

Jan. 22, 2026



R E S U M E
Avi Ostfeld
ATS Staff Academic Chair

Email and cell phone: ostfeld@technion.ac.il; +972-(0)50-7726139
Web page: <http://ostfeld.net.technion.ac.il/> (pdf files password: timna)
ORCID: <http://orcid.org/0000-0001-9112-6079>
Google scholar: <http://scholar.google.co.il/citations?user=og7iUDgAAAAJ&hl=en&oi=a>
CRIS profile: <https://cris.technion.ac.il/en/persons/avi-ostfeld>

ACADEMIC DEGREES

D.Sc. 1994, Civil Engineering, Technion, Haifa, Israel.
M.Sc. 1990, Civil Engineering, Technion, Haifa, Israel.
B.Sc. 1987, Agricultural Engineering, Technion, Haifa, Israel.

ACADEMIC APPOINTMENTS

Jan. 25 – present Adjunct Professor, University of Waterloo.
Apr. 23 – present Member of the Technion permanent committee for tenure appointments.
Jan. 23 – present Head, undergraduate Technion exposure program on hydrology and water resources.
Jan. 23 – present Vice Dean, Irwin and Joan Jacobs, Graduate School, Technion – Israel Institute of Technology.
Feb. 21 – Mar. 23 Member and alternating chair, Technion permanent committee for non-tenure appointments.
Apr. 17 – Mar. 23 Deputy Vice President for Academic Affairs, Technion – Israel Institute of Technology.
May 15 – Mar. 17 Vice Dean, Irwin and Joan Jacobs, Graduate School, Technion – Israel Institute of Technology.
Dec. 14 – present Professor, Civil and Environmental Engineering, Technion, Haifa, Israel.
Jun. 12 – Jun. 13 Affiliate Professor, Zhejiang University, China.

Jul. 09 – Dec. 14 Associate Professor, Civil and Environmental Engineering, Technion, Haifa, Israel.

Jul. 09 – Oct. 09 Visiting Professor, Research Center for Environmental Quality Management (RCEQM), Graduate School of Engineering, Kyoto University, Japan.

Apr. 08 – Oct. 08 Visiting Professor, Department of Civil and Environmental Engineering, University of Illinois at Urbana - Champaign.

Mar. 07 Tenure - Technion, Haifa, Israel.

Jul. 03 – Jun. 09 Senior Lecturer, Civil and Environmental Engineering, Technion, Haifa, Israel.

Oct. 00 - Jun. 03 Lecturer, Civil and Environmental Engineering, Technion, Haifa, Israel.

Sep. 96 - Sep. 97 Research Associate, Civil Engineering, the University of Arizona, Tucson, AZ, USA.

Apr. 94 - Jul. 96 Research Associate, Water Research Institute, Technion, Haifa, Israel.

PROFESSIONAL EXPERIENCE

Nov. 97 - Oct. 00 Project Manager/Senior Engineer at TAHAL – Consulting Engineers Ltd., on water resources development and water supply projects in Israel for the Water Commission, Mekorot Water Company Co., and private agencies in Israel and abroad.

Oct. 85 - Aug. 87 Trainee, Kapam Ltd., Haifa, Israel. Participation in Irrigation and Agricultural Engineering projects in Israel and abroad.

Jul. 85 - Oct. 85 Research Assistant, Agricultural Engineering, Technion, Haifa, Israel. Participation in Drainage and Soil Conservation Engineering projects.

RESEARCH INTERESTS

Water distribution systems security. Development and application of early warning detection system methodologies for monitoring stations allocation.

Evolutionary optimization. Development and application of evolutionary optimization techniques (e.g., Genetic Algorithms, Ant Colony, Cross Entropy) to water distribution systems and water resources management.

Reliability of water distribution systems. Development and application of reliability models for water distribution systems reliability simulation and management.

Management of multi-quality water distribution systems.

Integration of Geographical Information Systems with water resources models.
Modeling and management of surface water quantity and quality.

Development and application of machine learning techniques in water resources management.

TEACHING EXPERIENCE

Technion: Introduction to Engineering Hydrology (undergraduate); Water Resources Systems Engineering 1 (mutual graduate and undergraduate); Surface Hydrology (mutual graduate and undergraduate); Water Resources Systems Engineering 2 (mutual graduate and undergraduate); Introduction to Hydraulics and Hydrology (undergraduate); Project in Water Engineering (undergraduate); Advanced Hydraulics (graduate); Advanced Seminar in Environmental and Water Engineering (graduate); Advanced Topics in Hydrodynamics and Water Resources (graduate); Seminar in Environmental Engineering (undergraduate); Hydraulics (undergraduate, as teaching assistant).

University of Illinois at Urbana-Champaign: Environmental Systems I (undergraduate/graduate, Fall 2008); Independent study (graduate, Summer 2008).

College of Civil Engineering and Architecture, Zhejiang University

Hangzhou, China: special short course on water resources systems (graduate + faculty, Summer 2012).

TECHNION ACTIVITIES

Feb. 23 – present	Chair, interdisciplinary committee of the Technion Graduate School "MSc general engineering program."
Nov. 22	Chair, ad-hoc Senate committee for nominating the next Technion Executive Vice President & Director General.
Nov. 21 – Mar. 23	Technion EuroTech visiting professorship program representative.
Mar. 20 – Mar. 23	Technion EuroTechPostdoc2 (ETPD2) program coordinator.
Aug. 20 – Nov. 22	Member of the Technion committee for "Industry-Technion cooperation."
Feb. 20 – present	"CRIS-Technion" project manager.
Dec. 15 – Dec. 18	Member of the preparatory senate committee.
Dec. 14 – present	Representative of the Faculty of Civil and Environmental Engineering at the Technion Senate.

Oct. 13 – Mar. 15 Chair graduate, Civil and Environmental Engineering M.Sc. programs for Environmental Engineering, Water, and Agriculture.

Jan. 09 – Apr. 15 Head of the Center for Environmental and Water Resources Engineering.

Jun. 09 – Feb. 11 Chairperson of the Faculty of Civil and Environmental Engineering on preparing the Self-Evaluation Reports Submitted to The Council for Higher Education (MALAG) and for the Technion internal International Evaluation Committee.

Jan. 08 - present Head of the Grand Water Research Institute Mitchell Family Foundation Water Resources Management Laboratory.

Mar. 07 - Apr. 15 In charge of the undergraduate Civil Engineering B.Sc. program for Water Engineering.

Nov. 06 - Mar. 07 Civil and Environmental Engineering Undergraduate (first year) vice dean assistant.

Jan. 02 - Dec. 05 Civil and Environmental Engineering Council Academic Secretary.

Apr. 94 - Jul. 96 Coordinator, Water Research Institute, Technion, Haifa, Israel.

Nov. 91 - Feb. 92 Coordinator, Task Committee for "Creation of a Water Research Institute at the Technion", Samuel Neaman Institute for Advanced Studies in Science and Technology, Technion, Haifa, Israel.

PUBLIC PROFESSIONAL ACTIVITIES

May 25 Guest Editor for a special Issue on : Optimization of Water Distribution System Design and Operation Under Uncertainty, Water Journal jointly with Sriman Pankaj Boindala.

Feb. 25 Editor, Water Research.

Sep. 24 Guest Editor for a special Issue on :Applications of Artificial Intelligence (AI) in Water Resources Systems, Water Journal.

Oct. 23 Member, Water distribution systems optimal operation benchmarks, EWRI-ASCE task committee.

Jul. 23 Member, WDSA graduate students, EWRI-ASCE task committee.

Mar. 23 Guest Co-Editor for a Special Issue on Urban Water Systems: Solutions for Uncertain Futures, Springer Nature.

	Guest Co-Editor for a Special Issue on Water Distribution System Quality Analysis and Control in Water - Open Access Journal.
Aug. 22	Chief panel advisor to the U.S.-Israel Binational Science Foundation on Exact, Physical and Social Sciences
Jul. 22	Guest Co-Editor for a Special Collection on Water and Equity, to be jointly published in the Journal of Water Resources Planning and Management Division ASCE and the Journal of Sustainable Water in the Built Environment ASCE.
Jun. 22	Guest Co-Editor for a Special Issue on Rainwater Harvesting and Treatment, to be published in Water - Open Access Journal.
Oct. 21	Associate Editor, Water Research
Sep. 20	Editorial board member, Water – Open Access Journal, MDPI
Sep. 20	Member, Make results more reproducible, EWRI-ASCE task committee.
Jul. 20	Editor, Journal of Water Resources Planning and Management Division, ASCE.
May. 20	Guest Editor for a Special Issue on Active Contamination Event Detection in Water Distribution Systems, to be published in Water - Open Access Journal.
Feb. 19	Guest Editor for a Special Issue on Multi-Quality Water Distribution Systems Analysis: Simulation and Management, to be published in Water - Open Access Journal.
Dec. 18	Science advisor to the U.S.-Israel Binational Science Foundation.
Oct. 17	Chair, Planning and Management, EWRI-ASCE council.
Mar. 17	Associate Editor, Journal of Water Resources Planning and Management Division, ASCE.
Mar. 15	Member, Research database for water distribution systems, EWRI-ASCE task committee.
Aug. 14	Science advisor to the U.S.-Israel Binational Science Foundation.
Feb. 13	Elected Control Group Member, Planning and Management, EWRI-ASCE council.
Feb. 13	Member of the appointed Israeli National Professional Committee on Water Security.

Dec. 12	Advisory board director of Peak Dynamics (Energy Management in Water Systems) http://www.peak-dynamics.com/
Oct. 12	Associate Editor, Water Resources Research.
Feb. 12	Member, Planning and Management, EWRI-ASCE council.
Nov. 11	Member, Cloud Computing, EWRI-ASCE task committee.
Sep. 11	Member of the Editorial Board, Urban Water Member of the advisory board of Visenti (Improving Infrastructure Management)
Jul. 11	Chair, Standing Committee on Water Distribution Systems Analysis, ASCE.
Jan. 11	Management Committee Member of the IWA Hydroinformatics Specialist Group.
Nov. 10	Core member of the IEEE Systems Technical Committee on Monitoring Critical Infrastructures.
Jul. 10	Chief Editor, Journal of Water Resources Planning and Management Division, ASCE.
Jul. 10	Member of the EWRI Planning & Management Council Awards Committee.
May. 10	Vice Chair, Environmental Cyber-Sensing, EWRI-ASCE task committee.
May. 10	Member, Emerging and Innovative Technologies, EWRI-ASCE task committee.
Nov. 08	Editor Integrated Water Management category, Journal of Water Science and Technology, International Water Association (IWA).
Oct. 08	Member of the Editorial Board, Engineering Optimization.
Jan. 08	Guest Editor in collaboration with Prof. Dimitri Solomatine (UNESCO-IHE Institute for Water Education), Special Issue on Data Driven Modeling and Evolutionary Optimization for River Basin Management, Journal of Hydroinformatics, IAHR (International Association for Hydraulic Research) & IWA (International Water Association), Vol. 10, No. 1.
Jan. 07	Chair of the Standards Institution of Israel Committee on Water Security Models for Faults Handling and Surveillance Equipment Locations.

Jul. 06 Editor, Special issue on Drinking water Distribution Systems Security, Journal of Water Resources Planning and Management Division, American Society of Civil Engineers (ASCE).

Nov. 06 Member of the Israeli Steering Committee on a Drainage Engineering Manual preparation for Drainage Engineers, Ben-Zvi (Ed.).

Feb. 05 Associate Editor, Journal of Water Resources Planning and Management Division, American Society of Civil Engineers (ASCE).

Dec. 04 Vice Chair of the International Water Association (IWA) Watershed and River Basin Management Specialist Group.

Jun. 03 Member of the Task Committee on Integrated Water Resources Management, American Society of Civil Engineers (ASCE).

May 02 Member of the Task Committee on Water and Environmental Planning and Management, American Society of Civil Engineers (ASCE).

 Member of the Task Committee on Evolutionary Computation, American Society of Civil Engineers (ASCE).

 Member of the Environmental and Water Resources Systems Education Task Committee, American Society of Civil Engineers (ASCE).

Oct. 01 Member of the IWA Watershed and River Basin Management Specialist Group.

Oct. 00 In-charge of the Water Research Institute and the Water Resources and Environmental Engineering Departmental Seminars.

Jun. 94 Member of the Water Resources Systems Committee, American Society of Civil Engineers (ASCE).

Jun. 94 Member of the Task Committee on Integration of Reliability, Uncertainty, and Optimization in Hydraulics, American Society of Civil Engineers (ASCE).

Jan. 94 - present Reviewer of the Journal of Water Resources Planning and Management Division, ASCE; Journal of Hydrology; Engineering Optimization; Water Resources Research; Advances in Water Resources; Journal of Environmental Modelling and Software; Urban Water; Civil Engineering and Environmental Systems; Journal of the American Water Works Association; Journal of Environmental Management; Environmental Science

& Technology; Water SA, International Journal of Applied Mathematics and Computer Science (AMCS), IEEE Transactions on Evolutionary Computation, Optics Express (annual average of 30 reviews).

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Fellow, Environmental and Water Research Institute (EWRI).

Fellow, International Water Association (IWA).

Fellow, American Society of Civil Engineers (ASCE).

Japan Society of Hydrology and Water Resources (JSHWR).

Member, American Chemical Society (ACS).

The Operations Research Society of Israel (ORSIS).

American Geophysical Union (AGU).

Israel Association for Water Resources (IAWR).

The Israeli and International Water Association (IWA).

1991-present: Registered Engineer (#00065489), Israel

HONORS

Sep. 24 Journal of Water Resources Planning and Management Division, ASCE – Seminal Paper Award for Ostfeld et al. (2008):
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:6\(556\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:6(556))

Apr. 22 The Cooper Award for Excellence in Research.

Feb. 20 2020 Best Seminal Paper Award for the journal of Water Resources Planning and Management Division, ASCE, for the paper: "State of the art for genetic algorithms and beyond in water resources planning and management" by John W. Nicklow, Patrick Reed, Dragan Savic, Tibebe Dessalegne, Laura Harrell, Amy Chan-Hilton, Mohammad Karamouz, Barbara Minsker, Avi Ostfeld, Abhishek Singh, and Emily Zechman.
[https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0000053](https://doi.org/10.1061/(ASCE)WR.1943-5452.0000053)

Jan. 20 ASCE Julian Hinds AWARD.

Feb. 16 ASCE/EWRI 2016 Service to the Profession Award.

May 13 Fellow, Environmental and Water Research Institute (EWRI).

Jan. 13 Outstanding Reviewer Award for 2012 for the Journal of Environmental Modelling and Software (EMS).

Aug. 12 Fellow, International Water Association (IWA).

Mar. 12 Fellow, American Society of Civil Engineers (ASCE).

Apr. 12 EWRI-ASCE Planning & Management Council's Award for Outstanding Achievement.

Mar. 10 Second Best Poster Award: *Housh M.* Ostfeld A. and Shamir U. "Optimal Management of Israeli National Water Systems Under Uncertainty" in Partnership to Build Capacity for Integrated, International Water Resource Management, ISE - Jordan Water Week 2010, Amman, Jordan.

Jun. 09 International Visiting Scholarship Award, Research Center for Environmental Quality Management (RCEQM), Graduate School of Engineering, Kyoto University, Japan.

Sep. 09 Best CCWI09 Paper Award: *Preis A.*, Whittle A., Ostfeld A., and *Perelman L.* (2009). "On-line hydraulic state estimation in urban water networks using reduced models", in Integrating Water Systems, Boxall and Maksimovic (Eds.), Taylor and Francis Group, London, proceedings of Computing and Control in the Water Industry 2009 (CCWI09), Sheffield, UK, pp. 319-324.

Feb. 07 The Henri Gutwirth Research Grant.

May 06 Recognized D.WRE (Diplomate, Water Resources Engineer), American Academy of Water Resources Engineers.

Jun. 03 The Aharon Arenson Ltd. Prize for Outstanding Lectureship, Faculty of Civil and Environmental Engineering, Technion.

Jun. 02 The Aharon Arenson Ltd. Prize for Outstanding Lectureship, Faculty of Civil Engineering, Technion.

Jan. 02 The Karney Volovelsky Academic Lectureship Award, Technion.

May 01 The Michael Winer Career Development Chair of the Water Research Institute, Technion.

Jan. 01 The Samuel and Esther August Academic Lectureship Award, Technion.

Jun. 92 The Simha Blas Scholarship Award.

Jun. 92 The Ziva and Albert Ben David Prize for the Outstanding Assistant in teaching in the Fall Semester, 1992.

Jan. 92 The Wolf Foundation Scholarship Award for Research Students.

Jun. 91 The Gruenspan Prize for Research.

Mar. 90 The Miriam and Aaron Gutwirth Scholarship for Excellence Award.

GRADUATE STUDENTS

Completed Theses

1998 MSc, Mataeb G. Stanislav, "Inclusion of demand - pressure head relationships in simulation and management of water distribution systems", with Mordechai H. Diskin - primary advisor.

2003 MSc, Shani Salomons, "Development of a calibration model for CE-QUAL-W2". Currently – Water Transportation Engineer at Elia Ben-Shabat Transportation & Traffic Engineering, Haifa, Israel.

2003 Quirin Lutzenberger, "Hydraulic Simulation and Optimization of Water Distribution Networks", H. Orth (primary advisor), Avi Ostfeld, Ruhr-Universität Bochum, Germany.

2003 MSc, Eli Elias, "An approximated model for optimal design and operation of the Israeli National System: quantity and quality" (Final Paper Track). Currently – TAHAL – Consulting Engineers Ltd., Israel.

2004 MSc, Ami Preis, "A machine learning model for quantity - quality flow predictions in watersheds". Currently – Post doctorate, MIT, USA.

2004 MSc, Shahar Shlomi, "Development of methodologies for optimal groundwater monitoring", with Hillel Rubin - primary advisor.

2005 MSc, Doron Levin, "Analysis of primary - secondary sludge ratio and influences on wastewater treatment costs", with Noah Galil - primary advisor. Currently – Water Engineer at BALASHA-JALON Consulting Engineers Ltd., Haifa, Israel.

2005 MSc, Lina Perelman, "Multi - objective design of water distribution systems". Currently – Associate Professor, the University of Texas at Austin, USA.

2006 MSc, Zohar Sofer, "Reliability assessment of in - house graywater reuse", with Eran Friedler - primary advisor. Currently – Wastewater Engineer, Kalbinyan-Termak Ltd., Israel

2008 PhD, Ami Preis, "Water distribution systems security – multi - objective management". Currently – Founder of Visenti Pte. Ltd.

2008 MSc, Karnit Goldwaser, "Calibration and application of AVGWLF to Lake Kinneret watershed", with Eran Friedler - adjacent advisor.

2008 MSc, Yuri Mayorchik, "Optimal design and operation of pressure surge control devices in water distribution systems". Currently – Water Engineer at TAHAL Consulting Engineers Ltd.

2009 MSc, Shay Herer, "Development of tools for evaluating water hammer solutions" (Final Paper Track).

2010 MSc, Mashor Housh, for completing the requirements for the Master's degree during PhD direct track studies, with Uri Shamir - adjacent advisor. Currently – Tenured faculty member (Senior Lecturer) Haifa University.

2011 MSc, Ziv Ohar, "Optimal booster chlorination stations layout in water systems for minimizing disinfection by products" (cum laude). Currently – Research Assistant, Technion, with Avi Ostfeld.

2011 PhD, Lina Perelman, "Water Distribution Systems Aggregation". Currently – Tenured, Associate Professor, the University of Texas at Austin, USA.

2011 PhD, Mashor Housh, "Optimal multi-year management of regional water resources systems under uncertainty", with Uri Shamir - adjacent advisor. Currently – Tenured, Associate Professor, Haifa University, Israel.

2012 MSc, Ariel Krapivka, "A hybrid optimization model for water distribution systems design." Currently – Water Engineer – TAHAL Consulting Engineers, Ltd.

2012 MSc, Eyal Price , for completing the requirements for the Master's degree during PhD direct track studies. Currently – Water Engineer – IDE Consulting Engineers, Ltd.

2013 PhD, Dimitri Tukarev, "Development of a hydrodynamic model for managing water supply reservoirs", with Hillel Rubin – primary advisor.

2013 MSc, Jonathan Arad, "Water Distribution Systems Contamination Event Detection." Currently – private independent employee.

2014 MSc, Nurit Oliker, "Multivariate data analysis for contamination event detection in water distribution systems." Currently – PhD, Civil and Environmental Engineering at Optibus Consulting Company.

2014 MSc, Olya Skulovich, "Multi-objective layout of surge control devices in water distribution systems", with Lina Perelman – adjacent advisor. Currently – PhD student, Columbia University, USA.

2015 MSc, Matan Maskit, "Multi-objective operation, leakage, and water quality optimization for water distribution systems." Currently – Teaching Assistant, Civil and Environmental Engineering, Technion.

2015 MSc, Rafael Schwartz, "Inclusion of uncertainty in water distribution systems optimal design and operation" (summa cum laude). Currently – PhD, faculty member, Ariel University, Israel..

2016 PhD (direct track), Eyal Price, "Inclusion of reliability and leakage in multi-objective operation of multi-quality water distribution systems." Currently – Water Engineer – IDE Consulting Engineers, Ltd.

2016 MSc, Nathan Sankary, for completing the requirements for the Master's degree during PhD direct track studies.

2018 PhD (direct track), Nathan Sankary, "Inclusion of uncertainty in sensor network optimal design and operation for water distribution systems security." Currently – Affiliated researcher at a German University.

2018 MSc, Ron Lifshitz, "Dynamic district metering areas optimization for water distribution systems." Currently – Civil Engineer employee at the Israeli Ministry of Construction and Housing.

2018 MSc, Mohamad Zeidan, "Multi-objective optimization for trading off operational cost, leakage, and water age in water distribution systems." Currently – PhD Student, Technion – Israel Institute of Technology.

2018 MSc, Jad Naamnih, "Events detection in water distribution systems." Currently – Water Engineer, working in the Israeli industry.

2020 MSc, Shimon Somer, "Rehabilitation of water distribution systems following a cadmium contamination intrusion", with Ori Lahav – primary advisor.

2021 MSc, Biniam Abrha, "Storage water quality modeling - inclusion in water distribution systems management."

2022 MSc, Assefa Hayelom, "Utilization of network sub-systems for robust water distribution systems optimization under uncertainty."

2022 PhD, Leonid Kadinski, "An integrated warning system for contamination response and recovery of water distribution systems."

