

**Dr. Dominic L. Boccelli**

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**Professional Preparation**

Rensselaer Polytechnic Institute	Chemistry	B.S.	1993
Rensselaer Polytechnic Institute	Environmental Engineering	B.S.	1994
University of Cincinnati	Environmental Engineering	M.S.	1999
Carnegie Mellon University	Civil and Environmental Eng.	Ph.D.	2003

**Appointments**

2018-present	Associate Professor and Department Head, Department of Civil and Architectural Engineering and Mechanics, University of Arizona
2013-2018	Associate Professor, University of Cincinnati, Department of Chemical and Environmental Engineering
2007-2013	Assistant Professor, University of Cincinnati, Department of Biomedical, Chemical and Environmental Engineering (formerly part of Dept. of Civil and Env. Eng.)
2012, 2015	Visiting Faculty, University of Adelaide, School of Civil, Environmental, and Mining Engineering
2005-2007	Environmental Engineer, U.S. Environmental Protection Agency, National Homeland Security Research Center
2003-2005	Postdoctoral ORISE Research Participant at the CDC, Centers for Disease Control and Prevention
2003-2005	Visiting Scholar, University of Cincinnati, Department of Civil and Environmental Engineering

**Products: Most Relevant**

1. Chen, J. and D. L. Boccelli. 2018. Forecasting Hourly Water Demands with Seasonal Autoregressive Models for Real-Time Application. **Water Resources Research**, 54(2), 879-894.
2. Yang, X. and D. L. Boccelli. 2017. An Integrated System-Wide Model-Based Event Detection Algorithm. **Journal of Water Resources Planning and Management**, ASCE, 143(8), 04017047.
3. Yang, X. and D. L. Boccelli. 2014. A Simulation Study to Evaluate Temporal Aggregation and Variability of Stochastic Water Demands on Distribution System Hydraulics and Transport. **Journal of Water Resources Planning and Management**, ASCE, 140(8), 04014017.
4. Buffam, I., A. Townsend-Small, D. L. Boccelli, V. Russell, and R. D. Durtsche. 2012. Greening the Skyline – Biogeochemical Services and Disservices Provided by Green Roof Ecosystems. **4<sup>th</sup> International EcoSummit**, Columbus, OH
5. Boccelli, D. L., M. J. Small and U. M. Diwekar. 2004. Enhanced Coagulation for Satisfying the Arsenic Maximum Contaminant Level under Variable and Uncertain Conditions, **Environmental Science & Technology**, 39(17), 77-90.

**Products: Other Selected (of 71 total)**

6. Qin, T. and D. L. Boccelli. 2019. Estimating Distribution System Water Demands Using Markov Chain Monte Carlo. **Journal of Water Resources Planning and Management**, ASCE, 145(7).
7. Chen, J. and D. L. Boccelli. 2018. Real-Time Forecasting and Visualization Toolkit of Multi-Seasonal Time Series. **Environmental Modelling and Software**, 105, 244-256.
8. Rana, S. M. M., P. J. Oliveira, T. Qin, and D. L. Boccelli. 2017. Case Study: Improvements to a Real-Time Network Modeling Framework. **Proceedings, Computing and Control in the Water Industry 2017**, Sheffield, United Kingdom.
9. Yang, X. and D. L. Boccelli. 2016. Dynamic Water Quality Simulations for Contaminant Intrusion Events in Distribution Systems. **Journal of Water Resources Planning and Management**, ASCE, 142(10), 04016038.
10. Yang, X. and D. L. Boccelli. 2014. A Bayesian Approach for Real-Time Probabilistic Contaminant Source Identification. **Journal of Water Resources Planning and Management**, ASCE, 140(8), 04014019.

## **Synergistic Activities**

1. **2015-present, Open Source EPANET Project:** Currently serving as the chair of the Steering Committee for the Open Source EPANET Project (<http://wateranalytics.org/EPANET/>) along with Zoran Kapelan (Univ. of Exeter), Juan Saldarriaga (Univ. de los Andess), Angus Simpson (Univ. of Adelaide), Jim Uber (CitiLogics), and Kobus van Zyl (Univ. of Cape Town). Current key activities include developing guidelines for the steering and development committees, establishing a non-profit entity to support the volunteer development effort, fostering the development group for determining the architecture for EPANET 3.0, and outreach activities to raise awareness of the project.
2. **2009-present, Green Infrastructure: Improving Regional Understanding of Performance and Policy:** Projects that have supported research to: 1) evaluate the hydraulic performance of vegetated roofs using experimental test plots; 2) simulate the potential impacts of vegetated roofs on storm water flows in combined sanitary systems; and 3) co-sponsor a Green Roofs for Healthy Cities Market Development and Policy Symposium that brought together stakeholders to discuss advances in green technology and policy and to affect change in the Cincinnati metropolitan area.
3. **2014-2018, Water Center @ UC.** Founder and director of the Water Center at the University of Cincinnati to develop interdisciplinary research, education and outreach activities across the University and with our regional partners. Successfully competed for funds from the Office of the Provost (\$1.6M) to hire six new water related faculty; four completed at time of separation from UC.
4. **2009-2018, Cincinnati Area Water Distribution Systems Networking Seminar:** Co-founder and co-organizer of this bi-annual, half-day seminar that brings together faculty and students from the University of Cincinnati, researchers and staff from the US Environmental Protection Agency (Cincinnati, OH), and utility personnel and consultants from the Cincinnati/Northern Kentucky region for the purpose of sharing their research and professional activities (short presentations). To date, we have held twelve events ranging from 9 -- 11 speakers and 30 -- 50 attendees.
5. **2005-2017, Interdisciplinary Research on Improving Distribution System Network Modeling:** Participant of an interdisciplinary team (U. Cincinnati, US EPA, and Argonne National Labs) to improve distribution system network modeling capabilities and the tools associated with the design, implementation, and operation of distribution systems. Current research focused on: 1) water quality modeling emphasizing disinfectant decay and by-product formation, 2) large-scale hydraulic and water quality monitoring, and tracer tests to improve network model confidence, and 3) developing real-time hydraulic modeling capabilities including operational and security-based decision support.