminar Speaker, University of Tübingen, Germany.

2006 Seminar Speaker, University of Sheffield, U.K.

2005 Keynote Speaker, 2005 Conference on Ground Water Remediation, National Ground Water Association (NGWA).

2005 Panelist, EPRI Arsenic Modeling Workshop, Tampa, Florida.

2005 Invited Speaker, Special session on "Field-scale characterization of hydraulic properties," AGU Fall Meeting, San Francisco.

2005	Co-Chair, Working Group on Challenges and Opportunities in Chinese Groundwater Science, National Natural Science Foundation of China.
2005	Co-instructor, 1st Geochemical and Reactive Transport Modeling Course, Australian Centre for Groundwater Studies, Brisbane, Australia.
2005	Invited Lecturer, School of Chemistry, Physics and Earth Sciences, Flinders University of South Australia, Adelaide, Australia.
2005	Invited Lecturer, Australian Contaminated Land Consultants Association (ACLCA), Victoria, Australia.
2005	Invited Lecturer, Research Center for Deep Geological Environment, AIST, Tsukuba, Japan.
2005	Invited Lecturer, Research and Development Center, Nippon-Koei Co., Tokyo.
2004	Scientific Advisory Committee, International conference on *Finite-Element Models, MODFLOW, and More 2004*, Karlovy Vary, Czech Republic.
2004	Co-instructor, Short course on Groundwater Flow and Contaminant Transport Modeling with Introduction to Data Assessment, Sensitivity Analysis, Model Calibration and Uncertainty Evaluation, Charles University, Czech Republic.
2004	Chair, Organizing Committee, International symposium on Earth, Environment, and Human Impacts, IPACES 2004 Annual Meeting and Workshops, Chengdu, China.
2004	NSF IGERT Program "GIScience" Advisory Board, SUNY at Buffalo.
2003-2004	Chair-elect and Chair, International Professionals for the Advancement of Chinese Earth Sciences (IPACES).
2003	Organizing Committee, International Conference on MODFLOW and More 2003, Colorado School of Mines, Golden, Colorado.
2003	Invited Seminar Speaker, Department of Earth Sciences, University of Hong Kong.
2002	Review Panelist, Global Water Cycle Research Program, US NSF.
2002	Invited Speaker, Special session on Use Ground-Water Models to Guide Field Data Collection, AGU 2002 Fall Meeting, San Francisco.
2002-2004	Standing Committee on Hydrologic Information Systems, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI).
2002	Peer Reviewer, Assessment of Long-Term Sustainability of Monitored Natural Attenuation of Chlorinated Solvents, SERDP Program, DOD/EPA/DOE.
2002	Invited Seminar Speaker, Institute of Applied Geology, University of Tübingen.
2001-2003	Instructor, Short course on Reactive Transport Modeling, University of Sheffield, U.K.
2001	Scientific Advisory Committee and Keynote Speaker, GQ-2001: 3rd International Conference on Groundwater Quality, University of Sheffield, UK.
2001	Invited Geology Seminar Speaker, University of Tennessee, Knoxville, TN.
2001	Invited Lecturer, Earth Science Symposium, Peking University, China.
2001	Organizing Committee and Keynote Speaker, *MODFLOW 2001 and Other Modeling Odysseys*, Colorado School of Mines.
2000	Invited Speaker, *International Symposium on Groundwater Contamination*, sponsored by Japanese Association of Groundwater Hydrology, Tokyo, Japan.
2000	Lecturer, Short course on Mass Transport in Groundwater, Freiberg University of Mining and Technology, Freiberg, Germany.
2000	Invited Speaker, Western Pacific Geophysics Meeting, Tokyo, Japan.
2000	Graduate Fellowship Grant Application Review Panel, U.S. EPA, Washington, D.C.

Publications

Author or co-author of **500+ peer-reviewed journal articles and six books**; A total of more than **36,000 citations** on Google Scholar at https://scholar.google.com/citations?hl=en&user=g0FPeQsAAAAJ (accessed **October 2025**).

(*indicates corresponding author)

Wu, Y., L. Feng*, S. Yang, C. **Zheng***, 2025, Satellite observations reveal recent increases in water clarity in Chinese coastal waters, *Environ. Sci. Technol.* 59(38): 20452–20461, https://doi.org/10.1021/acs.est.5c07097.

Yao, Y., S. Guo, C.B. Andrews, F. Zhang, M. Lancia, X. Kuang, **C. Zheng***, 2025, Seeing China's invisible groundwater: Advances and challenges, *Water Resour. Res.*, 61, e2024WR038980, https://doi.org/10.1029/2024WR038980.