2022 PhD, Mohamad Zeidan, "Unsteady flow utilization for water distribution systems management."

2023 MSc, Rahel Amare Kidanu, "Improving multi-objective optimization methods of water distribution systems." with Maria da Conceição M.O. Cunha, University of Coimbra, Portugal.

2023 PhD, Sriman Pankaj Boindala, "Uncertainty inclusion in design-optimization of multi-quality water distribution systems."

2023 PhD, Ofer Snir, "Optimizing design and operation of urban rainwater harvesting systems: high-temporal resolution stochastic model", with Eran Friedler – primary advisor, Luca Vezzaro, DTU – secondary advisor, (served as consultant 2021-2022).

- 2024 MSc, Tomer Shmaya, "Conjunctive optimal operation of power and water networks."
- 2024 MSc, Gal Perelman, for completing the requirements for the Master's degree during PhD direct track studies.
- 2025 PhD, Gal Perelman, "Optimal operation of water distribution systems under uncertainty."

With Prof. Barbara Minsker and Prof. Arthur R. Schmidt, primary advisors, University of Illinois at Urbana-Champaign:

- 2013 PhD, Andrea Zimmer, "Hydraulic modeling and evolutionary optimization for enhanced real-time decision support of combined sewer overflows."

Theses in Progress

- 2024 PhD, Raghad Shamaly, "Integrating machine learning for simulating and managing water quality in water distribution systems." with Abhijith G R, IIT -Kanpur, India – adjunct advisor.
- 2025 MSc, Orjuwan Salfety, "Multi-objective optimization of surge control devices in water distribution systems."

POST-DOCS

- 2022 - 2023 Leonid Kadinski, working on BMBF 2019 funded project: "Online Monitoring and Digital Control in Drinking Water Distribution Systems."
- 2019 - 2022 Eyal Price, working on ISF 2018 funded project: "Dynamic Approach for Water Distribution Systems Clustering and Aggregation."
- 2019 - 2021 Mengning Qiu, worked on ISF 2018 funded project: "Dynamic Approach for Water Distribution Systems Clustering and Aggregation."
- 2020 - 2023 Abhijith Gopinathan, working on BMBF 2019 funded project: "Online Monitoring and Digital Control in Drinking Water Distribution Systems."
- 2025 Sriman Pankaj Boindala, working on MOST-BMBF 2024 funded project: "Stay Safe for Intermittent Agricultural Irrigation."
- 2024 - Shimon Komarovsky, working on BSF 2021 funded project: "Water distribution systems management under COVID-X."

RESEARCH GRANTS

- 2001 Mekorot Israel National Water Company Co., "Optimal selection of water distribution systems devices and their calibration", 117000 NIS (two years), Avi Ostfeld, Yehuda Agnon, Michael Saldkevitch.

2002 Water Commission, "A GIS based hydrological model for estimating pollutant loads to Lake Kinneret from its watershed", 179860 NIS, Avi Ostfeld; extension of 40000 NIS, Avi Ostfeld, Eran Friedler (three years).

2002 The Grand Water Research Institute, "Innovative systems for early warning in drinking water distribution networks", 22000 \$ (two years), Avi Ostfeld, Avner Kessler.

2002 The Grand Water Research Institute, "Lake Kinneret watershed contamination transports – a GIS based hydrological model", 15000 \$ (two years), Avi Ostfeld.

2002 The Grand Water Research Institute, "Optimal monitoring of pumped groundwater for water supply in semiarid populated areas", 24000 \$ (two years), Hillel Rubin, Avi Ostfeld.

2002 The Grand Water Research Institute, "Effects of water resources management policies, including pumping and recharge, on the salinization process in the coastal aquifer", 24000 \$ (two years), Uri Shavit, Avi Ostfeld, Shmuel Assouline.

2003 Technion's Counter Terrorism Competition, "Early warning monitoring system (EWMS) for drinking water distribution systems security", 7500 \$ (one year), Avi Ostfeld.

2004 The Grand Water Research Institute: "Development of a quantity - quality model for Lake Kinneret using clustering recognition and machine learning", 7000 \$ (one year), Avi Ostfeld, Lea Kronaveter.

2005 The Grand Water Research Institute, Research Focus on: "Integrative membrane treatment of municipal wastewater for unlimited use", 100000 \$ (one year), Robert Armon, Carlos Dosoretz, Eran Friedler, Noah Galil, Michal Green, Avi Ostfeld, Rafi Semiat, Avi Shavit.

2005 The Grand Water Research Institute, Research Focus on: "On - line monitoring of particulate contaminants in drinking water supplies", 70000 \$ (one year) Israel Schechter, Yechezkel Kashi, Avi Ostfeld.

2005 NATO Science for Peace (SfP) project: "Drinking water supply systems security using online monitoring", 271000 EURO (three years), Kevin Lansey (NATO country project director), David Walt (Co - director) - USA (45000 EURO); Avi Ostfeld (Partner NATO country project director), Israel Schechter (Co - director), Yechezkel Kashi (Co - director) - Technion, ISRAEL (226000 EURO).

2006 Mekorot, Israel National Water Co.: "Analysis of the hydraulic and Limnological system of Eshkol reservoirs", 647000 NIS (two years), a joint Kinneret Limnological Laboratory (KLL) and Technion – Israel Institute of Technology project (KLL – Ami Nishri, Allon Rimmer, Assaf Sukenik,

Tamar Zohary, Gideon Gal, Ilia Ostrovsky, and Yosi Yacobi; Technion – Hillel Rubin, Yehuda Agnon, and Avi Ostfeld).

2006 Water Commission, "Development of an optimal management model for Lake Kinneret watershed", 40000 NIS, Avi Ostfeld (one year).

2006 Institute for Future Defense Technologies Research Named for The Medvedi, Shwartzman and Gensler families: "Water distribution systems security using online contamination monitoring", 25000 \$, Avi Ostfeld (PI), Israel Schechter, Yechezkel Kashi (one year).

2007 MAGNET project: "Development of data driven models for Biofouling prediction", 150000 NIS, Avi Ostfeld (one year, to be extended to additional two years).

2007 Mekorot, Israel National Water Co.: "Toxic Cyanobacteria predictions in Lake Kinneret ", 51750 NIS, Avi Ostfeld (one year).

2007 Tahal, Consulting Engineers Ltd.: "Theoretical and empirical investigation into the effects of blending desalinated water with other water sources", 70000 NIS, Ori Lahav, Avi Ostfeld, Menahem Rebhun (1.5 years).

2008 Institute for Future Defense Technologies Research Named for The Medvedi, Shwartzman and Gensler families: "Water distribution systems security using online contamination monitoring", 145000 NIS, Avi Ostfeld (PI), Israel Schechter, Yechezkel Kashi (two years).

2008 MAGNET project: "Development of data driven models for Biofouling prediction", 162250 NIS, Avi Ostfeld and Eran Friedler (year two, to be extended to year three).

2008 Grand Water Research Institute: "Inclusion of desalinated water sources in optimizing the operation of water distribution systems", 4000 \$, Avi Ostfeld.

2008 Water Authority: "Protecting water distribution systems from deliberate contamination intrusions", 328920 NIS, Avi Ostfeld (three years).

2008 Member of COST (European Cooperation in the field of Scientific and Technical Research) initiative on Intelligent Monitoring, Control and Security of Critical Infrastructure Systems (IntelliCIS).

2009 Institute for Future Defense Technologies Research Named for The Medvedi, Shwartzman and Gensler families: "Water distribution systems security using online contamination monitoring", 60000 NIS, Avi Ostfeld (PI), Israel Schechter, Yechezkel Kashi (third year).

2009 Israeli Ministry of Industry and Trade MAGNET project: "Development of data driven models for Biofouling prediction", 234634 NIS, Avi Ostfeld (third year).

2010 Mekorot Water Company Co., "Optimal operation of the Kishon system", 50000 NIS, Avi Ostfeld (two years).

2010 Technion Research and Development and Lando/Ben-David, "Topological clustering analysis for water distribution systems", 2000 \$, Avi Ostfeld (one year).

2011 American Society of Civil Engineers (ASCE) Chief Editor support, 10000 \$, Avi Ostfeld (one year).

2011 Technion's Counter Terrorism Competition, "Extreme Impact Contamination Events Sampling for Water Distribution Systems Sensor Design and Operation", 29500 \$ (one year), Avi Ostfeld.

2011 Water Authority: "Water distribution systems security - contamination event response enhancement and vulnerability index development", 282900 NIS, Avi Ostfeld (three years).

2012 Umbrella Cooperation Program: Water quality event detection for urban water sustainability ", 8000 \$ (one year) Avi Ostfeld and Prof. Dr.-Ing. Holger Schüttrumpf, Institute of Hydraulic Engineering and Water Resources Management, RWTH, Aachen.

2012 Technion's Counter Terrorism Competition, "Mobile Sensors Utilization for Water Distribution Systems Security", 65500 \$ (three years), Avi Ostfeld.

2012 Water Authority: "Modeling of complex contaminants in water distribution systems", 360000 NIS, Avi Ostfeld (three years).

2013 MOST-BMBF: "Water quality event detection for urban water security and urban water management based on hydrotoxicological investigations (W³-Hydro)", 281000 EURO (Israel), 439000 EURO (Germany), Avi Ostfeld, Holger Schüttrumpf (three years).

2013 Grand Water Research Institute, "Mobile sensors operation for water distribution systems water quality monitoring and security", 22500 \$ (two year), Avi Ostfeld.

2013 United States Binational Science Foundation (BSF): "Remote mobile sensors operation for water quality and security enhancements of drinking water distribution systems", Avi Ostfeld, Katherine M. Banks, and Marshall Porterfield, 224400 \$ (four years).

2014 Robert Shilman Technion foundation for global security research – cooperation with Northeastern university: "Resilient supply-chain design and operation – the testbed of the Israeli national water system", 25000 \$ (one year), Avi Ostfeld.

2014 Water Authority: "Optimal disinfection of water distribution systems post a contamination event." 420000 NIS (three years), Avi Ostfeld.

2015 Grand Technion Energy Program: "Smart grid integration at the water-energy nexus." 420000 NIS (one year), Guy Ramon, Avi Ostfeld, and Yitzhak Birk.

2016 Technion's Counter Terrorism Competition, "Optimal decontamination of water distribution systems following a contamination event: a systems approach", 10300 \$ (one year), Avi Ostfeld.

2017 German Research Foundation (DFG), "Optimal pressure and water age management of water distribution systems", German PI, Pu Li, Technische Universität Ilmenau, 380000 Euro (three years, 273200 Germany, 106800, Israel), Avi Ostfeld.

2017 EU-H2020 (CIP-2016-2017-1), "Strategic, tactical, operational protection of water infrastructure against cyber-physical threats", STIFTELSEN SINTEF, Coordinator (Rita Ugarelli), total budget: 8255757 Euro, multiple academia and industry partners, four years, 400000 Euro, Technion, Avi Ostfeld.

2017 Technion's Counter Terrorism Competition, "Dynamic clustering for water distribution systems contamination response and recovery", 100000 NIS (one year), Avi Ostfeld.

2017 United States Binational Science Foundation (BSF): "An integrated contaminant warning system for contamination response and recovery", Avi Ostfeld and Dominic Boccelli, 145200 \$ (four years).

2017 Ministry of Science, Technology and Space: "Rehabilitation of water distribution systems following a chemical contamination intrusion – a solution based on water quality and water distribution systems modeling", Avi Ostfeld and Ori Lahav, 750030 NIS (three years).

2017 Ministry of Science, Technology and Space: "Utilization of advanced acoustic equipment for biomass and fish recognition for fishery optimal management in Lake Kinneret", Jonathan Belkin, Tel-Aviv University, Ilya Ostrovsky, Israel Oceanographic and Limnological Research (IOLR), Avi Ostfeld, Total of: 1199624 NIS (three years, Technion part: 169050 NIS).

2017 Ministry of Science and Technology and National Emergency Management Authority: "National knowledge and research center for emergency readiness", 9 research group heads, 85 researchers; multi-institutional: University of Haifa, Technion, Hebrew University, and others, total of 3,000,000 NIS, three years.

2018 Israeli Science Foundation (ISF): "Dynamic Approach for Water Distribution Systems Clustering and Aggregation", Avi Ostfeld, 720000 NIS (240000 NIS annually, three years).

2019 MOST-BMBF: "Online Monitoring and Digital Control in drinking water distribution systems", 356500 EURO, Avi Ostfeld, Mathias Ernst, Pu Li (three years).

2020 German Research Foundation (DFG), "Optimal Pressure and Water Age Management of Water Distribution Systems Under Uncertain Demand and Flexible Electrical Energy Tariff", German PI, Pu Li, Technische Universität Ilmenau, 405000 Euro (three years, 298000 Germany, 107000, Israel), Avi Ostfeld.

2021 United States Binational Science Foundation (BSF): "Water distribution systems management under COVID-X", Avi Ostfeld and Emily Berglund, 188800 \$ (four years).

2022 PMRI – Peter Munk Research Institute – Technion: "Enhancing the reliability of a contamination detection sensors network in water distribution systems during a cyber-attack", 60000 NIS (one year), Avi Ostfeld.

2022 The Bernard M. Gordon Center for Systems Engineering at the Technion: "Optimal operation of coupled power - water distribution systems under uncertainty", 20000 \$ (one year), Avi Ostfeld.

2023 British Council: "Application of e-Favor water leakage detection in water distribution systems under desert environment", Kegong Diao, Avi Ostfeld, and Monther Hind, 21000 \$ (one year, 7000 \$ Technion).

2024 Israeli Water Commission: "Multiobjective optimal operation design of water supply systems: cost, leakage, water quality", Shlomo Bekhor, Avi Ostfeld (three years, 341475 NIS).

2024 Scheme for Promotion of Academic and Research Collaboration (SPARC) , A Government of India Initiative: "Safe-water: a decision support tool facilitating chlorination in water distribution systems", G R Abhijith, Manoj Kumar Tiwari, Purnendu Bose (Indian Institute of Technology), Avi Ostfeld (Technion), Ahmed Abokifa (University of Illinois Chicago) (two years, funds for travel and accommodation for research cooperation in India).

2024 MOST-BMBF: "Stay safe for intermittent agricultural irrigation", 374190 EURO, Avi Ostfeld, Jörg E. Drewes and Benedikt M. Aumeier (three years).

2024 Grand Water Research Institute, Technion: "Data enabled predictive control for optimal operation of urban drainage systems", 16000\$ (two years).

2025 The Bernard M. Gordon Center for Systems Engineering at the Technion: "A systems approach for simulating and managing emerging contaminants in water networks", 15000\$ (one year).

2025 Israeli Council of Higher Education, "Mediterranean catchment observatory for studying climate - and human-induced hydrological and biogeochemical processes in aquatic environments" 4,250,000 NIS (total budget, four yrs.), Shai Arnon (PI) et al. + 22 researchers from Ben-Gurion University, Hebrew University, Technion, Geological Survey of Israel, Israel Oceanographic and

Limnological Research, and Volcani Institute. Acting as a researcher at the Technion team: Furman/Friedler/Ostfeld/Orenstein/Radian.

Judged as very good and worthy of support:

2003 United States Binational Science Foundation (BSF): "Early warning monitoring systems for drinking water distribution systems security", Avi Ostfeld, Kevin Lansey, not funded but judged as very good and worthy of support.

2005 United States Binational Science Foundation (BSF): "Innovative water quality sampling methodologies for water distribution systems control", Avi Ostfeld, Kevin Lansey, not funded but judged as very good and worthy of support.

2007 United States Binational Science Foundation (BSF): "Water distribution systems security management through monitoring and control", Avi Ostfeld, Kevin Lansey, not funded but judged as very good and worthy of support.

2009 Israeli Science Foundation (ISF): "Water distribution systems security: extreme impact contamination events sampling for sensor placement", Avi Ostfeld, not funded but judged as very good and worthy of support.

2010 United States Binational Science Foundation (BSF): "Sensor networks for real time control of water distribution systems", Avi Ostfeld, Andrew Whittle (MIT), not funded but judged as very good and worthy of support.

2011 Israeli Science Foundation (ISF): "Operation of mobile sensors for quality and security of water distribution systems", Avi Ostfeld, not funded but judged as very good and worthy of support.

2017 Israeli Science Foundation (ISF): "Dynamic approach for water distribution systems clustering and aggregation", Avi Ostfeld, not funded but judged as very good and worthy of support.

2025 ERC Advanced Grant (ERC): "COMputational Biology for INtegrating Emerging contaminants in water distribution networks (COMBINE)", Avi Ostfeld, past Stage 2 of the evaluation process with the grade of A (fully meets the ERC's excellence criteria and is recommended for funding if sufficient funds are available).

PUBLICATIONS

[Graduate students/research assistants - in italics; Current annual impact factor (5-year impact factor)]

Theses

1. **Ostfeld A.** (1990), "Management of a regional water supply system with sources of different qualities", M.Sc. Thesis, 178 p., Civil Engineering, Technion - Haifa, Israel.
2. **Ostfeld A.** (1994), "Optimal design of reliable multiquality water supply systems", D.Sc. Thesis, 164 p., Civil Engineering, Technion - Haifa, Israel.

Referred papers in professional journals

Published papers

1. **Ostfeld A.** and Shamir U. (1993). "Optimal operation of multiquality networks I: steady state conditions", Journal of Water Resources Planning and Management Division, ASCE, Vol. 119, No. 6, pp. 645 – 662, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(1993\)119:6\(645\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(1993)119:6(645))
2. **Ostfeld A.** and Shamir U. (1993). "Optimal operation of multiquality networks II: unsteady conditions", Journal of Water Resources Planning and Management Division, ASCE, Vol. 119, No. 6, pp. 663 – 684, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(1993\)119:6\(663\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(1993)119:6(663))
3. **Ostfeld A.** and Shamir U. (1996). "Design of optimal reliable multiquality water supply systems", Journal of Water Resources Planning and Management Division, ASCE, Vol. 122, No. 5, pp. 322 – 333, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(1996\)122:5\(322\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(1996)122:5(322))
4. Kessler A., **Ostfeld A.**, and Sinai G. (1998). "Detecting accidental contaminations in municipal water networks", Journal of Water Resources Planning and Management Division, ASCE, Vol. 124, No. 4, pp. 192 – 198, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(1998\)124:4\(192\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(1998)124:4(192))
- 4a. **Ostfeld A.** and Kessler A. (1999) Closure on "Detecting accidental contaminations in municipal water networks", Journal of Water Resources Planning and Management Division, ASCE, Vol. 125, No. 5, pp. 308 – 310, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(1999\)125:5\(308\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(1999)125:5(308))
5. Argaman Y., Papkov G., **Ostfeld A.**, and Rubin D. (1999). "Single - sludge Nitrogen removal model: calibration and verification", Journal of Environmental Engineering, ASCE, Vol. 125, No. 7, pp. 608 – 617, [http://dx.doi.org/10.1061/\(ASCE\)0733-9372\(1999\)125:7\(608\)](http://dx.doi.org/10.1061/(ASCE)0733-9372(1999)125:7(608))
6. **Ostfeld A.**, Muzaffar E., and Lansey K. E. (1999). "Analytical ground-water flow solutions for channel-aquifer interaction", Journal of Irrigation and Drainage Engineering, ASCE, Vol. 125, No. 4, pp. 196 – 202, [http://dx.doi.org/10.1061/\(ASCE\)0733-9437\(1999\)125:4\(196\)](http://dx.doi.org/10.1061/(ASCE)0733-9437(1999)125:4(196))
7. **Ostfeld A.** (2001). "Reliability analysis of regional water distribution systems", Urban Water Journal, Elsevier Science, Vol. 3, No. 3, pp. 137 – 144, [http://dx.doi.org/10.1016/S1462-0758\(01\)00035-8](http://dx.doi.org/10.1016/S1462-0758(01)00035-8)

8. **Ostfeld A.**, *Muzaffar E.*, and Lansey K. E. (2001). "HANDSS: the Hula aggregated numerical decision support system", *Journal of Geographic Information and Decision Analysis (GIDA)*, Vol. 5, No. 1, pp. 16 – 31.
9. **Ostfeld A.**, *Kogan D.*, and Shamir U. (2002). "Reliability simulation of water distribution systems - single and multiquality", *Urban Water Journal*, Elsevier Science, Vol. 4, No. 1, pp. 53 – 61, [http://dx.doi.org/10.1016/S1462-0758\(01\)00055-3](http://dx.doi.org/10.1016/S1462-0758(01)00055-3)
10. **Ostfeld A.** (2002). "IPCLASS – an interactive program for calibrating activated sludge systems", *Journal of Environmental Modelling and Software*, Elsevier Science, Vol. 17, No. 8, pp. 703 – 719, [http://dx.doi.org/10.1016/S1364-8152\(02\)00030-0](http://dx.doi.org/10.1016/S1364-8152(02)00030-0)
11. **Ostfeld A.** and *Preis A.* (2003). "Lake Kinneret watershed contamination transports: a GIS based hydrological model", *Water Science and Technology*, Vol. 48, No. 10, pp. 63 – 70, <http://www.iwaponline.com/wst/04810/wst048100063.htm>
12. **Ostfeld A.** and *Salomons E.* (2004). "Optimal operation of multiquality water distribution systems: unsteady conditions", *Engineering Optimization*, Vol. 36, No. 3, pp. 337 – 359, <http://dx.doi.org/10.1080/0305215042000207054>
13. **Ostfeld A.**, Kessler A., and *Goldberg I.* (2004). "A contaminant detection system for early warning in water distribution networks", *Engineering Optimization*, Vol. 36, No. 5, pp. 525 – 538, <http://dx.doi.org/10.1080/03052150410001714097>
14. **Ostfeld A.** and *Salomons E.* (2004). "Optimal layout of early warning detection stations for water distribution systems security", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 130, No. 5, pp. 377 – 385, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2004\)130:5\(377\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2004)130:5(377))
15. **Ostfeld A.** (2004). "Reliability analysis of water distribution systems", *Journal of Hydroinformatics*, Vol. 6, No. 4, pp. 281 – 294, <http://www.iwaponline.com/jh/006/jh0060281.htm>
16. ¹ **Ostfeld A.** (2005). "Water distribution systems connectivity analysis", *Evolutionary Computation Special Issue of the Journal of Water Resources Planning and Management Division, ASCE*, Vol. 131, No. 1, pp. 58 – 66, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2005\)131:1\(58\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2005)131:1(58))
17. **Ostfeld A.** (2005). "Optimal design and operation of multi - quality networks under unsteady conditions", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 131, No. 2, pp. 116 – 124, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2005\)131:2\(116\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2005)131:2(116))

¹ Most downloaded article January 2004 – January 2005.

