

# Qizhong (George) Guo, Ph.D., P.E., BC.WRE

**Professor, Department of Civil and Environmental Engineering** Rutgers University-  
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## EDUCATION

- **Ph.D., Civil Engineering (Water Resources)**, University of Minnesota, Minneapolis, MN, Sept. 1991
- **M.S., Civil Engineering (Water Resources)**, University of Minnesota, Minneapolis, MN, Feb. 1987
- **B.E., Civil Engineering (Hydraulic & Hydropower)**, Tianjin University, Tianjin, China, July 1982

## PROFESSIONAL REGISTRATION & CERTIFICATION

- **Board-Certified Water Resources Engineer (BC.WRE)**, American Academy of Water Resources Engineers (May 2010–Present)
  - **Professional Engineer (P.E.)**, Civil Engineering, State of Minnesota (July 1992–Present)
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## AREAS OF EXPERTISE

- Urban Stormwater and Flood Management
  - Inland, Estuarine, and Coastal Water Restoration
  - Hydraulics, Hydrology, and Water Resources Engineering
  - Green–Grey–Blue–Intelligent (GGBI) Water and Urban System Resilience
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## EMPLOYMENT HISTORY

**Rutgers, The State University of New Jersey-New Brunswick**, Piscataway, NJ

*Professor; Associate Professor; Assistant Professor* | Sept. 1992–Present

- Department of Civil and Environmental Engineering

**Lemna Corporation**, St. Paul, MN *Research and Development Engineer* | April–August 1992

**University of Minnesota**, Minneapolis, MN *Research Associate; Research Assistant; Teaching Assistant* | Sept. 1985–April 1992

- St. Anthony Falls Hydraulic Laboratory
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## PUBLICATIONS

*Author of over 200 publications, including books, journal articles, and technical reports.*

### Selected Books

- Guo, Q. (Ed.). (2017). *Guidelines for Certification of Stormwater Manufactured Treatment Devices*. American Society of Civil Engineers (ASCE).
- Guo, Q. (2013). *Automatic Vacuum Flushing Technology for Combined Sewer Solids*. IWA Publishing.
- Horikawa, K. & Guo, Q. (Eds.). (2009). *Civil Engineering (Vols. 1-2)*. UNESCO, Eolss Publishers.

### Selected Journal Articles

- Lin, Z., Meneses, D. M., & **Guo, Q.** (2025). Impacts of Reflective Heat Gain on Substrate Temperatures and Plant Growth Heterogeneity of a Constructed Green Roof. *Journal of Sustainable Water in the Built Environment*, ASCE.
  - **Guo, Q.** (2023). Strategies for a resilient, sustainable, and equitable Mississippi River basin. *River*.
  - Byrne, B. A. & **Guo, Q.** (2021). Removal of Salt Marsh-Impairing Tidal Flow Restrictions: Impact on Upstream Flooding. *Journal of Hydrologic Engineering*, ASCE.
  - Weinstein, M. P., **Guo, Q.**, & Santasieri, C. (2021). Protecting People and Property While Restoring Coastal Wetland Habitats. *Estuaries and Coasts*, CERF.
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### PRESENTATIONS (Selected)

- **Invited Speaker:** "Green, Grey, Blue, and Smart (GGBS) Infrastructure for Pluvial, Fluvial, and Coastal Flood Resilience." Morgan State University, NSF CREST, Sept. 11, 2025.
  - **Invited Speaker:** "Flood Mitigation and Ecosystem Enhancement through Green Stormwater Infrastructure and Blue Acres Floodplain Restoration." University at Buffalo - SUNY, Sept. 24, 2021.
  - **Plenary Address:** "Mitigating Combined Sewer Overflow (CSO) and Restoring Urban Water Environment." Sustainable Cities: The iSEE Congress 2018, University of Illinois, Oct. 5, 2018.
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### PROFESSIONAL ACTIVITIES & SERVICE (Selected)

- **Principal Investigator:** Implemented six rain gardens, two porous parking lots, and three Blue Acres of floodplain restoration via National Fish and Wildlife Foundation grant.
  - **Principal Investigator:** Led a multi-disciplinary team on a flood risk reduction strategy study for the **State of New Jersey Governor's Office of Recovery and Rebuilding** following Superstorm Sandy.
  - **Chair:** ASCE Task Committee on Guidelines for Certification of Stormwater Manufactured Treatment Devices.
  - **President:** Chinese American Water Resources Association.
  - **Media Expert:** Featured in *Gothamist*, *Science Channel*, *Fox 5*, *MSNBC*, *The Star-Ledger*, and *North Jersey Record*.
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### TEACHING & MENTORSHIP

#### Courses Taught (Selected):

- Fluid Mechanics, Design of Environmental Engineering Facilities, Sediment Transport, Analysis of Receiving Water Quality, Coastal Engineering, and Green Infrastructure for Water Management.

#### Research Advising and Mentoring:

- Supervised **15 Doctoral students**, **65 Master's students**, and **4 Postdoctoral scholars**.