Kong, L., Y. Wang, P. Xiao, Y. Tao, **C. Zheng***, 2025, Typhoon-induced depth-dependent nitrogen release from reservoir sediments: Insights from high-resolution ROV monitoring, *J. Hydrol.,* 663, Part B, 134242, https://doi.org/10.1016/j.jhydrol.2025.134242.

Huggins, X., T. Gleeson, J. S. Famiglietti, …, **C. Zheng,** 2025, A review of open data for studying global groundwater in social-ecological systems, *Environ. Res. Lett.*, 20, 093002, https://doi.org/10.1088/1748-9326/adf127.

Galluzzi, M., M. Lancia, **C. Zheng**, V. Castelvetro, E. Lichtfouse, 2025, Do microplastics affect human immune defenses? *Environ. Chem. Lett.*, https://doi.org/10.1007/s10311-025-01869-w.

Yu, S., X. Wang, H. Li, Z. Deng, **C. Zheng**, 2025, Tidal pumping controls transport of foodborne microbial pathogens between coastal groundwater and seawater, *Journal of Hazardous Materials*, 498, 139903, https://doi.org/10.1016/j.jhazmat.2025.139903.

Wu, Y., L. Feng*, X. Liu, Y. Wang, **C. Zheng***, 2025, Declining phytoplankton biomass in Chinese coastal oceans linked to climate warming, *Environ. Sci. Technol.*, 59(23), 11607–11615.

Zhan, Y., Z. Guo, J. Podgorski, …, **C. Zheng**, 2025, Changes in meat consumption can improve groundwater quality, *Nature Food*, https://doi.org/10.1038/s43016-025-01188-x.

Chen, K., E.E. Roden, **C. Zheng**, 2025, Hydrological controls on riverbed methane emissions: A numerical investigation of hydrodynamic and ebullitive mechanisms from site to basin scales, *Environ. Sci. Technol.,* https://doi.org/10.1021/acs.est.5c03453.

Wei, X., Y. Zhao, Y. Ling, X. Chen, B. Liang, Y. Ben*, C. B. Andrews, Z. Sun, **C. Zheng***, 2025, Advancing antibiotic detection in environmental waters: Standardization of solid phase extraction procedures and development of certified reference materials, *Sustainable Horizons*, 15, https://doi.org/10.1016/j.horiz.2025.100153.

Zhang, R., L. Fan, M. Huang, **C. Zheng***, 2025, Spatiotemporal dynamics of land cover on the Tibetan Plateau (2000− 2020): Evidence of greening and wetting, *Ecological Frontiers*, https://doi.org/10.1016/j.ecofro.2025.07.006.

Kong, L., Q. Wang, Y. Zhang, Y. Wang, **C. Zheng***, 2025, Ultralight TETA-functionalized cellulose aerogels for ultrahigh synchronous indigo and Congo red adsorption: Combined experimental and detailed DFT mechanistic insights, *Journal of Environmental Chemical Engineering*, 13(5), 118444, https://doi.org/10.1016/j.jece.2025.118444.

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Computer Software

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(Continuing to next page for **Funded Research Projects**)

Funded Research Projects

[Summary] Chunmiao Zheng has secured 58 funded projects, including 50 as Principal Investigator (PI) and 8 as co-PI. His portfolio includes approximately 200 million RMB in funding as PI while at Peking University, SUSTech, and the Eastern Institute of Technology (EIT), as well as about 19 million USD as PI or co-PI during his tenure at the University of Alabama. These projects have been supported by major funding agencies in China and the United States, including the National Natural Science Foundation of China (NSFC), the Ministry of Science & Technology of China (MOST), the China Geological Survey (CGS), as well as the U.S. National Science Foundation (NSF) and the U.S. Environmental Protection Agency (EPA).