18. **Ostfeld A.** and *Salomons S.* (2005). "A hybrid genetic - instance based learning algorithm for CE-QUAL-W2 calibration", *Journal of Hydrology*, Vol. 310, pp. 122 – 142, <http://dx.doi.org/10.1016/j.jhydrol.2004.12.004>
19. **Ostfeld A.** and *Salomons E.* (2005). "Securing water distribution systems using online contamination monitoring", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 131, No. 5, pp. 402 – 405, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2005\)131:5\(402\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2005)131:5(402))
20. **Ostfeld A.** and *Salomons E.* (2005). "Optimal early warning monitoring system layout for water networks security: inclusion of sensors sensitivities and response delays", *Civil Engineering and Environmental Systems*, Vol. 22, No. 3, pp. 151 – 169, <http://dx.doi.org/10.1080/10286600500308144>
21. **Ostfeld A.** and *Salomons E.* (2006). "Conjunctive optimal scheduling of pumping and booster chlorine injections in water distribution systems", *Engineering Optimization*, Vol. 38, No. 3, pp. 337 – 352, <http://dx.doi.org/10.1080/03052150500478007>
22. *Preis A.*, *Tubaltzev A.*, and **Ostfeld A.** (2006). "Kinneret watershed analysis tool: a cell based decision tree model for watershed flow and pollutants predictions", *Water Science and Technology*, Vol. 53, No.10, pp. 29 – 35, <http://dx.doi.org/10.2166/wst.2006.294>
23. Grayman W., **Ostfeld A.**, and *Salomons E.* (2006). "Locating monitors in water distribution systems: red team - blue team exercise", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 132, No. 4, 300 -304, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2006\)132:4\(300\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2006)132:4(300))
24. *Preis A.* and **Ostfeld A.** (2006). "Contamination source identification in water systems: a hybrid model trees - linear programming scheme", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 132, No. 4, 263 – 273, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2006\)132:4\(263\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2006)132:4(263))
25. *Perelman L.* and **Ostfeld A.** (2007). "An adaptive heuristic Cross Entropy algorithm for optimal design of water distribution systems", *Engineering Optimization*, Vol. 39, No. 4, pp. 413 – 428, <http://dx.doi.org/10.1080/03052150601154671>
26. *Preis A.* and **Ostfeld A.** (2007). "A contamination source identification model for water distribution system security", *Engineering Optimization*, Vol. 39, No. 8, pp. 941 – 951, <http://dx.doi.org/10.1080/03052150701540670>
27. *Preis A.* and **Ostfeld A.** (2007) "A coupled model tree - genetic algorithm scheme for flow and water quality predictions in watersheds", *Journal of Hydrology*, Vol. 349. Issues 3-4, pp. 364 – 375, <http://dx.doi.org/10.1016/j.jhydrol.2007.11.013>
28. **Ostfeld A.** and *Tubaltzev A.* (2008). "Ant colony optimization for least cost design of water distribution systems", *Journal of Water Resources Planning and*

Management Division, ASCE, Vol. 134, No. 2, pp. 107 – 118,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:2\(107\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:2(107))

29. *Preis A.* and **Ostfeld A.** (2008). "Genetic algorithm for contaminant source characterization using imperfect sensors", Civil Engineering and Environmental Systems, Vol. 25, No. 1, pp. 29 – 39,
<http://dx.doi.org/10.1080/10286600701695471>
30. *Perelman L.* and **Ostfeld A.** (2008). "Water distribution system aggregation for water quality analysis", Journal of Water Resources Planning and Management Division, ASCE, Vol. 134, No. 3, pp. 303 – 309,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:3\(303\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:3(303))
31. Friedler E., *Shwartzman Z.*, and **Ostfeld A.** (2008). "Assessment of the reliability of an on-site MBR system for greywater treatment and the associated aesthetic and health risks", Water Science and Technology, Vol. 57, No. 7, pp. 1103 –1110, <http://dx.doi.org/10.2166/wst.2008.248>
32. *Perelman L.*, *Maslia M. L.*, **Ostfeld A.**, and *Sautner J. B.* (2008). "Using aggregation/skeletonization network models for water - quality simulations in epidemiologic studies", Journal of the American Water Works Association (AWWA), Vol. 100, No. 6, pp. 122 – 133, <http://www.jstor.org/stable/41312909>
33. *Preis A.* and **Ostfeld A.** (2008) "Multiobjective contaminant sensor network design for water distribution systems", Journal of Water Resources Planning and Management Division, ASCE, Vol. 134, No. 4, pp. 366 – 377,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:4\(366\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:4(366))
34. *Perelman, L.*, **Ostfeld A.**, and Salomons E. (2008). "Cross Entropy multiobjective optimization for water distribution systems design", Water Resources Research, 44, W09413, <http://dx.doi.org/10.1029/2007WR006248>
35. *Preis A.* and **Ostfeld A.** (2008). "Multiobjective contaminant response modeling for water distribution systems security", Journal of Hydroinformatics, Vol. 10, No. 4, pp. 267 – 274, <http://dx.doi.org/10.2166/hydro.2008.061>
36. **Ostfeld A.**, Uber J., Salomons E. et al. (+ 32 co-authors) (2008). "The battle of the water sensor networks: a design challenge for engineers and algorithms", Journal of Water Resources Planning and Management Division, ASCE, Vol. 134, No. 6, pp. 556 – 568,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:6\(556\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:6(556))
37. Lahav O., *Salomons E.*, and **Ostfeld A.** (2009). "Chemical stability of inline blends of desalinated, surface and ground waters: the need for higher alkalinity values in desalinated water", Desalination, Vol. 239, pp. 334 – 345,
<http://dx.doi.org/10.1016/j.desal.2008.07.006>
38. *Krapivka A.* and **Ostfeld A.** (2009). "Coupled genetic algorithm – linear programming scheme for least cost design of water distribution systems",

Journal of Water Resources Planning and Management Division, ASCE, Vol. 135, No. 4, pp. 298 – 302,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2009\)135:4\(298\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2009)135:4(298))

39. *Tamar O., Ostfeld A.,* and Friedler E. (2009). "Modeling highway runoff pollutant levels using a data driven model", Water Science and Technology, Vol. 60, No. 1, pp. 19 – 28, <http://dx.doi.org/10.2166/wst.2009.289>
40. *Perelman L., Krapivka A.,* and **Ostfeld A.** (2009). "Single and multi-objective optimal design of water distribution systems: application to the case study of the Hanoi system", Water Science and Technology: Water Supply, Vol. 9, No. 4, pp. 395 – 404, <http://dx.doi.org/10.2166/ws.2009.404>
41. *Perelman L. and Ostfeld A.* (2010). "Extreme impact contamination events sampling for water distribution systems security", Journal of Water Resources Planning and Management Division, ASCE, Vol. 136, No. 1, pp. 80 – 87, [http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2010\)136:1\(80\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2010)136:1(80))
42. Nicklow J., Reed P., Savic D., Dessalegne T., Harrell L., Chan-Hilton A., Karamouz M., Minsker B., **Ostfeld A.**, Singh A., and Zechman E. (2010). "State of the art for genetic algorithms and beyond in water resources planning and management", Journal of Water Resources Planning and Management Division, ASCE, Vol. 136, No. 4, pp. 412 – 432, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000053](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000053)
43. *Ivnitzky H., Minz D., Kautsky L., Preis A., Ostfeld A., Semiat R.,* and Dosoretz C. G. (2010). "Biofouling formation and modeling in nanofiltration membranes applied to wastewater treatment", Journal of Membrane Science, Vol. 360, pp. 165 – 173, <http://dx.doi.org/10.1016/j.memsci.2010.05.007>
44. *Shlomi S., Ostfeld A., Rubin H.,* and Shoemaker C. (2010). "Optimal groundwater contamination monitoring using pumping wells", Water Science and Technology, Vol. 62, No. 3, pp. 556 – 569, <http://dx.doi.org/10.2166/wst.2010.318>
45. *Preis A., Andrew J. W., Ostfeld A.,* and *Perelman L.* (2011). "Efficient hydraulic state estimation technique using reduced models of urban water networks", Journal of Water Resources Planning and Management Division, ASCE, Vol. 137, No. 4, pp. 343 – 351, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000113](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000113)
46. *Brand N. and Ostfeld A.* (2011) "Optimal design of regional wastewater pipelines and treatment plants systems", Water Environment Research, Vol. 83, No. 1, pp. 53 – 64, <http://dx.doi.org/10.2175/106143010X12780288628219>
47. *Perelman L. and Ostfeld A.* (2011). "Topological clustering for water distribution systems analysis", Journal of Environmental Modelling and Software, Vol. 26, pp. 969 –972, <http://dx.doi.org/10.1016/j.envsoft.2011.01.006>

48. **Ostfeld A.**, *Salomons E.*, Lahav O. (2011). "Chemical water stability in optimal operation of water distribution systems with blended desalinated water", Journal of Water Resources Planning and Management Division, ASCE, Vol. 137, No. 6, pp. 531 – 541, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000166](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000166)
49. Preis A., Whittle A., and **Ostfeld A.** (2011) "Multi-objective optimization for conjunctive placement of hydraulic and water quality sensors in water distribution systems", Water Science and Technology: Water Supply, Vol. 11, No. 2, pp. 166 – 171, <http://dx.doi.org/10.2166/ws.2011.029>
50. Preis A. and **Ostfeld A.** (2011). "Hydraulic uncertainty inclusion in water distribution systems contamination source identification", Urban Water Journal, Vol. 8, Issue 5, pp. 267 – 277, <http://dx.doi.org/10.1080/1573062X.2011.596549>
51. Housh M., **Ostfeld A.**, and Shamir U. (2011). "Optimal multi-year management of a water supply system under uncertainty: robust counterpart approach", Water Resources Research, Vol. 47, W10515, <http://dx.doi.org/10.1029/2011WR010596>
52. Opher T. and **Ostfeld A.** (2011). "A coupled model tree (MT) genetic algorithm (GA) scheme for biofouling assessment in pipelines", Water Research, Vol. 45, No. 18, pp. 6277 – 6288, <http://dx.doi.org/10.1016/j.watres.2011.09.037>
53. Housh M., **Ostfeld A.**, and Shamir U. (2012). "Box-constrained optimization methodology and its application for a water supply system model", Journal of Water Resources Planning and Management Division, ASCE, Vol. 138, No. 6, pp. 651 – 659, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000229](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000229)
54. Opher T., Rom M., Kronaveter L., Friedler E., and **Ostfeld A.** (2012). "Some observations on biofouling prediction in pipelines using model trees and artificial neural networks versus logistic regression", Urban Water Journal, Vol. 9, Issue 1, pp. 11 – 20, <http://dx.doi.org/10.1080/1573062X.2011.633611>
55. **Ostfeld A.**, *Salomons E.*, Ormsbee L. et al. (+ 41 co-authors) (2012). "Battle of the water calibration networks", Journal of Water Resources Planning and Management Division, ASCE, Vol. 138, No. 5, pp. 523 – 532, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000191](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000191)
56. Perelman L. and **Ostfeld A.** (2012) "Water distribution systems simplifications through clustering", Journal of Water Resources Planning and Management Division, ASCE, Vol. 138, No. 3, pp. 218 – 229, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000173](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000173)
57. Housh M., **Ostfeld A.**, and Shamir U. (2012). "Seasonal multi-year optimal management of quantities and salinities in regional water supply systems", Journal of Environmental Modelling and Software, Vol. 37, pp. 55 – 67, <http://dx.doi.org/10.1016/j.envsoft.2012.03.001>
58. Perelman L. and **Ostfeld A.** (2012). "Extreme impact contamination events sampling for real sized water distribution systems", Journal of Water Resources

Planning and Management Division, ASCE, Vol. 138, No. 5, pp. 581 – 585, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000206](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000206)

59. **Ostfeld A.**, Barchiesi S., Bonte M., Collier C. R., Cross K., Darch G., Farrell T. A., Smith M., Vicory A., Weyand M., and Wright J. (2012). "Climate change impacts on river basin and freshwater ecosystems: some observations on challenges and emerging solutions", *Journal of Water and Climate Change*, Vol 3, No 3, pp 171 – 184, <http://dx.doi.org/10.2166/wcc.2012.006>
60. *Perelman L., Arad J., Housh M.*, and **Ostfeld A.** (2012). "Event detection in water distribution systems from multivariate water quality time series", *Environmental Science and Technology*, Vol. 46, No. 15, pp. 8212 – 8219, <http://dx.doi.org/10.1021/es3014024> (Cover page, featured manuscript)
61. **Ostfeld A.** (2012). "Optimal reliable design and operation of water distribution systems through decomposition", *Water Resources Research*, Vol. 48, W10521, 14 pp., <http://dx.doi.org/10.1029/2011WR011651>
62. *Housh M., Ostfeld A.*, and Shamir U. (2013). "Implicit mean-variance approach for optimal management of a water supply system under uncertainty", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 139, No. 6, pp. 634 – 643, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000307](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000307)
63. *Price E.* and **Ostfeld A.** (2013). "Iterative linearization scheme for convex non-linear equations: application to optimal operation of water distribution systems", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 139, No. 3, pp. 299-312 [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000275](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000275)
64. *Housh M., Ostfeld A.*, and Shamir U. (2013). "Limited multi-stage stochastic programming for managing water supply systems", *Journal of Environmental Modeling and Software*, Vol. 41, pp. 53 – 64, <http://dx.doi.org/10.1016/j.envsoft.2012.11.006> 4.404 (4.979)
65. *Kurek W.* and **Ostfeld A.** (2013). "Multi-objective optimization of water quality, pumps operation, and storage sizing of water distribution systems", *Journal of Environmental Management*, Vol. 115, pp. 189-197, <http://dx.doi.org/10.1016/j.jenvman.2012.11.030>
66. *Arad J., Housh M., Perelman L.*, and **Ostfeld A.** (2013). "A dynamic thresholds scheme for contaminant event detection in water distribution systems", *Water Research*, Vol. 47, Issue 5, pp. 1899-1908, <http://dx.doi.org/10.1016/j.watres.2013.01.017>
67. *Perelman L.* and **Ostfeld A.** (2013). "Bayesian networks for source intrusion detection", *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 139, No. 4, pp. 426 – 432, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000288](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000288)

68. *Perelman L., Housh M. and Ostfeld A.* (2013). "Least cost design of water distribution systems under demand uncertainty: the robust counterpart approach", *Journal of Hydroinformatics*, Vol. 15, No. 3, pp. 737 – 750. <http://www.iwaponline.com/jh/up/jh2013138.htm>
69. *Penn R., Friedler E., and Ostfeld A.* (2013). "Multi-objective evolutionary optimization for greywater reuse in municipal sewer systems", *Water Research*, Vol. 47, 5911-5920, <http://dx.doi.org/10.1016/j.watres.2013.07.012>
70. *Price E. and Ostfeld A.* (2013). "Iterative LP water system optimal operation including headloss, leakage, total head and source cost", *Journal of Hydroinformatics*, Vol. 15, No. 4, pp. 1203-1223, <http://www.iwaponline.com/jh/up/jh2013124.htm>
71. *Zimmer A., Schmidt A., Ostfeld A., and Minsker B.* (2013). "A new method for the offline solution of pressurized and supercritical flows", *Journal of Hydraulic Engineering*, Vol. 139, No. 9, pp. 935-948, [http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0000747](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0000747)
72. *Perelman L. and Ostfeld A.* (2013) "Operation of remote mobile sensors for security of drinking water distribution systems", *Water Research*, Vol. 47, Issue 13, pp. 4217-4226, <http://dx.doi.org/10.1016/j.watres.2013.04.048>
73. *Perelman L., Housh M., and Ostfeld A.* (2013). "Robust optimization for water distribution systems least cost design." *Water Resources Research*, Vol. 49, Issue 10, pp. 6795-6809, <http://dx.doi.org/10.1002/wrcr.20539>
74. *Meng F., Liu S., Ostfeld A., Chen C., and Burchard-Levine A.* (2013). " A deterministic approach for optimization of booster disinfection placement and operation for a water distribution system in Beijing", *Journal of Hydroinformatics*, Vol. 15, No. 3, pp. 1042-1058, <http://dx.doi.org/10.2166/hydro.2013.149>
75. *Kurek W. and Ostfeld A.* (2014). "Multi-objective water distribution systems control of pumping cost, water quality, and storage-reliability constraints", *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 140, No. 2, pp. 184-193, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000309](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000309)
76. *Oliker N. and Ostfeld A.* (2014). "A coupled classification-evolutionary optimization model for contamination event detection in water distribution systems." *Water Research*, Vol. 51, No. 15, pp. 234-245, <http://dx.doi.org/10.1016/j.watres.2013.10.060>
77. *Ohar Z. and Ostfeld A.* (2014). "Optimal design and operation of booster chlorination stations layout in water distribution systems", *Water Research*, Vol. 58, pp. 209-220, <http://dx.doi.org/10.1016/j.watres.2014.03.070>

78. *Oliker N.* and **Ostfeld A.** (2014). "Minimum volume ellipsoid classification model for contamination event detection in water distribution systems", Journal of Environmental Modelling and Software, Vol. 57, pp. 1-12, <http://dx.doi.org/10.1016/j.envsoft.2014.03.011>

79. *Burchard-Levine A.*, Liu S., Vince F., Li M., and **Ostfeld A.** (2014). "A hybrid evolutionary data driven model for river water quality early warning", Journal of Environmental Management, Vol. 143, pp. 8-16, <http://dx.doi.org/10.1016/j.jenvman.2014.04.017>

80. *Price E.* and **Ostfeld A.** (2014). "Discrete pump scheduling and leakage control using linear programming for optimal operation of water distribution systems", Journal of Hydraulic Engineering, ASCE, Vol. 140, No. 6, 04014017-1 - 04014017-16, [http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0000864](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0000864)

81. *Marchi A.*, *Salomons E.*, **Ostfeld A.** et al. (+ 57 co-authors) (2014). "The battle of the water networks II (BWN-II)", Journal of Water Resources Planning and Management Division, ASCE, Vol. 140, No. 7, 04014009-1 - 04014009-14, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000378](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000378)

82. Hill D. J., Kerkez B., Rasekh A., **Ostfeld A.**, Minsker B., and Banks M. K. (2014). "Sensing and cyberinfrastructure for smarter water management: the challenge of ubiquity", Journal of Water Resources Planning and Management Division, ASCE, Vol. 140, No. 7, 01814002-1 - 01814002-3, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000449](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000449) (Editorial)

83. *Schwartz R.*, Lahav O., and **Ostfeld A.** (2014). "Integrated hydraulic and organophosphate pesticide injection simulations for enhancing event detection in water distribution systems", Water Research, Vol. 63, pp. 271-284, <http://authors.elsevier.com/sd/article/S004313541400459X>

84. Maier H. R., Kapelan Z., Kasprzyk J., Kollat J., Matott L.S., Cunha M.C., Dandy G. C., Gibbs M. S., Keedwell E., Marchi A., **Ostfeld A.**, Savic D., Solomatine D. P., Vrugt J. A., Zecchin A. C., Minsker B. S., Barbour E. J., Kuczera G., Pasha F., Castelletti A., Giuliani M., Reed P. M. (2014). "Evolutionary algorithms and other metaheuristics in water resources: current status, research challenges and future directions", Journal of Environmental Modelling and Software, Vol. 62, pp. 271-299, <http://dx.doi.org/10.1016/j.envsoft.2014.09.013>

85. **Ostfeld A.**, *Oliker N.* and *Salomons E.* (2014). "Multi-objective optimization for least cost design and resiliency of water distribution systems", Journal of Water Resources Planning and Management Division, ASCE, Vol. 140, No. 12, 04014037, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000407](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000407)

86. Housh M. and **Ostfeld A.** (2015). "An integrated logit model for contamination event detection in water distribution systems", Water Research, Vol. 75, pp. 210-223, <http://dx.doi.org/10.1016/j.watres.2015.02.016>

87. **Ostfeld A.**, *Tubaltzev A.*, Rom M., Kronaveter L., Zohary T. and Gal G. (2015). "A coupled data driven evolutionary algorithm for toxic cyanobacteria (Blue-

Green algae) forecasting in Lake Kinneret", Journal of Water Resources Planning and Management, Vol. 141, No. 4, 04014069-1 - 04014069-13, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000451](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000451)

88. *Ohar Z, Lahav O., and Ostfeld A.* (2015). "Optimal sensor placements for detecting organophosphates intrusions into water distribution systems", Water Research, Vol. 73, No. 15, pp. 193-203, <http://dx.doi.org/10.1016/j.watres.2015.01.024>

89. *Oliker N. and Ostfeld A.* (2015). "Network hydraulics inclusion in water quality event detection using multiple sensor stations data", Water Research, Vol. 80, pp. 47-58, <http://dx.doi.org/10.1016/j.watres.2015.04.036>

90. *Skulovich O., Bent R. Judi D., Perelman L., and Ostfeld A.* (2015). "Piece-wise mixed integer programming for optimal sizing of surge control devices in water distribution systems", Water Resources Research, 51, <http://dx.doi.org/10.1002/2014WR016256>

91. *Oliker N. and Ostfeld A.* (2015). "Inclusion of mobile sensors in water distribution systems monitoring operation", Journal of Water Resources Planning and Management Division, ASCE, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000569](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000569), 04015044

92. *Zimmer A., Schmidt A., Ostfeld A., Minsker B.* (2015). "Evolutionary algorithm enhancement for model predictive control and real-time decision support", Journal of Environmental Modelling and Software, Vol. 69, pp. 330-341, <http://dx.doi.org/10.1016/j.envsoft.2015.03.005>

93. *Oliker N. and Ostfeld A.* (2015). "Comparison of two multivariate classification models for contamination event detection in water quality time series", Journal of Water Supply: Research and Technology – AQUA, Vol. 64, No. 5, pp. 558-566, <http://dx.doi.org/10.2166/aqua.2014.033>

94. Brown C., Lund J., Cai X., Reed P., Zagona E., **Ostfeld A.**, Hall J., Characklis G., Yu W., Brekke L. (2015). "The future of water resources systems analysis: from models to the science for water resources systems", Water Resources Research, Volume 51, Issue 8, pp. 6110-6124, <http://dx.doi.org/10.1002/2015WR017114>

95. *Price E. and Ostfeld A.* (2016). "Successive linear programming approach applied to BBLAWN", Journal of Water Resources Planning and Management Division, ASCE, Vol. 142, No. 5, C4015001, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000563](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000563),

96. *Zhao Y., Schwartz R., Salomons E., Ostfeld A., and Poor H. V.* (2016). "New formulation and optimization methods for water sensor placement", Journal of Environmental Modelling and Software, Vol. 76, pp. 128-136, <http://dx.doi.org/10.1016/j.envsoft.2015.11.013>

97. *Oliker N., Ohar Z., and Ostfeld A.* (2016). "Spatial event classification using simulated water quality data", *Journal of Environmental Modelling and Software*, Vol. 77, pp. 71-80, <http://dx.doi.org/10.1016/j.envsoft.2015.11.013>

98. *Gong W., Suresh M. A., Smith L., Ostfeld A., Stoleru R., Rasekh A., Banks M. K.* (2016). "Mobile sensor networks for optimal leak and backflow detection and localization in municipal water networks", *Journal of Environmental Modelling and Software*, Vol. 80, pp. 306-321, <http://dx.doi.org/10.1016/j.envsoft.2016.02.001>

99. *Price E. and Ostfeld A.* (2016). "Graph theory modelling approach for optimal operation of water distribution systems", *Journal of Hydraulic Engineering*, Vol. 142, No. 3, 10.1061/(ASCE)HY.1943-7900.0001099, 04015061, [http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0001099](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0001099),

100. *Schwartz R., Housh M., and Ostfeld A.* (2016). "Least cost robust design optimization of water distribution systems under multiple loading." *Journal of Water Resources Planning and Management Division*, ASCE, 04016031-1 - 04016031-11, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000670](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000670)

101. *Skulovich O., Perelman L. S., and Ostfeld A.* (2016). "Optimal closure of system actuators for transient control: an analytical approach." *Journal of Hydroinformatics*, Vol. 18, No. 3, pp. 393-408, <http://dx.doi.org/10.2166/hydro.2015.121>

102. *Schwartz R., Housh M., and Ostfeld A.* (2016). "Limited multi-stage stochastic programming for water distribution systems optimal operation." *Journal of Water Resources Planning and Management Division*, ASCE, 06016003-1 - 06016003-6, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000687](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000687)

103. *Price E. and Ostfeld A.* (2016). "Optimal pump scheduling in water distribution systems using graph theory under hydraulic and chlorine constraints." *Journal of Water Resources Planning and Management Division*, ASCE, 04016037-1 - 04016037-14, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000680](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000680)

104. *Nüßer L. K., Skulovich O., Hartmann S., Seiler T. B., Cofalla C., Schuettrumpf H., Hollert H., Salomons E., and Ostfeld A.* (2016). "A sensitive biomarker for the detection of aquatic contamination based on behavioral assays using zebrafish larvae." *Ecotoxicology and Environmental Safety*, Vol. 133, pp. 271-280, <http://dx.doi.org/10.1016/j.ecoenv.2016.07.033>

105. *Sankary N. and Ostfeld A.* (2017). "Inline mobile sensors for contaminant early warning enhancement in water distribution systems", *Journal of Water Resources Planning and Management Division*, ASCE, 04016073-1 - 04016073-12, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000732](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000732)

106. *Taormina R., Galelli S., Tippenhauer N. O., Salomons E., and Ostfeld A.* (2017). "Characterizing cyber-physical attacks on water distribution systems." *Journal of Water Resources Planning and Management Division*, ASCE,

107. *Sankary N.* and **Ostfeld A.** (2017). "Scaled multi-objective optimization of an intensive early warning system for water distribution system security." *Journal of Hydraulic Engineering*, 04017025-1 - 04017025-16, [http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0001317](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0001317)
108. *Salomons E.*, *Skulovich O.*, and **Ostfeld A.** (2017). "The battle of water networks DMAs – a multistage design approach", *Journal of Water Resources Planning and Management Division*, ASCE, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000830](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000830), 04017059-1 - 04017059-7
109. *Steffens S.*, *Nüßer L.*, *Seiler T. B.*, *Döring R.*, *Cofalla C.*, **Ostfeld A.**, *Salomons E.*, *Schüttrumpf H.*, *Hollert H.*, *Brinkmann M.* (2017). "A versatile and low-cost open source pipetting robot for automation of toxicological and ecotoxicological bioassays." *PLoS One*, <https://doi.org/10.1371/journal.pone.0179636>, 20p
110. *Skulovich O.*, *Cofalla C.*, *Caroline G.*, *Schüttrumpf H.*, and **Ostfeld A.** (2017). "Modelling of resuspension due to fish activity: mathematical modeling and annular flume experiments", *International Journal of Sediment Research*, Volume 32, Issue 3, pp. 421-431, <https://doi.org/10.1016/j.ijsrc.2017.07.003>
111. *Skulovich O.* and **Ostfeld A.** (2018). "Industry effluent disposal into rivers: coupled multiobjective-analytical optimization model", *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 144, No. 2, 06017008-1 - 06017008-7, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0000861](https://doi.org/10.1061/(ASCE)WR.1943-5452.0000861)
112. *Zimmer A.*, *Schmidt A.*, **Ostfeld A.**, and *Minsker B.* (2018). "Reducing combined sewer overflows (CSOs) through model predictive control and capital investment", *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 144, No. 2, 04017091-1 - 04017091-11, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0000879](https://doi.org/10.1061/(ASCE)WR.1943-5452.0000879)
113. *Lifshitz R.* and **Ostfeld A.** (2018). "Clustering for analysis of water distribution systems", *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 144, No. 5, 04018016-1 - 04017091-6, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0000917](https://doi.org/10.1061/(ASCE)WR.1943-5452.0000917)
114. *Sankary N.* and **Ostfeld A.** (2018). "Stochastic scenario evaluation in evolutionary algorithms used for robust scenario based optimization", *Water Resources Research*, <http://dx.doi.org/10.1002/2017WR022068>
115. *Taormina R.*, *Galelli S.*, *Tippenhauer N. O.*, *Salomons E.*, **Ostfeld A.**, *Eliades D. G.*, *Aghashahi M.*, *Sundararajan R.*, *Pourahmadi M.*, *Banks M. K.*, *Brentan B. M.*, *Campbell E.*, *Lima G.*, *Manzi D.*, *Ayala-Cabrera D.*, *Herrera M.*, *Montalvo I.*, *Izquierdo J.*, *Luvizotto E.*, *Chandy S. E.*, *Rasekh A.*, *Barker Z. A.*, *Campbell B.*, *Ehsan M. S.*, *Giacomoni M.*, *Gatsis N.*, *Taha A.*, *Abokifa A. A.*, *Haddad K.*, *Lo C. S.*, *Biswas P.*, *Fayzul M.*, *Pasha K.*, *Kc B.*, *Somasundaram S. L.*, *Housh*

M., and Ohar Z. (2018). "The battle of the attack detection algorithms", Journal of Water Resources Planning and Management Division, ASCE, <https://ascelibrary.org/doi/10.1061/%28ASCE%29WR.1943-5452.0000969>, 04018048-1 - 04018048-11

116. *Sankary N.* and **Ostfeld A.** (2018). "Multi-objective optimization of inline mobile and fixed wireless sensor networks under demands uncertainty", Journal of Water Resources Planning and Management Division, ASCE, Vol. 144, No. 8, 04018043-1 - 04018043-13, [http://dx.doi.org/10.1061/\(ASCE\)WR.1943-5452.0000930](http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000930)

117. *Taormina R.*, Galelli S., Tippenhauer N. O., Salomons E., and **Ostfeld A.** (2018). "A toolbox for assessing the impacts of cyber-physical attacks on water distribution systems", Journal of Environmental Modeling and Software. <https://doi.org/10.1016/j.envsoft.2018.11.008>

118. *Skulovich O.*, *Ganal C.*, *Nüßer L.*, *Cofalla C.*, Schüttrumpf H., Hollert H., Seiler T.-B., and **Ostfeld A.** (2018). "Prediction of erosional rates for cohesive sediments in annular flume experiments using artificial neural networks", H2Open Journal, <https://doi.org/10.2166/h2oj.2018.107>

119. *Sankary N.* and **Ostfeld A.** (2018). "Analyzing multi-variate water quality signals for water quality monitoring station placement in water distribution systems", Journal of Hydroinformatics, Vol. 20, No. 6, pp. 1323-1342, <https://doi.org/10.2166/hydro.2018.162>

120. *Lifshitz R.* and **Ostfeld A.** (2019). "Clustering for real time response to water distribution systems contamination event intrusions", Journal of Water Resources Planning and Management Division, ASCE, Vol. 145, No. 2, 04018091 - 1 - 04018091-9, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001031](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001031)

121. Bakalos N., Voulodimos A., Doulamis N., Doulamis A., **Ostfeld A.**, Salomons E., Caubet J., Jimenez V., Li P., (2019). "Protecting water infrastructure from cyber and physical threats: using multimodal data fusion and adaptive deep learning to monitor critical systems." IEEE Signal Processing Magazine, Vol. 36, Issue 2, pp. 36 – 48, <https://doi.org/10.1109/MSP.2018.2885359>

122. *Sankary N.* and **Ostfeld A.** (2019). "Bayesian localization of water distribution system contamination intrusion events using inline mobile sensor data." Journal of Water Resources Planning and Management Division, ASCE, Vol. 145, No. 8, 04019029-1 - 04019029-10 (featured in the Editor's Choice section), [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001086](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001086)

123. Cao H., Hopfgarten S., **Ostfeld A.**, Salomons E., and Li P. (2019). "Simultaneous sensor placement and pressure reducing valve localization for pressure control of water distribution systems." Water, Vol. 11, No. 7, pp. 1352-1370, <https://doi.org/10.3390/w11071352>

124. *Vrachimis S. G., Lifshitz R., Eliades D. G., Polycarpou M. M., and Ostfeld A.* (2020). "Active contamination fault detection in water distribution systems." Journal of Water Resources Planning and Management Division, ASCE, Vol. 146, No. 4. [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001176](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001176) (Editor's Monthly Choice)
125. *Qiu M., Salomons E., and Ostfeld A.* (2020). "A framework for real-time assembling of decontamination plan for a contamination event." Water Research, Vol. 174, No. 1, <https://doi.org/10.1016/j.watres.2020.115625>
126. Hassanzadeh A., Rasekh A., Galelli S., Aghashahi M., Taormina M., **Ostfeld A.**, and M. Banks M. K. (2020). "A review of cybersecurity incidents in the water sector." Journal of Environmental Engineering, ASCE, Vol. 146, No. 5. [https://dx.doi.org/10.1061/\(ASCE\)EE.1943-7870.0001686](https://dx.doi.org/10.1061/(ASCE)EE.1943-7870.0001686)
127. *Qiu M., Housh M., and Ostfeld A.* (2020). "A two-stage LP-NLP methodology for the least-cost design and operation of water distribution systems." Water, Vol. 12, No. 5, 1364, <https://www.mdpi.com/2073-4441/12/5/1364>
128. Rosenberg D., Jones A. S., Filion Y., Teasley Y., Solis S. S., Stagge J. H., Abdallah A., Castranova A., **Ostfeld A.**, and Watkins D. (2021). "Editor's note: reproducible results policy." Journal of Water Resources Planning and Management Division, ASCE, Vol. 147, No. 2, 01620001, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001368](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001368)
129. Qiu M., Housh M., and **Ostfeld A.** (2021). "Analytical optimization approach for simultaneous design and operation of water distribution systems optimization." Journal of Water Resources Planning and Management Division, ASCE, Vol. 147, No. 3, 06020014-1, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001330](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001330)
130. Zeidan M., Li P., and **Ostfeld A.** (2021). "DMA segmentation and multi-objective optimization for trading-off water age, excess pressure and pump operational cost in water distribution systems." Journal of Water Resources Planning and Management Division, ASCE, Vol. 147, No. 4, 04021006-1, <https://ascelibrary.org/doi/full/10.1061/%28ASCE%29WR.1943-5452.0001344>
131. *Abhijith G. R., Kadinski L., and Ostfeld A.* (2021). "Modeling bacterial regrowth and trihalomethanes formation in water distribution systems." Water, Vol. 13, No. 4, 463, <https://www.mdpi.com/2073-4441/13/4/463>
132. *Levinas D., Perelman G., and Ostfeld A.* (2021). "Water leak localization using high resolution pressure sensors." Water, Vol. 13, No. 5, 59, <https://www.mdpi.com/2073-4441/13/5/591>
133. *Qiu M., Salomons E., and Ostfeld A.* (2021). "An analytical model for the decontamination of water distribution systems using slug-feed method of disinfection." Water Resources Research, <http://doi.org/10.1029/2020WR028277>

134. *Abhijith G. R.* and **Ostfeld A.** (2021). "Modeling the formation and propagation of 2, 4, 6-trichloroanisole, a dominant taste and odor compound, in water distribution systems." *Water*, Vol. 13, No. 5, 638, <https://www.mdpi.com/2073-4441/13/5/638>

135. *Nikolopoulos D.*, **Ostfeld A.**, Salomons E., and Makropoulos C. (2021). "Resilience assessment of water quality sensor designs under cyber-physical attacks." *Water*, Vol. 13, No. 5, 647, <https://www.mdpi.com/2073-4441/13/5/647>

136. Berglund E. Z., Thelemaque N., Spearing L., Faust K., Kaminsky J., Sela L., Goharian E., Abokifa A., Lee J., Keck J., Giacomoni M., van Zyl J. E., Harkness B., Y. C. Ethan Yang Y. C. E., Cunha M., **Ostfeld A.**, and Kadinski L. (2021). "Water and wastewater systems and utilities: challenges and opportunities during the COVID-19 pandemic." *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 147, No. 5, 02521001 (Editor's choice), [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001373](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001373)

137. *Pecci F.*, Stoianov I., and **Ostfeld A.** (2021). "Tightened polyhedral relaxations of a non-convex mixed integer program for optimal placement and control of valves and chlorine boosters in water networks." *European Journal of Operational Research*, <https://doi.org/10.1016/j.ejor.2021.03.004>

138. *Perelman G.* and **Ostfeld A.** (2021). "Optimal wellfield operation under water quality constraints." *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 147, No. 6, 04021028-1, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001391](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001391)

139. *Qiu M.* and **Ostfeld A.** (2021). "A head formulation for the steady-state analysis of water distribution systems using an explicit and exact expression of the Colebrook-White equation." *Water*, Vol. 13, No. 9, 1163, <https://doi.org/10.3390/w13091163>

140. *Shapira N.*, Ayalon O. **Ostfeld A.**, Farber Y. and Housh M. (2021). "Cybersecurity in water Sector: stakeholders perspective." *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 147, No. 8, 05021008, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001400](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001400)

141. *Maskit M.* and **Ostfeld A.** (2021). "Multi-objective operation-leakage optimization and calibration of water distribution systems." *Water*, Vol. 13, No. 11, 1606, <https://doi.org/10.3390/w13111606>

142. *Somer S.*, Fridman-Bishop N., **Ostfeld A.**, Lahav O. (2021). "Adsorption and (induced) desorption of heavy metal cations from the corrosion scales of water distribution pipes, following a deliberate contamination event: Cd(II) as a case study." *Water Science and Technology: Water Supply*, Vol. 21, No. 4, pp. 1525-1537, <https://doi.org/10.2166/ws.2021.014>

143. *Jia Y.*, Zheng F., Maier H., Kapelan Z., **Ostfeld A.**, Creaco E., Savic D., and Langeveld J. (2021). "Water quality modeling in sewer networks: review and future research directions." *Water Research*, Vol. 202, 117419, <https://doi.org/10.1016/j.watres.2021.117419>

144. *Abhijith G. R. and Ostfeld A.* (2021). "Modeling the response of non-chlorinated, chlorinated, and chloraminated water distribution systems toward arsenic contamination." *Environmental Engineering*, ASCE, Vol. 147, No. 10, 04021045 (featured in the Editor's choice section), [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001918](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001918)

145. *Abhijith G. R. and Ostfeld A.* (2021). "Model-based investigation of the formation, transmission, and health risk of perfluorooctanoic acid, a member of PFASs group, in drinking water distribution systems" *Water Research*, Vol. 204, 117626, <https://doi.org/10.1016/j.watres.2021.117626>

146. *Kadinski L. and Ostfeld A.* (2021). "Incorporation of COVID-19 inspired behavior into agent-based modelling for water distribution systems contamination response." *Water*, Vol. 13, No. 20, 2863, <https://doi.org/10.3390/w13202863>

147. *Abhra B. and Ostfeld A.* (2021). "Analytical solutions to conservative and non-conservative water quality constituents in water distribution systems storage tanks." *Water*, Vol. 13, No. 24, p. 3502, <https://doi.org/10.3390/w13243502>

148. *Pecci F., Stoianov I., and Ostfeld A.* (2021). "Convex heuristic for optimal placement and control of valves and chlorine boosters in water networks." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 2, 04021098, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001509](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001509)

149. *Zeidan M. and Ostfeld A.* (2022). "Hydraulic ram pump integration into water distribution systems for energy recovery application." *Water*, Vol. 14, No. 21, <https://doi.org/10.3390/w14010021>

150. *Price E. and Ostfeld A.* (2022). "A graph theory-based layout algorithm for PRVs placement and setpoint determination in water distribution systems." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 4, 04022005, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001529](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001529)

151. *Snir O., Friedler E., and Ostfeld A.* (2022). "Optimizing the control of decentralized rainwater harvesting systems for reducing urban drainage flows." *Water*, Vol. 14, 571 (featured paper), <https://doi.org/10.3390/w14040571>

152. *Zeidan M. and Ostfeld A.* (2022). "Using hydraulic transients for biofilm detachment in water distribution systems: approximated model." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 4, 04022008, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001539](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001539)

153. *Pankaj B. S., G Jaykrishnan, and Ostfeld A.* (2022). "Optimising water quality treatment levels for water distribution systems under mixing uncertainty at junctions." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 5, 04022013, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001544](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001544)

154. *Abhijith G. R.* and **Ostfeld A.** (2022). "Examining the longitudinal dispersion of solutes inside water distribution systems." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 6, 04022022, [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001562](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001562)

155. *Kadinski L.*, *Salcedo C.*, *Boccelli D.*, *Berglund E.* and **Ostfeld A.** (2022). "A hybrid data-driven-agent-based modelling framework for water distribution systems contamination response during COVID-19" *Water*, Vol. 14, 1088, <https://doi.org/10.3390/w14071088>

156. *Berglund E. Z.*, *Buchberger S.*, *Cunha M.*, *Faust K. M.*, *Giacomoni M.*, *Haxton T.*, *Goharian E.*, *Kleiner Y.*, *Lee J.*, **Ostfeld A.**, *Pasha F.*, *Pesantez J. E.*, *Saldarriaga J.*, *Shafiee E.*, *Lauryn Spearing L.*, *van Zyl J. E.*, and *Yang Y. C. E.* (2022). "Effects of the COVID-19 pandemic on water utility operations and vulnerability." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 6, 04022027, <https://ascelibrary.org/doi/full/10.1061/%28ASCE%29WR.1943-5452.0001560>

157. *Abhijith G. R.* and **Ostfeld A.** (2022). "Making waves: applying systems biology principles in water distribution systems engineering." *Water Research*, Vol. 219, 118527, <https://doi.org/10.1016/j.watres.2022.118527>

158. *Ormsbee L.*, *Hoagland S.*, *Hernandez E.*, *Hall A.*, and **Ostfeld A.** (2022). "Hydraulic model database for applied water distribution systems research." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 8, 04022037, <https://ascelibrary.org/doi/10.1061/%28ASCE%29WR.1943-5452.0001559>

159. *Abhijith G. R.* and **Ostfeld A.** (2022). "Contaminant fate and transport modeling in distribution systems: EPANET-C." *Water*, Vol. 14, No. 10, 1665, <https://www.mdpi.com/2073-4441/14/10/1665>

160. *Kadinski L.*, *Berglund E. Z.*, and **Ostfeld A.** (2022). "An agent-based model for contamination response in water distribution systems during the COVID-19 pandemic." *Journal of Water Resources Planning and Management Division*, ASCE, Vol. 148, No. 8, 04022042, <https://ascelibrary.org/doi/10.1061/%28ASCE%29WR.1943-5452.0001576>

161. *Boindala S. P.* and **Ostfeld A.** (2022). "Robust multi-objective design optimization of water distribution system under uncertainty." *Water*, Vol. 14, No. 14, 2199, <https://www.mdpi.com/2073-4441/14/14/2199>

162. *Zeidan M.* and **Ostfeld A.** (2022). "Unsteady friction modeling technique for Lagrangian approaches in transient simulations." *Water*, Vol. 14, No. 15, 2437, <https://www.mdpi.com/2073-4441/14/15/2437/htm>

163. *Hayelom A.* and **Ostfeld A.** (2022). "Network subsystems for robust design optimization of water distribution systems." *Water*, Vol. 14, No. 15, 2443, <https://www.mdpi.com/2073-4441/14/15/2443>

164. *Abhijith G. R.* and **Ostfeld A.** (2022). "Flexible decision-making framework for developing operation protocol for water distribution systems." *Journal of Environmental Management*, Vol. 320, 115817, <https://doi.org/10.1016/j.jenvman.2022.115817>

165. *Vrachimis S. G.*, *Eliades D. G.*, *Taormina R.*, *Kapelan Z.*, **Ostfeld A.**, *Liu S.*, *Kyriakou M.*, *Pavlou P.*, *Qiu M.*, and *Polycarpou M. M.* (2022). "Battle of the leakage detection and isolation methods." *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 148, No. 12, 04022068, <https://ascelibrary.org/doi/epdf/10.1061/%28ASCE%29WR.1943-5452.0001601>

166. *Hayelom A.* and **Ostfeld A.** (2022). "Network subsystems for water distribution system optimization." *Journal of Water Resources Planning and Management Division, ASCE*, Vol. 148, No. 12, 06022003, <https://ascelibrary.org/doi/10.1061/%28ASCE%29WR.1943-5452.0001629>

167. *Price E.*, *Abhijith G. R.*, and **Ostfeld A.** (2022). "Pressure management in water distribution systems through PRVs optimal placement and settings." *Water Research*, 226, 119236, <https://doi.org/10.1016/j.watres.2022.119236>