1. Multiscale transport mechanisms and predictive modeling of PFAS in heterogeneous aquifers, National Natural Science Foundation of China, 2026-2030, PI (through Eastern Institute of Technology).
2. Occurrence and transport of agriculture-related microplastics in soil and groundwater, National Key R&D Program of China – Intergovernmental Collaborative Project, 2023-2025, PI (through Southern University of Science and Technology/Eastern Institute of Technology, Ningbo).
3. Novel technologies for green environmental remediation and nature-based carbon sequestration, Office of Research Innovation, Zhejiang Province, 2023-2028, PI (through Eastern Institute of Technology, Ningbo).
4. Funding to establish a research institute for low carbon technologies, City of Ningbo, 2023-2028, PI (through Eastern Institute of Technology, Ningbo).
5. 3D simulation and early warning system for urban water bodies with joint consideration of soil and groundwater quality control, City of Ningbo, 2023-2025, PI (through Eastern Institute of Technology, Ningbo).
6. Guangdong-Hong Kong Joint Laboratory of Soil and Groundwater Pollution Control, Government of Guangdong Province, 2023-2025, PI (through Southern University of Science and Technology).
7. Pollution risk assessment, early warning, and emergency management associated with drinking water source areas, City of Shenzhen, 2021-2024, PI (through Southern University of Science and Technology).
8. Surface water-groundwater interactions and their ecological and environmental effects, University Discipline Innovation Plan, Ministry of Education and Ministry of Science and Technology, 2020-2024, PI (through Southern University of Science and Technology).
9. Roles of anomalous diffusion in groundwater contaminant source identification, in situ remediation and risk assessment: A theoretical and experimental study, National Natural Science Foundation of China, 2020-2024, PI (through Southern University of Science and Technology).
10. Migration and transformation of nutrients across the land-sea interface in the Guangdong-Hong Kong-Macao Greater Bay Area, National Natural Science Foundation of China, 2019-2023, PI (through Southern University of Science and Technology).
11. INFEWS (U.S.-China): Sustainability in the Food-Energy-Water nexus; integrated hydrologic modeling of tradeoffs between food and hydropower in large scale Chinese and US basins, a joint program of National Natural Science Foundation of China and U.S. National Science Foundation, 2018-2022, PI (through Southern University of Science and Technology).
12. Guangdong Provincial Key Laboratory of Soil and Groundwater Pollution Control and Remediation, Government of Guangdong Province, 2017-2020, PI (through Southern University of Science and Technology).
13. Development and application of integrated technologies for groundwater remediation, Leading Talents Program of Guangdong Province, Government of Guangdong Province, 2017-2021, PI (through Southern University of Science and Technology).
14. Seawater intrusion along the eastern coastlines of China and associated environmental impacts, National Key R&D Program of China, 2016-2020, PI (through Southern University of Science and Technology).
15. Building excellence in the field of environmental protection and efficient resource utilization, University Academic Program Enhancement Scheme, Development and Reform Commission of Shenzhen Municipal Government, 2016-2019, PI (through Southern University of Science and Technology).

16. A Comprehensive approach to pollution control and management of urban watersheds, Shenzhen Municipal Government, 2016-2020, PI (through Southern University of Science and Technology).
17. Key Laboratory for Soil and Groundwater Pollution Control of Shenzhen City, Shenzhen Municipal Government, 2015-2017, PI (through Southern University of Science and Technology).
18. Integrated modeling and prediction of the water-ecosystem-economics system in the Heihe River Basin, National Natural Science Foundation of China, 2015-2018, co-PI (through Peking University).
19. Effects of small-scale preferential flow paths on contaminant transport and remediation, National Natural Science Foundation of China, 2014-2018, PI (through Peking University).
20. System behaviors and regulation of ecohydrological processes in the middle and lower Heihe River Basin, National Natural Science Foundation of China, 2013-2016, PI (through Peking University).
21. Risk assessment of groundwater contamination from a REE mining site in Baotou, Inner Mongolia, China Ministry of Environmental Protection, 2013-2016, PI (through Peking University).
22. Development of technical guidelines for comprehensive assessment of groundwater contamination, China Ministry of Environmental Protection, 2011-2016, PI (through Peking University).
23. Field study of contaminant transport processes and numerical model development, China Geological Survey, 2011-2013, PI (through Peking University).
24. Collaborative Research: High-resolution dynamic characterization of transport pathways: providing new insights into subsurface processes, National Science Foundation, 2008-12, PI (through University of Alabama).
25. Optimal management of coastal aquifers against seawater intrusion, Baldwin County, Alabama, NOAA through the state of Alabama, 2008-2009, PI (through University of Alabama).
26. With John Zachara (PI) and 17 co-PIs, Multi-scale mass transfer processes controlling natural attenuation and engineered remediation: An Integrated Field Challenge (IFC) focused on Hanford's 300 Area uranium plume, Department of Energy, 2007-2012, co-PI (through University of Alabama).
27. Accurate determination of groundwater recharge on the North China Plain through environmental tracers and 3D numerical modeling, Sino-German International Collaborative Research Program, National Natural Science Foundation of China, 2010-2012, PI (through Peking University).
28. A Coupled surface water-groundwater model for understanding hydrologic processes and water quality evolution in the North China Plain (NCP), Ministry of Science and Technology of China, 2007-2011, PI (through Peking University).
29. Spatial distribution of groundwater ages in a large sedimentary basin: Numerical simulation and application, National Natural Science Foundation of China, 2007-2009, PI (through Peking University).
30. Collaborative Research: Solute transport in aquifers containing connected high-conductivity networks: theory founded on laboratory and field data, National Science Foundation, 2006-2009, PI (through University of Alabama).
31. Development of modeling methods and tools for predicting coupled reactive transport processes in porous media at multiple scales, Department of Energy, 2006-2009, PI of subaward to University of Alabama.
32. Discrete fracture network models for risk assessment of carbon sequestration in coal, Department of Energy, 2005-2008, PI of subaward to University of Alabama.
33. Sustainable groundwater management of coastal aquifers in Baldwin County, Alabama, NOAA through the state of Alabama, 2005-2007, PI (through University of Alabama).
34. Reliability considerations in groundwater remediation system and monitoring network design, DuPont Company, 2005-2006, PI (through University of Alabama).
35. Development of information infrastructure for hydrologic sciences, National Science Foundation, 2004-2005, PI of subaward to University of Alabama.
36. Groundwater study of Ft. Morgan Peninsula, Baldwin County, NOAA through the state of Alabama, 2004-2005, PI (through University of Alabama).