168. *Abhijith G. R.*, *Salomons E.*, and **Ostfeld A.** (2022). "Reliability of a contamination detection sensors network in water distribution systems during a cyber-physical attack." *Water*, Vol. 14. No. 22, 3669, <https://www.mdpi.com/2073-4441/14/22/3669>

169. *Shmaya T.* and **Ostfeld A.** (2022). "A graph-theory based PRV placement algorithm for water age reduction in water distribution systems." *Water*, Vol. 14, No. 23, 3796, <https://www.mdpi.com/2073-4441/14/23/3796>

170. *Perelman G.*, **Ostfeld A.**, and *Fishbain B.* (2023). "Robust optimal operation of water distribution systems." *Water*, Vol. 15, No. 5, 963, <https://doi.org/10.3390/w15050963>

171. *Raimondi A.*, *Quinn R.*, *Abhijith G. R.*, *Becciu G.* and **Ostfeld A.** (2023). "Rainwater harvesting and treatment: state of the art and perspectives." *Water*, Vol. 15, No. 8, 1518, <https://doi.org/10.3390/w15081518>

172. **Ostfeld A.** and *Abhijith G. R.* (2023). "Digital twin for water distribution systems management – a paradigm shift?" *Journal of Pipeline Systems Engineering and Practice, ASCE*, Vol. 14, No. 3, 02523001, <https://doi.org/10.1061/JPSEA2.PSENG-1486>

173. *Pankaj B. S.*, *G Jaykrishnan*, and **Ostfeld A.** (2023). "Robust optimal booster disinfectant injection in water systems under uncertainty." *Water*, Vol. 15, No. 9, 1777, <https://doi.org/10.3390/w15091777>

174. *Kidanu R. A.*, *Cunha M.*, *Salomons E.*, and **Ostfeld A.** (2023). "Improving multi- objective optimization methods of water distribution networks." *Water*, Vol. 15, No. 14, 2561, <https://www.mdpi.com/2073-4441/15/14/2561>

175. *Abhijith G. R.*, *Salomons E.*, and **Ostfeld A.** (2023). "Developing a simplified practical approach for analyzing the criticality of isolation valves." *Journal of*

Water Resources Planning and Management Division, ASCE, Vol. 149, No. 11, 06023005, <https://ascelibrary.org/doi/10.1061/JWRMD5.WRENG-6126>

176. *Abhijith G. R.*, Naidu M. N., Pankaj B. S., Vasan A., and **Ostfeld A.** (2023). "Analyzing the role of consumer behavior in coping with intermittent supply in water distribution systems." *Journal of Hydroinformatics*, Vol 25, No 5, 1766-1787, <https://doi.org/10.2166/hydro.2023.022>
177. *Zeidan M.* and **Ostfeld A.** (2023). "Pressure transient utilization for pipeline particle deposits laceration." *Journal of Hydraulic Engineering*, ASCE, Vol. 150, No. 2, 04023063, <https://ascelibrary.org/doi/10.1061/JHEND8.HYENG-13671>
178. *Perelman G.* and **Ostfeld A.** (2023). "Adjustable robust optimization for water distribution system operation under uncertainty." *Water Resources Research*, 59, e2023WR035508, <https://doi.org/10.1029/2023WR035508>
179. *Abhijith G.* and **Ostfeld A.** (2024). "Assessing uncertainties in mechanistic modeling of quality fluctuations in drinking water distribution systems." *Journal of Environmental Engineering*, ASCE, Vol. 150, No, 1, 04023091-1 - 04023091-13, <https://doi.org/10.1061/JOEEDU.EEENG-7400> (featured in the Editor's Choice section)
180. *Vizanko B.*, Kadinski L., **Ostfeld A.**, Berglund E. Z. (2024). "Social distancing, water demand changes ,and quality of drinking water during the COVID-19 pandemic." *Sustainable Cities and Society*, Vol. 102, 105210, <https://doi.org/10.1016/j.scs.2024.105210>
181. *Stagge J. H.*, David E Rosenberg D. E., Castranova A. M., **Ostfeld A.**, Jones A. S. (2024). "Journal of water resources planning and management's program reproducibility review program: accomplishments, lessons, and next steps." *Journal of Water Resources Planning and Management*, ASCE, Vol. 150, No. 8, 01824001 (Editorial), <https://doi.org/10.1061/JWRMD5.WRENG-6559>
182. *Vizanko B.*, Kadinski L., Cummings C., **Ostfeld A.**, and Berglund E. (2024). "Modeling prevention behaviors during the COVID-19 pandemic using Bayesian belief networks and protection motivation theory." *Risk Analysis*, 1-26, <https://doi.org/10.1111/risa.14287>
183. *Korder K.*, Cao H., Salomons E., **Ostfeld A.**, and Li P. (2024). "Simultaneous minimization of water age and pressure in water distribution systems by pressure reducing valves." *Water Resources Management*, <https://doi.org/10.1007/s11269-024-03828-6>
184. *Shmaya T.* and **Ostfeld A.** (2024). "Employing tank constraints to present total cost and water age trade-offs in optimal operation of water distribution systems." *Water*, Vol. 16, No. 12, 1637, <https://doi.org/10.3390/w16121637>
185. *Raimondi A.*, Quinn R., Gnecco I, and **Ostfeld A.** (2024). "New advances in rainwater harvesting and treatment." *Water*, Vol. 16, 1591 (Editorial), <https://doi.org/10.3390/w16111591>

186. Pointl M., Marques J., Pick F. C., Salcedo C., Vertommen I., Zeidan M., Boxall J., Maria C. Cunha M. C., Fuchs-Hanusch D., Jung D., **Ostfeld A.**, Saldarriaga J., Lansey K. E. (2024). "Future water: a multi-university international web seminar." *Water*, Vol. 16, No. 13, 1862, <https://doi.org/10.3390/w16131862>

187. *Shmaya T.* and **Ostfeld A.** (2024). "Conjunctive optimal design of water and power networks." *Journal of Hydrology*, Vol. 643 (2024) 131932, <https://doi.org/10.1016/j.jhydrol.2024.131932>

188. *Tal-maon M.* and **Ostfeld A.** (2024). "Developing water quality formulations for a semi-distributed rainfall–runoff model." *Water*, Vol. 16, No. 15, 2072, <https://doi.org/10.3390/w16152072>

189. *Shmaya T.*, Housh M., Pecci F., Baker K., Kasprzyk J., and **Ostfeld A.** (2024). "Conjunctive optimal operation of water and power networks." *Heliyon*, Vol. 10, Issue 20, e39136, <https://doi.org/10.1016/j.heliyon.2024.e39136>

190. *Shmaya T.* and **Ostfeld A.** (2024). "Inclusion of water age in conjunctive optimal operation of water and power networks." *AQUA - Water Infrastructure, Ecosystems and Society*, Vol 73, No 10, 2045, <https://doi.org/10.2166/aqua.2024.188>

191. Zeidan M., Nemeth M., Abhijith G. R., Weber R., and **Ostfeld A.** (2024). "Transient flow dynamics in tesla valve configurations: insights from computational fluid dynamics simulations." *Water*, Vol. 16, 3492, <https://www.mdpi.com/2073-4441/16/23/3492>

192. Levy M., Housh M., Hartman A., Ayalon O., Nir B., **Ostfeld A.**, and Hadar I. (2024). "Muddy waters: design thinking for understanding the multi-organizational problem space of the water sector." *Sustainability*, Vol. 16, 9819, <https://www.mdpi.com/2071-1050/16/22/9819>

193. Pankaj B. S., G Jaykrishnan, and **Ostfeld A.** (2025). "Booster disinfection scheduling under uncertainty in water distribution systems: approximate robust reformulation approach." *Journal of Water Resources Planning and Management*, ASCE, Vol. 151, No. 2, 04024070, <https://doi.org/10.1061/JWRMD5.WRENG-6555>

194. *Perelman G.*, *Shmaya T.*, Navon A., Vrachimis S., Eliades D., and **Ostfeld A.** (2025). "Coordinated operational optimization of water and power systems under emergency conditions." *Sustainable Energy, Grids and Networks*, Vol. 42, 101643, <https://doi.org/10.1016/j.segan.2025.101643>

195. Perelman G. and **Ostfeld A.** (2025). "Data enabled predictive control for water distribution systems optimization." *Water Resources Research*, 61, e2024WR039059, <https://doi.org/10.1029/2024WR039059>

196. *Salfety O., Sarne O., Boindala S. P., Abhijith G. R., and Ostfeld A.* (2025). "A cell model for pollutant transport quantification in rainfall - runoff watershed events." *Water*, Vol 17, No. 11, 1693
<https://doi.org/10.3390/w17111693>

197. Tariq H. M., Zvulunov Y., Kinnebrew E., Gates T. K., Steven R. E., VanderRoest J. P., Radian A., Chi J., Abhijith G. R., Nathan D. M., **Ostfeld A.**, Fang L., and Borch T. (2025). "Advancing sustainable water use across the agricultural lifecycle in the united states." *Nature Water*, Vol. 3, pp. 655–667
<https://doi.org/10.1038/s44221-025-00450-7>

198. Alvisi S. et. al. (+ 138 authors, **Ostfeld A. is author #111**). (2025). "Battle of water demand forecasting." *Journal of water Resources Planning and Management Division, ASCE*, Vol. 151, Issue 10, 04025049-1 - 04025049-16
<https://doi.org/10.1061/JWRMD5.WRENG-6887>

199. Salomons E., *Cao H., Korder K., Ostfeld A., and Li. P.* (2025)."Real-time optimal operation of water systems under demand uncertainty and maximum water age constraints." *Water Resources Research*, Vol. 61, e2024WR038587
<https://doi.org/10.1029/2024WR038587>

200. *Vizanko B., Komarovsky S., Ostfeld A., Berglund E. Z.* (2025). "Assessing equitable access to safe and affordable water during COVID-19: agent-based modeling for tap water avoidance behaviors." *Sustainable Cities and Society*,
<https://doi.org/10.1016/j.scs.2025.106517>

201. Xu A., **Ostfeld A.**, Shao Y., Zhang T. Chu S., and Liang Z. (2025). "Leveraging spatiotemporal redundancy for sensor data imputation in water distribution networks." *Water Resources Research*, Vol. 61, e2025WR040528
<https://doi.org/10.1029/2025WR040528>

202. Komarovsky S., *Vizanko B., Berglund E. and Ostfeld A.* (2025). "Assessing the sensitivity of sociotechnical water distribution systems to uncertainty in consumer behaviors: social distancing and demand changes during the COVID-19 pandemic." *Water*, Vol. 17, No. 13, 1965
<https://doi.org/10.3390/w17131965>

203. *Shmaya T., Pecci F., Housh M., and Ostfeld A.* (2026). "Optimal water–power flow solutions using polyhedral and conic relaxations." *Journal of Water Resources Planning and Management, ASCE*, Vol. 15, No. 2, 06025002
<https://doi.org/10.1061/JWRMD5.WRENG-7040>

204. Wei S., Yu T., **Ostfeld A.**, Liu C., Chu S., and Shen H. (2026). "Edge computing for energy-efficient sensor scheduling water distribution systems." *Water Resources Research*, 62 ,e2025WR040149.
<https://doi.org/10.1029/2025WR040149>

205. Vizanko B., Komarovsky S., **Ostfeld A., and Berglund E. Z.** (2026). "Agent-based modeling to assess equitable access to affordable and clean water: intra-

system water quality and tap water avoidance." Environmental Research: Infrastructure and Sustainability, Vol. 6, 015001
<https://doi.org/10.1088/2634-4505/ae2d90>

206. Davda J. and **Ostfeld A.** (2026). "DeePC sensitivity for pressure control with pressure-reducing valves (PRVs) in water networks." Water, 18, 253
<https://doi.org/10.3390/w18020253>

207. Hosseini S. H. , Zolghadr-Asli B., Tenkanen H., Madani K., Matin M. A., Demir I., **Ostfeld A.**, Singh V. P., and Savic D. (2026). "Making waves: a conceptual framework exploring how large language model-based multi-agent systems could reshape water engineering." Water Research, Vol. 291, 125157
<https://doi.org/10.1016/j.watres.2025.125157>

208. Komarovskiy S., *Shamaly R.*, Abhijith G. R., Cominola A., and **Ostfeld A.** (2026). "Comparing different physics-informed neural network models for chlorine modeling in EPANET under varying initial and boundary conditions." Water Research X, Vol. 30, 100471
<https://doi.org/10.1016/j.wroa.2025.100471>

209. *Perelman G.*, Housh M., Navon A., and **Ostfeld A.** (2026)."Integrated optimal operation of power and water systems under uncertainty: an adjustable robust optimization approach." Water Research, Vol. 292, 125325
<https://doi.org/10.1016/j.watres.2026.125325>

Submitted papers

Abhijith G. R., *G Jaykrishnan*, and **Ostfeld A.** (2024). "EPyT-C: A Python package for water quality modeling in water distribution systems." Journal of Open Source Software (JOSE) (revised stage).

Wéber R., Abhijith G. R., Salomons E., Hős C., **Ostfeld A.** (2024)."Optimizing diameters of ideal backup design for a pipe failure in water distribution networks." Journal of Water Resources Planning and Management, ASCE.

Wéber R., *Sándor L.*, Abhijith G., Boindala S., and **Ostfeld A.** (2025)."Modelling incomplete solute mixing at pipe junctions in water distribution networks: parametric CFD simulations and a predictive regression approach." Hydraulic Engineering, ASCE (revised stage).

Goldshtain Y., *Perelman G.*, Schuster A., and **Ostfeld A.** (2025). "Large language models for water distribution systems modeling and decision-making." Environmental Modelling and Software (revised stage).

Salfety O. and **Ostfeld A.** (2026). "Multi-objective optimization of surge control devices in water networks." Water (revised stage).

Narwariya V. S., Cominola A., **Ostfeld A.**, and Abhijith G. R. (2026). "Deep learning for predicting the spatiotemporal dynamics of chlorine in water distribution pipes." Water Research.

Review papers

210. **Ostfeld A.** and Shamir U. (1993). "Incorporating reliability in optimal design of water distribution networks – review and new concepts", Reliability Engineering and System Safety, Vol. 42, No. 1, pp. 5 – 11, [http://dx.doi.org/10.1016/0951-8320\(93\)90049-5](http://dx.doi.org/10.1016/0951-8320(93)90049-5)
211. **Ostfeld A.** (2005). "A review of modeling water quality in distribution systems", Urban Water Journal, Vol. 2, No. 2, pp. 107 – 114, <http://dx.doi.org/10.1080/15730620500144266>
212. Solomatine D. and **Ostfeld A.** (2008). "Data driven modeling: some past experiences and new approaches", Journal of Hydroinformatics, Vol. 10, No. 1, pp. 3 – 22, <http://dx.doi.org/10.2166/hydro.2008.015>

Books

1. **Ostfeld A.** (2004). "Optimal monitoring stations allocations for water distribution systems security", In Water Supply Systems Security (Mays L., Ed.), McGraw-Hill, Inc., Chapter 16, pp. 16.1-16.15 (chapter contribution)
2. **Ostfeld A.** and Tyson J. M. (Eds.) (2005). "River basin restoration and management", Water and Environmental Management Series, IWA publication, 94p (editor)
3. **Ostfeld A.** (2005). "Watershed management – a physically based approach versus data driven modeling" In River Basin Restoration and Management (**Ostfeld A.** and Tyson J. M., Eds.) Water and Environmental Management Series, IWA publication, pp. 49-53 (chapter contribution)
4. **Ostfeld A.** and Preis A. (2005). "A data driven model for flow and contaminants runoff predictions in watersheds." In River Basin Restoration and Management (**Ostfeld A.** and Tyson J. M., Eds.) Water and Environmental Management Series, IWA publication, pp. 62-70 (chapter contribution)
5. Lansey K., Choi C., **Ostfeld A.**, and Pepper I. (Eds.) (2010). "Water Distribution Systems Analysis 2010." The 12th water distribution systems analysis symposium, ASCE publication, Tucson, AZ (Editor)
6. **Ostfeld A.** (2010). "Evolutionary Computation for Single and Multiobjective Water Distribution Systems Optimal Design: Review of Some Recent Applied Methodologies." In Handbook of Research on Hydroinformatics: Technologies, Theories and Applications (Tagelsir M., Ed.), IGI Global publication, Hershey PA 17033-1240, USA, pp. 332-345 (chapter contribution)
7. Hakim S., Clark B., and **Ostfeld A.** (Eds.) (2011). "Protecting Water and Wastewater Facilities", Rowman and Littlefield, Lanham, Maryland 20706, USA, ISBN 978-1-4614-0188-9, 527p (editor)

8. **Ostfeld A.** (2011). "Water Distribution Systems Security Modeling" In Protecting Water and Wastewater Facilities (Hakim S., Clark B., and **Ostfeld A.**, Eds.), Rowman and Littlefield, Lanham, Maryland 20706, USA (chapter contribution)
9. **Ostfeld A.** (Ed.) (2011). "Ant Colony Optimization - Methods and Applications" IN-TECH publications, ISBN 978-953-307-157-2, 342p, <http://dx.doi.org/10.5772/577> (editor)
10. **Ostfeld A.** (Ed.) (2012). "Water Supply Systems Analysis – Selected Topics" IN-TECH publications, ISBN 978-953-51-0889-4, 149p, <http://dx.doi.org/10.5772/2882> (editor)
11. **Ostfeld A.** (2014). "Water Distribution Networks." In E. Kyriakides and M. Polycarpou (Eds.), Intelligent Monitoring, Control, and Security of Critical Infrastructure Systems, Studies in Computational Intelligence 565, Berlin: Springer-Verlag, pp. 101-124

Research reports or case reports

1. Reliability assessment of single and multiquality water distribution systems (The Water Research Institute, Technion - Haifa, Israel); Ostfeld, Kogan, Shamir; 1996.
2. Detecting accidental contaminations in municipal water networks (The Water Research Institute, Technion - Haifa, Israel); Ostfeld, Kessler; 1996.
3. Calibration of advanced mathematical models for upgrading activated sludge plants through improved design and operation (The Water Research Institute, Technion - Haifa, Israel); Argaman, Brener, Papkov, Ostfeld; 1996.
4. Decision support system for arid land wetland and riparian zones (Civil Engineering, the University of Arizona, Tucson, AZ, USA); Ostfeld and Lansey; 1997.
5. Management of multiquality water distribution systems using heuristic combinatorial techniques (Civil Engineering, Technion - Haifa, Israel); Ostfeld; 2001.
6. A GIS based hydrological model for estimating pollutant loads to Lake Kinneret from its watershed (Civil Engineering, Technion - Haifa, Israel); Ostfeld, Perelman, Preis, Rimmer, Salingar; 2002.
7. Management of multiquality water distribution systems using heuristic combinatorial techniques (Civil and Environmental Engineering, Technion - Haifa, Israel); Ostfeld; 2002.
8. Backups selection for water distribution systems (Civil and Environmental Engineering, Technion - Haifa, Israel); Ostfeld; 2002.

9. Innovative systems for early warning monitoring in drinking water distribution networks (Civil and Environmental Engineering, Technion - Haifa, Israel); Ostfeld, Kessler; 2002.
10. Effects of water resources management policies, including pumping and recharge, on the salinization process in the coastal aquifer (Civil and Environmental Engineering, Technion - Haifa, Israel); Shavit, Assouline, Ostfeld, Kislev; 2002.
11. Optimal monitoring of pumped groundwater for water supply in semiarid populated areas (Civil and Environmental Engineering, Technion - Haifa, Israel); Rubin, Shlomi, Ostfeld; 2002.
12. A GIS based hydrological model for estimating pollutant loads to Lake Kinneret from its watershed (Civil Engineering, Technion - Haifa, Israel); Ostfeld, Friedler, Perelman, Preis, Rimmer, Salingar; 2003.
13. Innovative systems for early warning monitoring in drinking water distribution networks (Civil and Environmental Engineering, Technion - Haifa, Israel); Ostfeld, Salomons; 2003.
14. Optimal monitoring of pumped groundwater for water supply in semiarid populated areas (Civil and Environmental Engineering, Technion - Haifa, Israel); Rubin, Shlomi, Ostfeld; 2003.
15. Effects of water resources management policies, including pumping and recharge, on the salinization process in the coastal aquifer (Civil and Environmental Engineering, Technion - Haifa, Israel); Shavit, Assouline, Ostfeld, 2003.
16. Development of a quantity - quality model for Lake Kinneret using clustering recognition and machine learning (Civil and Environmental Engineering, Technion - Haifa, Israel); Ostfeld, Tubaltzev, 2004.
17. Lake Kinneret water quality management and optimization support system - Phase 2, Final report. [IOLR-KLL Report T10/2005, Zohary T., Gal G. and J. Antenucci. [Eds], Chapter 3: Calibration of CAEDYM using a Genetic Algorithm, by Ostfeld A., Gal G., and Salomons E.
18. Probability estimation of Blue Algae's blooms in Lake Kinneret, Interim Report (Mekorot Water Company Co., Kinneret Limnological Laboratory, Civil and Environmental Engineering – Technion), Teltsch B. (Ed.), Rom M., Kronaveter L., Ostfeld A., 2005.
19. Drinking water supply systems security using online monitoring, Final Report, Kevin Lansey (NATO country project director), David Walt (Co - director) – USA, Avi Ostfeld (Partner NATO country project director), Israel Schechter (Co - director), Yechezkel Kashi (Co - director) - Technion, ISRAEL, 2008.

Other publications

1. **Ostfeld A.** (1998). "Israel's water sector - coping with scarce resources", World Markets Series, Business Briefing: Israel at 50, pp. 130 – 133.
2. **Ostfeld A.** (2006). "Enhancing water distribution systems security through modeling", Editorial, Journal of Water Resources Planning and Management Division, ASCE, Vol. 132, No. 4, pp. 209 – 210,
[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2006\)132:4\(209\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2006)132:4(209))
3. **Ostfeld A.** and Solomatine D. (2008). "Prologue: special issue on data driven modeling and evolutionary optimization for river basin management", Prologue, Journal of Hydroinformatics, Vol. 10, No. 1, p 1.,
<http://dx.doi.org/10.2166/hydro.2007.018>

CONFERENCES

(Speakers underlined, graduate students/research assistants - in italics)

Plenary or invited talks

International

1. **Ostfeld A.** and Shamir U. (1991). "Optimal operation of multiquality distribution systems: steady state conditions", Water Quality Modeling in Distribution Systems Special Workshop, EPA, Cincinnati, Ohio, USA.
2. *Shlomi S.*, Rubin H., **Ostfeld A.**, and Shoemaker C. (2002). "Developing a methodology for selecting wells sampled for the evaluation of groundwater quality", the 18th Umbrella joined Technion and Aachen University Symposium, Aachen, Germany.
3. **Ostfeld A.** (2003). "Modeling water quality in distribution systems", Keynote lecture at the International Conference on Advances in Water Supply Management (CCWI03), Imperial College, London, UK.
4. **Ostfeld A.** (2004). "Optimal simultaneous design and operation of multiquality water distribution systems under unsteady hydraulics", Invited Keynote lecture at ACTUI2004: "Decision Support in the Water Industry Under Conditions of Uncertainty", University of Exeter, Exeter, Devon, UK.
5. **Ostfeld A.** (2007). "Cross boundary integrated water resources management – quantitative methodologies, tools, examples", Invited Keynote lecture, Multinational Agricultural Research and Development (MARD), Balancing Water Scarcity and Growing Demands in Agriculture, Dead Sea, Jordan.
6. **Ostfeld A.** (2007). "Water distribution systems security enhancement through modeling", Invited Plenary lecture, Water Management Challenges in Global Change CCWI2007 and SUWM2007 Conference, De Montfort University, Leicester, United Kingdom.

7. **Ostfeld A.** (2007). "Standardization of models for water distribution systems security", Invited Plenary lecture, International Workshop Agreement (IWA), The Standards Institution of Israel, Tel-Aviv, Israel.
8. **Ostfeld A.** (2009). "2nd forum on water infrastructure security", Invited Plenary lecture, International Workshop, Università degli Studi di Cassino, Italy.
9. **Ostfeld A.** (2009). "Modeling water resources systems: traditional and new perspectives", Invited lecture, The Dahlia Greidinger Memorial Symposium 2009 on Crop Production in the 21st Century: Global Climate Change, Environmental Risks and Water Scarcity, Technion-IIT, Haifa, Israel.
10. **Ostfeld A.** (2009). "Water resources systems management – networks, hydrology, surface water", Invited lecture, New Developments in Water Research One Day bi- National Conference March 24, 2009 Technion- IIT, Haifa, Israel.
11. **Ostfeld A.** (2009). "On greywater reuse in Israel: potential and feasibility", Invited lecture, the 1st GEGES Global COE Workshop in FY2009, Kyoto University, Kyoto, Japan.
12. **Ostfeld A.** (2009). "Integrated water resources management – quantitative methodologies, tools, examples", Invited lecture, 31st Kyoto University Environmental Sanitary Engineering Research Symposium, the Association of Environmental & Sanitary Engineering Research of Japan, Vol. 23, No. 3, p. 1, Kyoto, Japan.
13. **Ostfeld A.** (2009). "Water resources systems analysis using evolutionary hybrid optimization methodologies", Invited lecture, Disaster Prevention Research Institute (DPRI), Kyoto University, Kyoto, Japan.
14. **Ostfeld A.** (2009). "Calibration of CE-QUAL-W2 using a hybrid genetic instance based algorithm", Invited lecture, annual Japan Society for Water Environment (JSWE) symposium, Tokyo, Japan.
15. **Ostfeld A.** (2009). "Integrated water resources systems management – concepts and examples", Invited lecture, Institute of Industrial Science, University of Tokyo, Tokyo, Japan.
16. **Ostfeld A.** (2010). "Simulation and optimization of watersheds – review of recent methodologies and future directions", Invited lecture, Workshop on Climate Change Impacts on Watershed Management: Challenges and Emerging Solutions Science, IWA World Water Congress and Exhibition, September 2010, Montreal, Canada.
17. **Ostfeld A.** (2010). "Drinking water distribution systems security modeling: review and challenges", Invited Keynote lecture, IntelliCIS COST Action IC0806 Intelligent Monitoring, Control and Security of Critical Infrastructure Systems, September 2010, Novi Sad, Serbia.

18. **Ostfeld A.** (2011). "Water distribution systems security modeling", Invited Plenary lecture, Watermatex 2011, 8th IWA Symposium on Systems Analysis and Integrated Assessment, June 2011, San Sebastian, SPAIN.
19. **Ostfeld A.** (2011). "Modeling and simulation in water distribution system engineering", Invited talk, The 25th Umbrella Symposium & The German-Israeli forum for Science and Technology, June 2011, Aachen, Germany.
20. **Ostfeld A.** (2011). "Water resources systems analysis: methodologies and applications", Plenary lecture, International Conference on Drinking Water Safety, Security and Sustainability, October 2011, Hangzhou, China.
21. **Ostfeld A.** (2011). "Systems analysis for integrated water resources planning and management – Overview and Case Studies", Keynote lecture, in Sustainable Water Management in the 21 Century – Policy and Practice, CINADCO, Centre for International Agricultural Development Cooperation, November 2011, Shefayim, Israel.
22. **Ostfeld A.** (2012). "Optimal urban water distribution systems management", Keynote lecture, in International Workshop on Urban Water Safety, Tsinghua University, April 2012, Beijing, China
23. **Ostfeld A.** (2012): "Water distribution systems modeling." Invited presentation, Jinan Water Utility, China
24. **Ostfeld A.** (2012). "Science and application of water management." Keynote lecture, in the Chamber of Engineers 21st Annual Engineering Conference on: "Water: a 21st Century Challenge", May 2012, Malta, Italy
25. Perelman L. Arad J., Housh M., Oliker N., and **Ostfeld A.** (2012). "Water distribution systems event detection." Invited paper and presentation at COMPENG IEEE Workshop on Complexity in Engineering, June 11-13, Aachen, Germany.
26. **Ostfeld A.** (2012). "Water distribution systems optimization: problems and solutions." Keynote talk, Water Distribution System Academic Salon, Zhejiang University, August 2012, Hangzhou, China.
27. **Ostfeld A.** (2013). "Water distribution systems: theory and applications." Invited talk at the Second IntelliCIS Training School on Simulation-based Design of Complex Infrastructure March, 2013, RWTH Aachen University, Aachen, Germany.
28. **Ostfeld A.** (2013). "Past successes, current state of the art, and future challenges for water resources systems analysis." Invited talk at panel discussion, EWRI annual conference, May 2013, Cincinnati, Ohio, USA.
29. **Ostfeld A.** (2013). "Smart urban water management." Invited talk at workshops on: Water challenges in Mexico: Present and future situation; Approaches, technologies and solutions (Knowledge, Technology, Implementation, Policy an

Regulation), SEMANA DE LA INNOVACIÓN CIENCIA Y TECNOLOGIA
INSTITUTO POLITÉCNICO NACIONAL SECRETARÍA DE
INVESTIGACIÓN Y POSGRADO, October 2013, Mexico City, Mexico.

30. **Ostfeld A.** (2013). "Water distribution systems security: overview and challenges." Invited talk at FACIES: Workshop on Online Identification of Failure and Attack on Interdependent Critical Infrastructures, December 2013, Florence, Italy.
31. **Ostfeld A.** (2014). "Water distribution systems optimization." ERA-2014 Conference (<http://era.citedi.mx/portal2014>) Tijuana, B.C. México, April 09 – 11, 2014, in Advances in Computing Science, Control and Communications, Garcia M. G., Sidorov G., and Kumar S. (Eds.), Vol. 69, pp. 89-98.
32. **Ostfeld A.** (2014). "Management of water distribution systems: overview and challenges." Universidad de los Andes, Bogota, Colombia, May 19 – 22, 2014, special conference in preparation to the 18th Water Distribution Systems Analysis (WDSA) conference in 2016, Cartagena de Indias, Caribbean Sea City, Colombia.
33. **Ostfeld A.** (2014). "Water distribution systems modelling: overview and challenges." FP7 EFFINET Workshop on "Efficient Integrated Real-time Monitoring and Control of Drinking Water Networks", September 30, 2014, Cornellà de Llobregat, Barcelona, Spain
34. **Ostfeld A.** (2014). "Water distribution systems security enhancement through monitoring." CRITIS 2014, 9th International Conference on Critical Information Infrastructures Security, October 13-15, 2014, Limassol, Cyprus.
35. **Ostfeld A.** (2015). "Challenges and limitations of current modeling approaches for water distribution systems security." In Secure Cyber Physical [SCy-Phy] Systems Week, June 22-23, 2015, Singapore.
36. **Ostfeld A.** (2015). "Water distribution systems security enhancements through modeling: review and challenges." CCWI 2015, The 13th Computer and Control for Water Industry Conference, 2 - 4 September 2015, De Montfort University, UK.
37. **Ostfeld A.** (2015). "Water resources system analysis: tools and challenges." In EXPO 2015, joint meeting on "Managing Water Quality for Public Health", Politecnico di Torino, Technion Institute of Technology, University of Torino, 14 - 15 October 2015, Torino, Italy.
38. **Ostfeld A.** (2018). "EPANET - challenges and opportunities." In EPANET Summit, ASCE Headquarters, Reston, Virginia, 3 - 4 April 2018, USA.
39. **Ostfeld A.** (2019). "A review of cybersecurity events in the water sector." Keynote address in the International Symposium on Cyberterrorism: Future Threats in an Interconnected World, the University of Haifa, ISRAEL.

40. **Ostfeld A.** (2021). "Uncertainty inclusion in optimization of multi-quality water distribution systems." Invited talk at the 2021 Grid Science Winter School & Conference, Center for Nonlinear Studies, Los Alamos National Laboratories, New Mexico, USA.
41. **Ostfeld A.** (2022). "Water distribution systems simulation and management." Invited talk at the 2022 "Mathematical Methods for Engineering Problems" one day workshop at AIMS Rwanda.
42. **Ostfeld A.** (2022). "Integrated water resources management for sustainable agricultural water supply." Invited talk at "Sustainable agricultural water (SAW) workshop" May 24, 2022 Estes Park Colorado, USA.
43. **Ostfeld A.** (2023). "Sustainable water resources management: modeling, challenges, opportunities." Plenary talk at "3rd International Forum on Drinking Water Challenges and Opportunities for the Eastern Mediterranean Region" March 21, 2023 Larnaca, Cyprus.
44. **Ostfeld A.** (2023). "Water distribution systems analysis: review and challenges." Invited talk (Erasmus+ program), Budapest University of Technology and Economics, Faculty of Mechanical Engineering, Department of Hydrodynamic Systems, April 19, 2023, Budapest, Hungary.
45. **Ostfeld A.** (2023). "A perspective on water distribution systems analysis." Invited plenary talk, 19th Computing and Control for the Water Industry Conference (CCWI-2023), De Montfort University, September 4, 2023, Leicester, UK.
46. **Ostfeld A.** (2023). "A systems approach to water resources systems analysis." Invited plenary talk, the 6th International Symposium on Water Pollution and Treatment, October 14-15, 2023, Bangkok, Thailand.
47. **Ostfeld A.** (2024). "State-of-the-art of water supply systems design and operation." Invited plenary talk, two-day international workshop on Design and Implementation of Smart Water Systems, August 30-31, 2024, IIT-Kanpur, India.
48. **Ostfeld A.** (2024). "Real-time monitoring and control." Invited plenary talk, two-day international workshop on Design and Implementation of Smart Water Systems, August 30-31, 2024, IIT-Kanpur, India.
49. **Ostfeld A.** (2024). "Water distribution systems analysis: perspectives and challenges." Invited plenary talk, One day workshop on challenges and key focus towards smart water systems (SWS-2024), September 12, 2024, NIT Kurukshetra, India.
50. **Ostfeld A.** (2024). "The Israel water resources management system." Invited plenary talk, One day workshop on challenges and key focus towards smart water systems (SWS-2024), September 12, 2024, NIT Kurukshetra, India.

51. **Ostfeld A.** (2025). "AI-based modelling of water distribution systems." Invited talk, Department of Civil Engineering, Visvesvaraya National Institute of Technology (VNIT), November 18, 2025, Nagpur, India.
52. **Ostfeld A.** (2025). "Water distribution systems modeling." Invited keynote talk, International Conference on Sustainability, Circularity, Outreach and Policy for Environment (SCOPE 2025), November 20-22, 2025, IIT Kanpur, India.

National

1. Rubin H., **Ostfeld A.**, and Dveyrin D. (2002). "Groundwater contaminants monitoring design for early warning", special international symposium on Stressed Aquifers – Causes and Management, Sde-Boker, Israel.
2. **Ostfeld A.** (2003). "An early warning detection system for drinking water distribution systems security", Mekorot Water Company Co.
3. **Ostfeld A.** (2003). "Optimal layout of early warning detection stations for water distribution systems security", visit to the Technion of Military Attaches from Latin America and Europe, December 2003.
4. **Ostfeld A.**, Gal G., and Salomons E. (2005). "Automated CAEDYM calibration", Invited lecture at the 'Kinneret Model Day' marking the completion of the Kinneret Ecosystem Modelling Project, Nof Ginosar, Lake Kinneret, Israel.
5. **Ostfeld A.** (2010). "Water distribution systems security – review and applications", Mekorot Water Company Co.
6. **Ostfeld A.** (2012). "Water distribution systems event detection", Technion – University of Toronto Joint Workshop on Response and Protection of Infrastructure to Extreme Loadings, Technion, Haifa, Israel.
7. **Ostfeld A.** (2013). "Incorporating transient analysis modeling in water distribution systems management", Hydraulic Surge and Air Control Symposium, Kibbutz Kfar Charuv, Ramat Hagolan, Israel.
8. **Ostfeld A.** (2013). "Drinking water distribution systems security modeling", Session on Water Security and Modeling as Ultimate Tools for the Water Manager, Water Technology and Environmental Control Exhibition and Conference (WATEC), Tel-Aviv, Israel.
9. **Ostfeld A.** (2016). "Model for disinfect contaminated water systems in times of crisis", International conference on resilient cities, September 27-28, 2016, University of Haifa, Israel.
10. **Ostfeld A.** (2024). "Data-driven predictive control for water distribution systems optimal control", Invited keynote talk, Hydroinformatics Data and AI Applications in Water, July 17, 2024, Water Research Institute, Technion, Haifa, Israel.

Papers in refereed conference proceedings

1. **Ostfeld A.** and Shamir U. (1993). "Modeling multiquality networks", proceedings of the AWWA annual conference, San Antonio, Texas, USA, pp. 151 - 160.
2. **Ostfeld A.** and Shamir U. (1994). "Designing optimal reliable multiquality water supply systems", proceedings of the EWRI annual conference, ASCE, Denver, Colorado, USA, pp. 270 - 274.
3. **Ostfeld A.** and Shamir U. (1995). "Water quality modeling in distribution systems: overview and state of - the art in methods of solutions", proceedings of the EWRI annual conference, ASCE, Cambridge, Massachusetts, USA, pp. 698 - 701.
4. Kessler A., **Ostfeld A.**, and Sinai G. (1997). "Detecting accidental contaminations in municipal water networks", proceedings of the EWRI annual conference, ASCE, Houston, Texas, USA, pp. 732 - 737.
5. **Ostfeld A.**, Lansey K. E., Salingar Y., and Maddock T. III (1997). "Development of a decision support system for the Lake Hula project", ESRI Annual User's Conference, San Diego, California, published at: <http://www.esri.com>
6. **Ostfeld A.** and Kessler A. (1998). "Detecting accidental contaminations in municipal water networks: application", proceedings of the EWRI annual conference, ASCE, Chicago, Illinois, USA, pp. 272 - 278.
7. **Ostfeld A.** and Shamir U. (1998). "Using back - up sub - systems for design and operation of reliable multiquality systems", proceedings of the EWRI annual conference, ASCE, Chicago, Illinois, USA, pp. 303 - 306.
8. **Ostfeld A.** (2000). "Reliability analysis of regional water distribution systems - a case study", proceedings of the EWRI annual conference, ASCE, Minneapolis, Minnesota, USA, [http://dx.doi.org/10.1061/40517\(2000\)194](http://dx.doi.org/10.1061/40517(2000)194)
9. **Muzaffar E., Ostfeld A.**, and Lansey K. (2000). "An overview of HANDSS: Hula aggregated numerical decision support system", proceedings of the EWRI annual conference, ASCE, Minneapolis, Minnesota, USA, [http://dx.doi.org/10.1061/40517\(2000\)30](http://dx.doi.org/10.1061/40517(2000)30)
10. **Ostfeld A.** (2001). "Reliability simulation of water distribution systems", in Water Software Systems: Theory and Applications, Ulanicki B., Coulbeck B., and Rance J. P. (Eds.), Proceedings of the CCWI01 Conference, Vol. 1, pp. 289 - 300.
11. **Ostfeld A.** and Kessler A. (2001). "Protecting urban water distribution systems against accidental hazards intrusions", Proceedings of the IWA Second Conference, Berlin 2001, Published on CD.

12. **Ostfeld A.** (2001). "Activated sludge systems calibration - an interactive approach", Proceedings of the IWA Second Conference, Berlin 2001, Published on CD.
13. **Ostfeld A.**, *Salomons E.*, and Shamir U. (2002) "Optimal operation of water distribution systems under water quality unsteady conditions", Proceedings of the annual EWRI ASCE Conference, Roanoke, Virginia, published on CD.
14. Rubin H., **Ostfeld A.**, and *Dveyrin D.* (2002). "Optimal monitoring of pumped groundwater for water supply in semiarid populated areas", Proceedings of the annual EWRI ASCE Conference, Roanoke, Virginia, published on CD.
15. Berger D. and **Ostfeld A.** (2002). "Application of CE-QUAL-W2 to Lake Kinneret", Proceedings of the 5th International Conference on Hydroinformatics, Cardiff, UK, Vol. 1, pp. 528 - 333.
16. **Ostfeld A.** (2002). "Reliability oriented analysis of water distribution systems", Proceedings of the 5th International Conference on Hydroinformatics, Cardiff, UK, Vol. 2, pp. 1459 - 1464.
17. **Ostfeld A.** and *Preis A.* (2002). "Lake Kinneret watershed contamination transports: a GIS based hydrological model", Proceedings of the IWA 9th International Specialized Conference on Watershed and River Basin Management, Edinburgh, Scotland, Published on CD.
18. **Ostfeld A.** and *Salomons E.* (2003). "An early warning detection system (EWDS) for drinking water distribution systems security", Proceedings of the annual EWRI ASCE Conference, Philadelphia, Pennsylvania, USA, [http://dx.doi.org/10.1061/40685\(2003\)34](http://dx.doi.org/10.1061/40685(2003)34)
19. *Shlomi S.*, Rubin H., **Ostfeld A.**, and Shoemaker C. (2003). "Developing a methodology for selecting wells sampled for the evaluation of groundwater quality", Proceedings of the annual EWRI ASCE Conference, Philadelphia, Pennsylvania, USA, [http://dx.doi.org/10.1061/40685\(2003\)204](http://dx.doi.org/10.1061/40685(2003)204)
20. **Ostfeld A.**, Kessler A., and *Goldberg I.* (2003). "An early warning contaminants detection system for water distribution networks", in Advances in Water Supply Management, Maksimovic C., Butler d., and Memon F. A. (Eds.), Proceedings of the CCWI03 Conference, pp. 433 – 439, <http://dx.doi.org/10.1201/NOE9058096081.ch46>
21. **Ostfeld A.** (2004). "Optimal simultaneous design and operation of multi-quality water distribution systems under unsteady hydraulics ", EWRI ASCE Conference, Salt Lake City, Utah, [http://dx.doi.org/10.1061/40737\(2004\)479](http://dx.doi.org/10.1061/40737(2004)479)
22. **Ostfeld A.** and *Salomons E.* (2004). "A stochastic early warning detection system model for drinking water distribution systems security", EWRI ASCE Conference, Salt Lake City, Utah, USA, [http://dx.doi.org/10.1061/40737\(2004\)454](http://dx.doi.org/10.1061/40737(2004)454)

23. **Ostfeld A.** and *Salomons E.* (2004). "Optimal scheduling of pumping and chlorine injections under unsteady hydraulics", EWRI ASCE Conference, Salt Lake City, Utah, USA, [http://dx.doi.org/10.1061/40737\(2004\)452](http://dx.doi.org/10.1061/40737(2004)452)
24. *Shlomi S.*, **Ostfeld A.**, Rubin H., and Shoemaker C. A. (2004). "Optimal groundwater contamination monitoring using pumping wells", EWRI ASCE Conference, Salt Lake City, Utah, USA, [http://dx.doi.org/10.1061/40737\(2004\)104](http://dx.doi.org/10.1061/40737(2004)104)
25. *Salomons S.* and **Ostfeld A.** (2004). "A Calibration model for CE-QUAL-W2", EWRI ASCE Conference, Salt Lake City, Utah, USA, [http://dx.doi.org/10.1061/40737\(2004\)227](http://dx.doi.org/10.1061/40737(2004)227)
26. *Preis A.* and **Ostfeld A.** (2005). "A hybrid (MT - LP) - GA approach to water distribution systems management", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)23](http://dx.doi.org/10.1061/40792(173)23)
27. **Ostfeld A.** and *Salomons E.* (2005). "Solving the inverse problem of deliberate contaminants intrusions into water distribution systems", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)46](http://dx.doi.org/10.1061/40792(173)46)
28. **Ostfeld A.** and *Krapivka A.* (2005). "A GA - LP approach to water distribution systems optimal design", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)611](http://dx.doi.org/10.1061/40792(173)611)
29. *Perelman L.* and **Ostfeld A.** (2005). "Multi - objective design of water distribution systems using cross entropy", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)35](http://dx.doi.org/10.1061/40792(173)35)
30. **Ostfeld A.** and *Tubaltzev A.* (2005). "Reliable optimal design and operation of multiquality networks: unsteady conditions", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)613](http://dx.doi.org/10.1061/40792(173)613)
31. **Grayman W.**, **Ostfeld A.**, and *Salomons E.* (2005). "Red team - blue team exercise for locating monitors in distribution systems", EWRI ASCE Conference, Anchorage, Alaska, USA, [http://dx.doi.org/10.1061/40792\(173\)42](http://dx.doi.org/10.1061/40792(173)42)
32. *Perelman L.* and **Ostfeld A.** (2005). "Water distribution systems optimal design using Cross Entropy", Genetic and Evolutionary Computation Conference (GECCO-2005, Ranked A at Computer Science Conference Rank), Washington DC, Vol. 1, pp. 647 – 648, <http://dx.doi.org/10.1145/1068009.1068117>
33. **Ostfeld A.** and *Tubaltzev A.* (2005). "An ant colony non - dimensional algorithm for water distribution systems optimal design and operation", Proceedings of the Eighth International Conference on Computing and Control for the Water Industry (CCWI05), Exeter, UK, Vol. 2, pp. 63 - 68.
34. *Perelman L.* and **Ostfeld A.** (2005). "Optimal design of water distribution systems using Cross Entropy", Proceedings of the Eighth International

Conference on Computing and Control for the Water Industry (CCWI05),
Exeter UK, Vol. 2, pp. 75 - 80.