37. Further development of the MT3DMS contaminant transport model for linkage with the Army Risk Assessment Modeling System, Army Engineer Research and Development Center, 2003-2004, PI (through University of Alabama).
38. Further development of the ModGA code for contaminant source identification, DuPont Company, 2003-2004. PI (through University of Alabama).
39. Acquisition of geophysical field equipment for earth science research and teaching at the University of Alabama, NSF, 2002-2004, Co-PI.
40. With Jimmy Jiao (University of Hong Kong), Modification of regional groundwater regimes by large-scale land reclamation, Research Grants Council of Hong Kong, 2002-2005, Co-PI (through University of Alabama).
41. Further development of the ModGA code for monitoring network design optimization, DuPont Company, 2002-2003. PI (through University of Alabama).
42. Collaborative Research: A systematic study of solute transport influenced by preferential flow paths at the decimeter and smaller scales, NSF, 2001-2005, PI (through University of Alabama).
43. Field demonstration of transport optimization modeling for reducing the costs of groundwater pump-and-treat systems, Department of Defense Environmental Security Technology Certification Program (ESTCP), 2000-2003, PI (through University of Alabama).
44. With Amy Ward (Project Director, University of Alabama) and 17 others at University of Alabama and University of New Mexico, Integrated Graduate Education Research Training (IGERT) Program in Freshwater Sciences, NSF, 1999-2004, co-investigator and leader of the solute transport research theme (through University of Alabama).
45. With Jimmy Jiao (University of Hong Kong), Origin and evolution of abnormal fluid pressures in the Shiwu area in northeastern China, Research Grants Council of Hong Kong, 1999-2002, Co-PI (through University of Alabama).
46. Subsurface site characterization via a computer-aided tool, Gulf Coast Hazardous Substance Research Center, US EPA, 1998-2000, Co-PI (through University of Alabama).
47. Incorporation of variably saturated flow and contaminant transport in the groundwater flow and transport optimization model ModGA, DuPont Chemical, 1998-1999, PI (through University of Alabama).
48. Multi-fractal scaling of hydraulic conductivity distributions and the effect on plume-scale contaminant transport, National Science Foundation, 1997-2000, PI of subaward to University Alabama.
49. Modeling biologically reactive contaminant transport and natural attenuation, Pacific Northwest National Laboratory, Department of Energy, 1997-1998, PI (through University of Alabama).
50. Development and application of a multicomponent solute transport simulator for the Department of Defense Groundwater Modeling System (GMS), US Army Engineer Research and Development Center, 1996-2000, PI (through University of Alabama).
51. A global optimization approach for parameter identification in contaminant transport modeling, U.S. Environmental Protection Agency, 1995-1997, PI (through University of Alabama).
52. Development of a simulation-optimization model for groundwater management and remediation designs, DuPont Company, 1995-1998, PI (through University of Alabama).
53. Parameter identification using genetic algorithms, DuPont Company, 1995-1996, PI.
54. Simulation of reactive tracer transport in a strongly heterogeneous aquifer, Cray Research, Inc., 1995-1996, PI (through University of Alabama).
55. Augmentation of optimal policy selections to groundwater contaminant transport model MT3D (Phases I and II), USGS through Alabama Water Resources Research Institute, 1994-1995, Co-PI (through University of Alabama).
56. Development of an advanced contaminant fate and transport simulator for Cray supercomputers, Cray Research, Inc., 1994-1995, PI (through University of Alabama).

57. An investigation of underpressured geological formations for disposal of hazardous wastes, State of Alabama through UA School of Mines and Energy Development, 1994-95, PI (through University of Alabama).
58. A graduate fellowship to support Ph.D. research in hydrogeology, S.S. Papadopulos & Associates, Inc., 1994-1995, PI (through University of Alabama).