35. *Preis A., Tubaltzev A., and Ostfeld A.* (2005). "Kinneret watershed analysis tool (KWAT) – a cell based decision tree model for watershed flow and pollutants predictions", the 2005 IWA Watershed & River Basin Management Specialist Group Conference, September 13 - 15, 2005 Calgary, Alberta, Canada, published on CD.
36. **Ostfeld A.**, Gal G., and *Salomons E.* (2006). "Calibration of CAEDYM using a genetic algorithm - the Lake Kinneret case study", EWRI ASCE Conference, Omaha, Nebraska, USA, [http://dx.doi.org/10.1061/40856\(200\)114](http://dx.doi.org/10.1061/40856(200)114)
37. **Ostfeld A.**, *Tubaltzev A.*, Rom. M., and Kronaveter L. (2006). "A hybrid decision tree (DT) - genetic algorithm (GA) model for toxic Cyanobacteria predictions in Lake Kinneret", EWRI ASCE Conference, Omaha, Nebraska, USA, [http://dx.doi.org/10.1061/40856\(200\)125](http://dx.doi.org/10.1061/40856(200)125)
38. Watkins D., Hilton A. C., Loucks E., Nzewi E., and **Ostfeld A.** (2006). "Case studies for environmental and water resources systems analysis education", EWRI ASCE Conference, Omaha, Nebraska, USA, [http://dx.doi.org/10.1061/40856\(200\)83](http://dx.doi.org/10.1061/40856(200)83)
39. *Preis A.* and **Ostfeld A.** (2006). "Multiobjective sensor design for water distribution systems security", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)107](http://dx.doi.org/10.1061/40941(247)107)
40. *Preis A.* and **Ostfeld A.** (2006). "Optimal sensors layout for contamination source identification in water distribution systems", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)127](http://dx.doi.org/10.1061/40941(247)127)
41. Perelman L. and **Ostfeld A.** (2006). "Aggregation of water distribution systems for contamination detection", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)62](http://dx.doi.org/10.1061/40941(247)62)
42. Perelman L. and **Ostfeld A.** (2006). "Demand loading conditions: to what extent are they representative?", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)167](http://dx.doi.org/10.1061/40941(247)167)
43. **Ostfeld A.** and *Salomons E.* (2006). "Sensor network design proposal for the battle of the water sensor networks (BWSN)", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)108](http://dx.doi.org/10.1061/40941(247)108)
44. *Mayorchik Y.* and **Ostfeld A.** (2006). "Multiobjective optimal design and operation of pressure surge control devices in water distribution systems", 8th

Annual International Symposium on Water Distribution Systems Analysis,
Cincinnati, Ohio, USA, [http://dx.doi.org/10.1061/40941\(247\)61](http://dx.doi.org/10.1061/40941(247)61)

45. Preis A. and **Ostfeld A.** (2007). "Multiobjective Contaminant Detection Response Model ", EWRI ASCE Conference, Tampa, Florida, USA, [http://dx.doi.org/10.1061/40927\(243\)528](http://dx.doi.org/10.1061/40927(243)528)
46. Preis A. and **Ostfeld A.** (2007). "Efficient contamination events sampling for sensors layout design", EWRI ASCE Conference, Tampa, Florida, USA, [http://dx.doi.org/10.1061/40927\(243\)462](http://dx.doi.org/10.1061/40927(243)462)
47. Perelman L. and **Ostfeld A.** (2007). "Rare events Monte Carlo sampling for contamination warning systems (CWS) evaluation", EWRI ASCE Conference, Tampa, Florida, USA, [http://dx.doi.org/10.1061/40927\(243\)464](http://dx.doi.org/10.1061/40927(243)464)
48. Preis A., Perelman L. and **Ostfeld A.** (2007). "Contamination source detection with fuzzy sensors data", EWRI ASCE Conference, Tampa, Florida, USA, [http://dx.doi.org/10.1061/40927\(243\)503](http://dx.doi.org/10.1061/40927(243)503)
49. **Ostfeld A.** (2007). "Challenges in drinking water distribution systems security modeling", EWRI ASCE Conference, Tampa, Florida, USA, published on CD.
50. **Ostfeld A.**, Lahav O., and Salomons E. (2007). "Desalinated water sources inclusion in optimizing the operation of water systems", Water Management Challenges in Global Change, Ulanicki et al. (Eds.), CCWI2007 and SUWM2007 Conference, De Montfort University, Leicester, United Kingdom, Taylor and Francis Group, London, pp. 387 - 390.
51. **Ostfeld A.** and Salomons E. (2007). "A multiobjective model for imperfect sensors layout", Water Management Challenges in Global Change, Ulanicki et al. (Eds.), CCWI2007 and SUWM2007 Conference, De Montfort University, Leicester, United Kingdom, Taylor and Francis Group, London, pp. 87 - 89.
52. Friedler E., Shwartzman Z., and **Ostfeld A.** (2007). "Assessment of the reliability of an on - site MBR system for greywater treatment and the associated aesthetic and health risks", IWA 6th Conference on Wastewater Reclamation and Reuse for Sustainability, Belgium, published on CD.
53. Preis A., Perelman L., and **Ostfeld A.** (2008). "Uncertainty quantification of contamination source identification", EWRI ASCE Conference, Honolulu, [http://dx.doi.org/10.1061/40976\(316\)505](http://dx.doi.org/10.1061/40976(316)505)
54. Romero-Gomez P., Preis A., Choi C., **Ostfeld A.**, Lansey K. (2008). "Sensor network design with improved water quality models at cross junctions", 10th International Water Distribution System Analysis Conference Kruger National Park, South Africa, [http://dx.doi.org/10.1061/41024\(340\)94](http://dx.doi.org/10.1061/41024(340)94)
55. Zimmer A., Hill D., Minsker B., **Ostfeld A.**, Schmidt A. (2009). "Evolutionary optimization of combined sewer overflow control", EWRI ASCE Conference, Kansas, USA, [http://dx.doi.org/10.1061/41036\(342\)110](http://dx.doi.org/10.1061/41036(342)110)

56. Dawsey W. J., Minsker B., and **Ostfeld A.** (2009). "Analysis of model sensitivity and uncertainty for chlorine transport and decay in a water distribution system", EWRI ASCE Conference, Kansas, USA, [http://dx.doi.org/10.1061/41036\(342\)64](http://dx.doi.org/10.1061/41036(342)64)
57. Preis A., Whittle A., and **Ostfeld A.** (2009). "On-line hydraulic state prediction of water distribution systems", EWRI ASCE Conference, Kansas, USA, [http://dx.doi.org/10.1061/41036\(342\)32](http://dx.doi.org/10.1061/41036(342)32)
58. Austin R. G., Choi C. Y., Preis A., **Ostfeld A.**, and Lansey K. (2009). "Multi-objective sensor placements with improved water quality models in a network with multiple junctions", EWRI ASCE Conference, Kansas, USA, [http://dx.doi.org/10.1061/41036\(342\)44](http://dx.doi.org/10.1061/41036(342)44)
59. Preis A., Whittle A., and **Ostfeld A.** (2009). "Multi-objective sensor network placement model for integrated monitoring of hydraulic and water quality parameters", World City Water Forum, Incheon, Korea, published on CD.
60. Ohar Z. and **Ostfeld A.** (2009). "Optimal placement of booster chlorination stations for disinfection by products minimization", in Integrating Water Systems, Boxall and Maksimovic (Eds.), Taylor and Francis Group, London, proceedings of Computing and Control in the Water Industry 2009 (CCWI09), Sheffield, UK, pp. 405 - 410.
61. Preis A., Whittle A., **Ostfeld A.**, and Perelman L. (2009). "On-line hydraulic state estimation in urban water networks using reduced models", in Integrating Water Systems, Boxall and Maksimovic (Eds.), Taylor and Francis Group, London, proceedings of Computing and Control in the Water Industry 2009 (CCWI09), Sheffield, UK, pp. 319 - 324.
62. Perelman L. and **Ostfeld A.** (2010). "Cluster analysis for water distribution systems security enhancement", EWRI ASCE Conference, Providence, Virginia, USA, [http://dx.doi.org/10.1061/41114\(371\)440](http://dx.doi.org/10.1061/41114(371)440)
63. Ohar Z. and **Ostfeld A.** (2010). "Alternative formulation for DBP's minimization by optimal design of booster chlorination stations ", EWRI ASCE Conference, Providence, Virginia, USA, [http://dx.doi.org/10.1061/41114\(371\)433](http://dx.doi.org/10.1061/41114(371)433)
64. Zimmer A., Minsker B., Schmidt, A., and **Ostfeld A.** (2010). "Evolutionary algorithm memory enhancement for dynamic hydraulics", EWRI ASCE Conference, Providence, Virginia, USA, [http://dx.doi.org/10.1061/41114\(371\)232](http://dx.doi.org/10.1061/41114(371)232)
65. Perelman L. and **Ostfeld A.** (2010). "Bayesian networks for estimating contaminant source and propagation in water distribution system using cluster structure", 12th Annual International Symposium on Water Distribution Systems Analysis, Tucson, Arizona, USA, [http://dx.doi.org/10.1061/41203\(425\)40](http://dx.doi.org/10.1061/41203(425)40)
66. Salomons E. and **Ostfeld A.** (2010). "Identification of possible contamination sources using reverse hydraulic simulation", 12th Annual International

Symposium on Water Distribution Systems Analysis, Tucson, Arizona, USA,
[http://dx.doi.org/10.1061/41203\(425\)42](http://dx.doi.org/10.1061/41203(425)42)

67. **Ostfeld A.**, *Salomons E.*, and *Lahav O.* (2010). "Chemical stability inclusion in optimizing the operation of water networks", 12th Annual International Symposium on Water Distribution Systems Analysis, Tucson, Arizona, USA, [http://dx.doi.org/10.1061/41203\(425\)109](http://dx.doi.org/10.1061/41203(425)109)
68. **Housh M.**, **Ostfeld A.**, and *Shamir U.* (2011). "Multi-year optimal management of quantities and salinities in water supply systems", EWRI ASCE Conference, Palm Springs, California, USA, [http://dx.doi.org/10.1061/41173\(414\)443](http://dx.doi.org/10.1061/41173(414)443)
69. **Housh M.**, **Ostfeld A.**, and *Shamir U.* (2011). "Optimal multi-year management of a water supply system under uncertainty: robust counterpart approach", EWRI ASCE Conference, Palm Springs, California, USA, [http://dx.doi.org/10.1061/41173\(414\)321](http://dx.doi.org/10.1061/41173(414)321)
70. **Housh M.**, **Ostfeld A.**, and *Shamir U.* (2011). "Search method for box-constrained optimization", EWRI ASCE Conference, Palm Springs, California, USA, [http://dx.doi.org/10.1061/41173\(414\)303](http://dx.doi.org/10.1061/41173(414)303)
71. **Zimmer A.**, *Minsker B.*, *Schmidt A.*, and **Ostfeld A.** (2011). "Benefits of meta-model validation for real-time sewer system decision support", EWRI ASCE Conference, Palm Springs, California, USA, [http://dx.doi.org/10.1061/41173\(414\)304](http://dx.doi.org/10.1061/41173(414)304)
72. **Housh M.**, **Ostfeld A.**, and *Shamir U.* (2011). "Optimal multi-year operation of a water supply system under uncertainty: robust methods", Risk in Water Resources Management (Proceedings of Symposium H03, held during IUGG2011 in Melbourne, Australia, July 2011) (IAHS Publication 347, 2011), <http://cat.inist.fr/?aModele=afficheN&cpsidt=24546574>
73. *Price E.* and **Ostfeld A.** (2011). "Headloss successive linearization for optimal operation of water distribution systems", in *Urban Water Management: Challenges and Opportunities*, *Savic D. A.*, *Kapelan Z.*, and *Butler D.* (Eds.), Proceedings of the CCWI11 Conference, Vol. 2, pp. 521 - 526.
74. *Opher T.* and **Ostfeld A.** (2011). "A hybrid evolutionary data-driven model for biofouling assessment in pipelines", in *Urban Water Management: Challenges and Opportunities*, *Savic D. A.*, *Kapelan Z.*, and *Butler D.* (Eds.), Proceedings of the CCWI11 Conference, Vol. 2, pp. 641 - 644.
75. *Arad J.*, *Perelman L.*, and **Ostfeld A.** (2011). "Water distribution systems event detection through classification and regression trees", in *Urban Water Management: Challenges and Opportunities*, *Savic D. A.*, *Kapelan Z.*, and *Butler D.* (Eds.), Proceedings of the CCWI11 Conference, Vol. 3, pp. 725 - 730.
76. **Zimmer A.**, *Minsker B.*, *Schmidt A.*, and **Ostfeld A.** (2012). "Computationally implicit hydraulics for real-time combined sewer overflow modeling." EWRI

ASCE Conference, Albuquerque, New Mexico, USA,
<http://dx.doi.org/10.1061/9780784412312.032>

77. *Housh M.*, **Ostfeld A.**, and *Shamir U.* (2012). "Optimal multi-year management of a regional water supply system under uncertainty: the affine adjustable robust counterpart approach." EWRI ASCE Conference, Albuquerque, New Mexico, USA, <http://dx.doi.org/10.1061/9780784412312.082>
78. *Perelman L.*, and **Ostfeld A.** (2012). "Optimal mobile self-powered sensor operation for water distribution systems water quality enhancements." EWRI ASCE Conference, Albuquerque, New Mexico, USA, <http://dx.doi.org/10.1061/9780784412312.322>
79. *Arad J.*, *Perelman L.*, and **Ostfeld A.** (2012). "A coupled decision trees Bayesian approach for water distribution systems event detection." EWRI ASCE Conference, Albuquerque, New Mexico, USA, <http://dx.doi.org/10.1061/9780784412312.291>
80. *Price E.* and **Ostfeld A.** (2012). "A successive linear programming scheme for optimal operation of water distribution networks." EWRI ASCE Conference, Albuquerque, New Mexico, USA, <http://dx.doi.org/10.1061/9780784412312.297>
81. *Price E.* and **Ostfeld A.** (2012). "Iterative linearization scheme for optimal operation of water distribution systems including leakage and cost at source." 14th Water Distribution Systems Analysis Conference 24-27 September 2012, Adelaide, Australia, <http://search.informit.com.au/documentSummary;dn=945892394690614;res=IELEN G>
82. *Oliker N.* and **Ostfeld A.** (2012). "A weighted support vector machine classifier for contamination event detection in water distribution systems." 14th Water Distribution Systems Analysis Conference 24-27 September 2012, Adelaide, Australia, <http://search.informit.com.au/documentSummary;dn=948407845810471;res=IELEN G>
83. *Perelman L.*, *Housh M.*, *Oliker N.*, and **Ostfeld A.** (2012). "Non-probabilistic approach for the optimal design of water distribution systems under demand uncertainty." 14th Water Distribution Systems Analysis Conference 24-27 September 2012, Adelaide, Australia, <http://search.informit.com.au/documentSummary;dn=946879942167298;res=IELEN G>
84. *Arad J.*, *Housh M.*, *Perelman L.*, and **Ostfeld A.** (2012). "Contamination event detection utilizing genetic algorithm." 14th Water Distribution Systems Analysis Conference 24-27 September 2012, Adelaide, Australia, <http://search.informit.com.au/documentSummary;dn=946414117885843;res=IELEN G>
85. *Arad J.*, *Housh M.*, *Perelman L.*, and **Ostfeld A.** (2012). "Comparison between fixed thresholds and genetic algorithm methods for water quality event detection." 14th Water Distribution Systems Analysis Conference 24-27 September 2012, Adelaide,

Australia,
<http://search.informit.com.au/documentSummary;dn=948351946896696;res=IELEN>
G

86. *Perelman L., Amani W. W., Salim W., Wu R., Park J., Ostfeld A.*, Banks M. K., and Porterfield D. M. (2013). "Enhancing water distribution system security through water quality mobile sensor operation." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.064>
87. *Perelman L., Housh M., and Ostfeld A.* (2013). "Explicit demand uncertainty formulation for robust design of water distribution systems." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.066>
88. *Price E., and Ostfeld A.* (2013). "Linear programming of headloss, leakage and variable pump energy consumption for optimal operation of water distribution systems." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.079>
89. *Oliker N. and Ostfeld A.* (2013). "Multi-objective optimization of cost and resilience of water distribution system design." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.081>
90. *Oliker N. and Ostfeld A.* (2013). "Classification - optimization model for contamination event detection in water distribution systems." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.061>
91. *Perelman L. and Ostfeld A.* (2013). "Application of graph theory to sensor placement in water distribution systems." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.060>
92. *Schwartz R., Oliker N., and Ostfeld A.* (2013). "Water distribution systems complex contamination simulations for event detection model calibration and verification." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA, <http://dx.doi.org/10.1061/9780784412947.098>
93. *Skulovich O., Perelman L., and Ostfeld A.* (2013). "Modeling and optimizing hydraulic transients in water distribution systems." 12th international CCWI conference (CCWI2013), 2-4 September 2013, Perugia, Italy, in Procedia Engineering, Vol. 70, 2014, pp. 1558-1565, <http://dx.doi.org/10.1016/j.proeng.2014.02.172>
94. *Oliker N. and Ostfeld A.* (2013). "Minimum volume ellipsoid classification model for contamination event detection in water distribution systems." 12th international CCWI conference (CCWI2013), 2-4 September 2013, Perugia, Italy, in Procedia Engineering, Vol. 70, 2014, pp. 1280-1288, <http://dx.doi.org/10.1016/j.proeng.2014.02.141>
95. *Oliker N. and Ostfeld A.* (2013). "Comparison of Multivariate Classification Methods for Contamination Event Detection in Water Distribution Systems." 12th

international CCWI conference (CCWI2013), 2-4 September 2013, Perugia, Italy, Procedia Engineering, Vol. 70, 2014, pp. 1271-1279, <http://dx.doi.org/10.1016/j.proeng.2014.02.140>

96. *Price E.* and **Ostfeld A.** (2013). "Practical approach to water system optimal operation." 12th international CCWI conference (CCWI2013), 2-4 September 2013, Perugia, Italy, in Procedia Engineering, Vol. 70, 2014, pp. 1362-1368, <http://dx.doi.org/10.1016/j.proeng.2014.02.150>

97. Fagiolini A., Housh M., **Ostfeld A.**, and Bicchi A. (2014). "Distributed estimation and control of water distribution networks by logical consensus." International Symposium on Communications, Control, and Signal Processing: Special Session on Wireless Sensor and Actuator Network Applications, Athens, Greece

98. *Schwartz R.*, Lahav O., and **Ostfeld A.** (2014). "Optimal sensor placement in water distribution systems for injection of chlorpyrifos." EWRI Conference, 1-5 June 2014, Portland, Oregon, USA, <http://dx.doi.org/10.1061/9780784413548.052>

99. *Skulovich O.*, *Perelman L.*, and **Ostfeld A.** (2014). "Optimization of surge protection devices in water distribution systems." EWRI Conference, 1-5 June 2014, Portland, Oregon, USA, <http://dx.doi.org/10.1061/9780784413548.053>

100. *Price E.* and **Ostfeld A.** (2014). "Optimal water system operation using successive shortest path graph algorithm." EWRI Conference, 1-5 June 2014, Portland, Oregon, USA, <http://dx.doi.org/10.1061/9780784413548.042>

101. *Maskit M.* and **Ostfeld A.** (2014). "Leakage calibration of water distribution systems." EWRI Conference, 1-5 June 2014, Portland, Oregon, USA, <http://dx.doi.org/10.1061/9780784413548.045>

102. *Price E.* and **Ostfeld A.** (2014). "Battle of background leakage assessment for water networks using successive linear programming." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Volume 89, 2014, Pages 45-52, <http://dx.doi.org/10.1016/j.proeng.2014.11.158>

103. *Price E.* and **Ostfeld A.** (2014). "Optimal water system operation using graph theory algorithms." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Vol. 89, 2014, pp. 502-508, <http://dx.doi.org/10.1016/j.proeng.2014.11.245>

104. **Ostfeld A.** and *Salomons E.* (2014). "Optimal disinfection of water distribution networks following a contamination event." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Vol. 89, 2014, pp. 168-172, <http://dx.doi.org/10.1016/j.proeng.2014.11.173>

105. Maskit M. and **Ostfeld A.** (2014). "Leakage calibration of water distribution networks." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Vol. 89, 2014, pp. 664-671.

<http://dx.doi.org/10.1016/j.proeng.2014.11.492>

106. Skulovich O., Perelman L., and **Ostfeld A.** (2014). "Bi-level optimization of closed surge tanks placement and sizing in water distribution system subjected to transient events." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Vol. 89, 2014, pp. 1329-1335, <http://dx.doi.org/10.1016/j.proeng.2014.11.449>
107. Schwartz R. and **Ostfeld A.** (2014). "Smart grid for water quality sensor locations." 16th Water Distribution Systems Analysis Conference, 14-17 July 2014, Bari, Italy, Procedia Engineering, Vol. 89, 2014, pp. 1292-1297, <http://dx.doi.org/10.1016/j.proeng.2014.11.440>
108. Salomons E. and **Ostfeld A.** (2015). "Reducing system wide event detection false positive alerts by using reversed hydraulic simulation." EWRI Conference, 17-21 May 2015, Austin, Texas, USA, Conference proceedings, pp. 838-843, <http://dx.doi.org/10.1061/9780784479162.078>
109. Housh M. and **Ostfeld A.** (2015). "Utilizing discrete choice models for fusing alarms from multiple water quality indicators." EWRI Conference, 17-21 May 2015, Austin, Texas, USA, Conference proceedings, pp. 652-657, <http://dx.doi.org/10.1061/9780784479162.060>
110. Sankary N., Oliker N., **Ostfeld A.**, Rasekh A., Wu R., Banks M. K., and Porterfield M. (2015). "Mobile sensors for water quality management in water distribution systems." EWRI Conference, 17-21 May 2015, Austin, Texas, USA, Conference proceedings, pp. 792-801, <http://dx.doi.org/10.1061/9780784479162.073>
111. Oliker N. and **Ostfeld A.** (2015). "Water quality event detection in water networks through multiple sensors data." EWRI Conference, 17-21 May 2015, Austin, Texas, USA, Conference proceedings, pp. 902-906, <http://dx.doi.org/10.1061/9780784479162.085>
112. Ohar Z., Lahav O., and **Ostfeld A.** (2015). "Optimal sensors location using contamination detailed chemistry reactions." EWRI Conference, 17-21 May 2015, Austin, Texas, USA, Conference proceedings, pp. 820-828, <http://dx.doi.org/10.1061/9780784479162.076>
113. Ohar Z., **Ostfeld A.**, Lahav O., and Birnhack L. (2015). "Modelling heavy metal contamination events in water distribution systems." 13th international CCWI conference (CCWI2015), 2-4 September 2015, Leicester, UK, in Procedia Engineering, Vol. 119, 2015, pp. 328-336, <http://dx.doi.org/10.1016/j.proeng.2015.08.892>
114. Salomons E. and **Ostfeld A.** (2015). "A multi-objective approach for minimizing water network disinfection time and disinfectant quantity." 13th international CCWI conference (CCWI2015), 2-4 September 2015, Leicester, UK, in Procedia Engineering, Vol. 119, 2015, pp. 347-351, <http://dx.doi.org/10.1016/j.proeng.2015.08.894>

115. Taormina R., Galelli S., Tippenhauer N. O., Salomons E., and **Ostfeld A.** (2016). "Simulation of cyber-physical attacks on water distribution systems with EPANET." Inaugural Singapore Cyber Security R&D Conference, Singapore University of Technology and Design, Singapore, <http://ebooks.iospress.nl/volume/article/42059> <http://dx.doi.org/10.3233/978-1-61499-617-0-123>
116. Nuesser L., Hartmann S., Salomons E., Skulovich O., **Ostfeld A.**, Hollert H. and Seiler T. B. (2016). "Can zebrafish larvae behavior be used for on-line contamination event detection in water distribution systems?" SETAC Europe 26th Annual Meeting, Nantes, France (Platform presentation, 31% acceptance rate).
117. Taormina R., Galelli S., Tippenhauer N. O., **Ostfeld A.**, and Salomons E. (2016). "Assessing the effect of cyber-physical attacks on water distribution systems." EWRI Conference, 22-26 May 2016, West Palm Beach, Florida, USA, pp. 436-442 <http://dx.doi.org/10.1061/9780784479865.046>
118. Price E. and **Ostfeld A.** (2016). "A graph theory modelling approach for optimal operation of water distribution systems under water quality constraints." EWRI Conference, 22-26 May 2016, West Palm Beach, Florida, USA, pp. 497-504, <http://dx.doi.org/10.1061/9780784479865.052>
119. Salomons E. and **Ostfeld A.** (2016). "Slug flow optimal disinfection of water distribution networks following a contamination event." EWRI Conference, 22-26 May 2016, West Palm Beach, Florida, USA, pp. 516-522, <http://dx.doi.org/10.1061/9780784479865.054>
120. Sankary N. and **Ostfeld A.** (2016). "Incorporating operational uncertainty in early warning system design optimization for water distribution system security." 18th Water Distribution Systems Analysis Conference, 24-28 July 2016, Cartagena de Indias, Caribbean Sea City, Colombia, Procedia Engineering, Vol. 186, 2017, pp. 160-167, <https://doi.org/10.1016/j.proeng.2017.03.222>
121. **Ostfeld A.** and Salomons E. (2016). "Water age clustering for water distribution systems." 18th Water Distribution Systems Analysis Conference, 24-28 July 2016, Cartagena de Indias, Caribbean Sea City, Colombia, Procedia Engineering, Vol. 186, 2017, pp. 470-474, <https://doi.org/10.1016/j.proeng.2017.03.256>
122. Salomons E., Skulovich O. and **Ostfeld A.** (2016). "The battle of water networks DMAs – a multistage design approach." 18th Water Distribution Systems Analysis Conference, 24-28 July 2016, Cartagena de Indias, Caribbean Sea City, Colombia, 3rd place winners.
123. Skulovich O., Cofalla C., Schüttrumpf H., and **Ostfeld A.** (2017). "Fish activity impact on sediment erosion resuspension: mathematical modeling and annular flume verification experiments." EWRI Conference, 21-25 May 2017, Sacramento, California, USA, <http://dx.doi.org/10.1061/9780784480601.060#sthash.2LH58YgM.dpuf>
124. Salomons E. and **Ostfeld A.** (2017). "Inclusion of variable disinfection levels in slug feed optimal disinfection of water distribution systems." EWRI Conference, 21-25

May 2017, Sacramento, California, USA,
<http://dx.doi.org/10.1061/9780784480625.058#sthash.Xq25dSbJ.dpuf>

125. Sankary N. and **Ostfeld A.** (2017). "Early warning system design for contamination event detection incorporating surrogate water quality indicators in water distribution systems." EWRI Conference, 21-25 May 2017, Sacramento, California, USA,
<http://dx.doi.org/10.1061/9780784480625.044#sthash.iKQAVgDY.dpuf>
126. Sankary N. and **Ostfeld A.** (2017). "Importance sampling of water distribution system contamination events based on nodal neighborhood populations." EWRI Conference, 21-25 May 2017, Sacramento, California, USA,
<http://dx.doi.org/10.1061/9780784480625.045#sthash.AEpbZWdZ.dpuf>
127. Lifshitz R. and **Ostfeld A.** (2017). "Dynamic approach for water distribution systems clustering and aggregation." EWRI Conference, 21-25 May 2017, Sacramento, California, USA,
<http://dx.doi.org/10.1061/9780784480625.047#sthash.2ROERa24.dpuf>
128. Lifshitz R. and **Ostfeld A.** (2017). "A clustering model for contamination spreading control in water distribution systems." EWRI Conference, 21-25 May 2017, Sacramento, California, USA,
<http://dx.doi.org/10.1061/9780784480625.048#sthash.kYMPrsmy.dpuf>
129. **Ostfeld A.** (2017). "The EPANET challenge." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017 (abstract only).
130. Sankary N. and **Ostfeld A.** (2017). "Inline mobile water quality sensors deployed for contamination intrusion localization." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017
<https://doi.org/10.15131/shef.data.5364490.v1>
131. Sankary N. and **Ostfeld A.** (2017). "Dynamic scenario selection in optimal design problems and evolutionary optimization with uncertain system knowledge." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017
<https://doi.org/10.15131/shef.data.5364262.v1>
132. Lifshitz R. and **Ostfeld A.** (2017). "Infection delay time analysis for enhancing water networks vulnerabilities to contamination intrusions." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017
<https://doi.org/10.15131/shef.data.5364514.v1>
133. Lifshitz R. and **Ostfeld A.** (2017). "A perspective on reducing uncertainties in water distribution networks management using clusters." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017
<https://doi.org/10.15131/shef.data.5364601.v1>
134. Skulovich O. and **Ostfeld A.** (2017). "Adaptation of *Physarum Polycephalum* evolution for least-cost design of water distribution networks." 15th CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017

<https://doi.org/10.15131/shef.data.5364109.v1>

135. Naamnih J. and **Ostfeld A.** (2018). "A time varying minimum volume ellipsoid (MVE) method for water distribution systems event detection." EWRI Conference, Minneapolis, MN, June 3-7 USA
<https://ascelibrary.org/doi/abs/10.1061/9780784481424.041>
136. Zeidan M., Pu L., and **Ostfeld A.** (2018). "Decomposing water distribution system into district metered areas for leakage and water age reduction." EWRI Conference, Minneapolis, MN, June 3-7 USA
<https://ascelibrary.org/doi/abs/10.1061/9780784481424.042>
137. Naamnih J. and **Ostfeld A.** (2018). "A clustered minimum volume ellipsoid model for event detection in water networks." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12189/7782>
138. Zeidan M., Chen J., Geletu A., Li P., and **Ostfeld A.** (2018). "Clustering and multi-objective operation of water distribution systems: water age, leakage and cost trade-off." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12513/8097>
139. Lifshitz R and **Ostfeld A.** (2018). "District metering areas and pressure reducing valves trade-off in water distribution system leakage management." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12195/7788>
140. Lifshitz R., **Ostfeld A.**, Vrachimis S. G., Eliades D. G., and Polycarpou M. M. (2018). "Improving contamination detectability in water distribution systems using active fault detection." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12258/7854>
141. Murray R., Grayman W., Parsons B., Whitten B., Boccelli D., Cleveland T., **Ostfeld A.**, and Strasser A. (2018). "Results from the summit on the future of EPANET." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12339/7932>
142. Chen J., Zeidan M., Geletu A., **Ostfeld A.**, and Li P. (2018). "Analysis of relations between pressure and water age in water distribution systems." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12186/7779>
143. Taormina R., Galelli S., Douglas H. C., Tippenhauer N. O., Salomons E., and **Ostfeld A.** (2018). "Modeling cyber-physical attacks on water networks with epanetCPA." WDSA/CCWI Joint Conference, Kingston, Canada, July 23-25 Canada.
<https://ojs.library.queensu.ca/index.php/wdsa-ccw/article/view/12204/7797>

144. *Kadinski L.*, *Rana M.*, Boccelli D., and **Ostfeld A.** (2019). "Grab sampling placement modeling for real time contamination event detection in water networks." EWRI Conference, Pittsburgh, PA, May 19-23, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784482353.051>
145. Fridman-Bishop N., *Somer S.*, Birnhack L., Kadinski L., **Ostfeld A.**, and Lahav O. (2019). "Rehabilitation of water distribution systems following a Cadmium contamination intrusion - a solution based on water quality and water distribution systems modeling." EWRI Conference, Pittsburgh, PA, May 19-23, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784482353.052>
146. *Qiu M.* and **Ostfeld A.** (2020). "Dynamic clustering for water distribution system water quality management." EWRI Conference, Henderson, NV, May 17-21, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784482971.031>
147. *Babbar-Sebens*, Qiu M, and **Ostfeld A.** (2021). "Design and operation of agricultural water distribution systems as hard and soft climate change adaptation strategy." EWRI Conference, Milwaukee, WI, June 7-11, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784483466.100>
148. *Zeidan M.* and **Ostfeld A.** (2021). "Inducing transient waves interferences for imitating pressure signature in water distribution systems." EWRI Conference, Milwaukee, WI, June 7-11, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784483466.085>
149. *Zeidan M.* and **Ostfeld A.** (2021). "Employing transient wall shear stress for biofilm separation in water distribution systems." EWRI Conference, Milwaukee, WI, June 7-11, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784483466.086>
150. *Kadinski L.* and **Ostfeld A.** (2021). "Considering COVID-19 pandemic reaction and response analogies in an agent based modelling framework for water distribution system contamination response." EWRI Conference, Milwaukee, WI, June 7-11, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784483466.087>
151. *Kadinski L.* Salcedo C., Lee S., Boccelli D. L., and **Ostfeld A.** (2021). "Using graph theory for determining grab sampling location in real time upon a contamination detection in water distribution system." EWRI Conference, Milwaukee, WI, June 7-11, USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784483466.090>
152. Abhijith G. R. and **Ostfeld A.** (2022). "EPANET-C - An umbrella simulation tool for water distribution system quality analysis." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.092>
153. Abhijith G. R. and **Ostfeld A.** (2022). "Appraisal of the position of water distribution systems as a PFAS exposure pathway." EWRI Conference, Atlanta, GA, June 5-8, USA

<https://ascelibrary.org/doi/abs/10.1061/9780784484258.089>

154. *Pankaj B. S., G Jaykrishnan, and Ostfeld A.* (2022). "Robust multi-objective optimization of water distribution systems." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.099>
155. *Pankaj B. S., G Jaykrishnan, and Ostfeld A.* (2022). "Optimizing water quality treatment levels for water distribution systems under mixing uncertainty at junctions." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/28ASCE29WR.1943-5452.0001544>
156. *Kadinski L., Berglund E., and Ostfeld A.* (2022). "A socio-technological framework for optimizing water utility strategies and resilience to pandemic changes and contamination events." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.085>
157. *Kadinski L., Schuster J., Abhijith G. R., Hao C., Li P., Ernst M., and Ostfeld A.* (2022). "Establishing an experimental and simulation interface for online monitoring and modeling of bacterial growth in water distribution systems." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.105>
158. *Schuster J., Kadinski L., Hao C., Abhijith G. R., Li P., Ostfeld A., and Ernst M.* (2022). "Real-time monitoring and controlling of water quality in water distribution networks based on flow cytometry and fluorescence spectroscopy." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.108>
159. *Hao C., Schuster J., Kadinski L., Abhijith G. R., Ernst M., Ostfeld A., and Li P.* (2022). "Optimal control of chlorine concentration in water distribution system." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.107>
160. *Zeidan M. and Ostfeld A.* (2022). "Hydraulic ram pump application in urban water distribution systems." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.095>
161. *Zeidan M. and Ostfeld A.* (2022). "Hydraulic transient assault capabilities in water distribution systems." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.096>
162. *Hayelom A. and Ostfeld A.* (2022). "Utilization of network subsystems for designing a level-1 redundant water distribution network." EWRI Conference, Atlanta, GA, June 5-8, USA
<https://ascelibrary.org/doi/abs/10.1061/9780784484258.103>
163. *Pecci F., Stoianov I., and Ostfeld A.* (2022). "Optimal design-for-control of chlorine booster systems in water networks via convex optimization." European Control Conference (ecc22), 12-15 July 2022, London, UK.

<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9838063>

164. *Boindala S. P., G Jaykrishnan, and Ostfeld A.* (2022). "Optimization of reservoir treatment levels considering uncertainty in mixing at cross junctions in water distribution systems using Info-gap decision theory." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/11SZX-tUROmpnXm2mg3y3jiJm2QqffKGg/view>
165. *Pecci F., Stoianov I., and Ostfeld A.* (2022). "Optimal design-for-control of water distribution networks via convex relaxation." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1IC5senrSQ2p3W-UXDoYlcdqT9yGuzzCj/view>
166. *Kadinski L., Vizanko B., Berglund E., and Ostfeld A.* (2022). "Utilizing machine learning in an agent-based modelling framework to optimize response to contamination events in water networks during a global pandemic." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1UzhH6lKX6y7ffIXb1g8n8OQQApVYmELR/view>
167. *Boindala S. P. and Ostfeld A.* (2022). "Multiobjective optimization of water distribution system under uncertainty using robust optimization." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1G5dD1xh0Hfiv-4ePdfVydDVI85ooH-3e/view>
168. *Zeidan M. and Ostfeld A.* (2022). "Unsteady friction modeling technique for Lagrangian approaches in transient simulations." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
https://drive.google.com/file/d/1tWXDADKHoJPgQ-CRjFU8YaxVwAASl_Wa/view
169. *Kadinski L., Schuster J., Abhijith G. R., Hao C., Grieb A., Pu L., Ernst M., and Ostfeld A.* (2022). "Machine learning methodologies to predict possible water quality anomalies as a support tool for online monitoring of organic parameters." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1DIUcpBTWu48zsRefBCoQiVeJJXVowgTx/view>
170. *Salcedo C. A., Ostfeld A., and Boccelli D. L.* (2022). "Optimal location of multiple confirmatory sampling locations in water supply networks in real-time using information theory." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1j4LEcmq4Mp2DI2dTykKZC0StiKCmKlyF/view>
171. *Vizanko B., Kadinski L., Ostfeld A., Berglund E., and Cummings C. L.* (2022). "Coupling agent-based modeling with water distribution system models to simulate social distancing and water infrastructure performance during COVID-19." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.
<https://drive.google.com/file/d/1kZHjt9Y6CkqHa02IXNSVwHfBdDAhm67O/view>
172. *Shmaya T., Housh M., Pecci F., Baker K., Kasprzyk J. and Ostfeld A.* (2023). "Conjunctive optimal operation of power and water networks." EWRI Conference, Henderson Nevada, May 21-24 USA.

<https://ascelibrary.org/doi/10.1061/9780784484852.081>

173. Shmaya T. and **Ostfeld A.** (2023). "A graph-theory based PRV placement algorithm for reducing water age in water distribution systems." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/10.1061/9780784484852.076>
174. Perelman G. and **Ostfeld A.** (2023). "What's next in water distribution systems management?" EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.098>
175. Perelman G. and **Ostfeld A.** (2023). "Optimal operation of water distribution systems under uncertainty." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/10.1061/9780784484852.089>
176. Abhijith G., Steffelbauer D., and **Ostfeld A.** (2023). "Towards digital twins for emerging contaminants in water distribution systems." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.096>
177. Abhijith G. and **Ostfeld A.** (2023). "Inferring the stochasticity associated with modeling the biological stability of drinking water within distribution networks." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.086>
178. Abhijith G., Salomons E., and **Ostfeld A.** (2023). "Enhancing the reliability of a contamination detection sensors network in water distribution systems during a cyber-attack." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/10.1061/9780784484852.001>
179. Boindala S. P., Jayakrishnan G., and **Ostfeld A.** (2023). "Optimal booster chlorination scheduling in WDS under uncertainty: a robust counterpart approach." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.088>
180. Daniel I., Kadinski L., Abhijith G., **Ostfeld A.**, and Cominola A. (2023). "A machine learning-based surrogate model for coupled hydraulic and water quality simulation in water distribution networks." EWRI Conference, Henderson Nevada, May 21-24 USA (**2nd best student paper of the conference**).
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.077>
181. Sitzenfrei R., Qiu M., **Ostfeld A.**, Savic D., and Kapelan Z. (2023). "A hybrid approach for considering topography in graph-based optimization of water distribution networks." EWRI Conference, Henderson Nevada, May 21-24 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784484852.078>
182. Berglund E., Vizanko B., Kadinski L., and **Ostfeld A.** (2023). "Coupling machine learning and agent-based modeling to characterize contamination sources in water distribution systems for changing demand regimes." EWRI Conference, Henderson Nevada, May 21-24 USA.

<https://doi.org/10.1061/9780784484852.082>

183. *Boindala S. P.*, Yousefian R., Duchesne S. and **Ostfeld A.** (2024). "Robust booster disinfection scheduling using incomplete mixing water quality model (EPANET-IMX)." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA.
<https://ascelibrary.org/doi/abs/10.1061/9780784485477.122>
184. *Balireddy R.*, Kuiry S. N., Chakravorty A., Abhijith G. R., and **Ostfeld A.** (2024). "Calculation of water age using electrical simulators." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA
<https://doi.org/10.1061/9780784485477.114>
185. *Shmaya T.*, *Perelman G.*, and **Ostfeld A.** (2024). "Conjunctive optimal design of water and power networks." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA
<https://doi.org/10.1061/9780784484852.081>
186. *Shmaya T.*, Pecci F, Housh M., and **Ostfeld A.** (2024). "OWPF solutions using polyhedral and conic relaxations." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA.
<https://doi.org/10.1061/9780784485477.121>
187. *Vizanko B.*, *Shmaya T.*, *Boindala S. P.*, **Ostfeld A.**, and Berglund E. Z. (2024). "Operating water distribution systems for equitable access to clean water." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA.
<https://ascelibrary.org/doi/10.1061/9780784485477.109>
188. Pesantez J. E., *Salazar A. T.*, Pasha F., and **Ostfeld A.** (2024). "Clustering analysis in water distribution systems for enhanced metering infrastructure retrofitting." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA.
<https://doi.org/10.1061/9780784485477.115>
189. *Perelman G.* and **Ostfeld A.** (2024). "Integrated optimal operation of water and power distribution systems under uncertainty: an adjustable robust optimization approach." EWRI Conference, Milwaukee, Wisconsin, USA May 19-22 USA.
<https://ascelibrary.org/doi/10.1061/9780784485477.120>
190. *Wéber R.*, Tuyakbayev T., Abhijith G.R., Salomons E., Hős C. and **Ostfeld A.** (2024). "Backup design optimization for water distribution networks." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/104>
191. *Boindala S.P.*, Abhijith G.R., Ihjas K. and **Ostfeld A.** (2024). "Towards optimal scheduling of intermittent water supply system incorporating consumer behavior." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/168>
192. *Perelman G.* and **Ostfeld A.** (2024). "Data-enabled predictive control for optimal pressure management." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/5>

193. Zeidan M., Yondonjamts D., Nemeth M., Abhijith G.R., Wéber R. and **Ostfeld A.** (2024). "Transient flow dynamics in tesla valve configurations: insights from computational fluid dynamics simulations." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/195>

194. Shmaya T. and **Ostfeld A.** (2024). "Inclusion of water age in conjunctive optimal operation of water and power grids." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/196>

195. Vizanko B., Shmaya T., Boindala S.P., **Ostfeld A.**, and Berglund E. (2024). "Operating water distribution systems for equitable access to clean water." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/194>

196. Perelman G., Romano Y. and **Ostfeld A.** (2024). "Optimizing time series models for water demand forecasting." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/9>

197. Daniel I., Abhijith G.R., Kutz J.N., **Ostfeld A.**, and Cominola A. (2024). "Physics-informed machine learning for universal surrogate modelling of water quality parameters in water distribution networks." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/205>

198. Korder K., Salomons E., **Ostfeld A.**, and Li P. "Minimization of water age in water distribution systems under uncertain demand." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/17>

199. Perelman G., Shmaya T., Vrachimis S., Panteli M., Eliades D.G. and **Ostfeld A.** (2024). "Cooperative operational optimization of water and power systems under extreme conditions." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/14>

200. Wéber R., Sándor L., Horváth A., Barakka G., Abhijith G.R. and **Ostfeld A.** (2024). "Predicting contamination spreading in water distribution networks." WDSA CCWI 2024 Conference, Ferrara, Italy, July 1-4 Italy.
<https://www.mdpi.com/2673-4591/69/1/96>

201. Boindala S. P., Abhijith G.R., Ihjas K., and **Ostfeld A.** (2024). "Ensuring equitable water access in intermittent water supply systems through operation management." Water and Sustainable Development - 2024 (ICWSD:2024), Nagpur, India, November 8-9 India.

202. Salazar A. T., Perlman G., **Ostfeld A.**, and Pesantez J. E. (2025). "Clustering and forecasting model for water distribution systems analysis." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.077>

203. Vizanko B., Komarovsky S., Zauscher E., **Ostfeld A.**, and Berglund E. (2025). "Equitable access to affordable and clean water in pre-pandemic, pandemic, and post-pandemic modes of work." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.056>

204. Shamaly R., Abhijith G. R., and **Ostfeld A.** (2025). "From traditional simulation to machine learning: a comparison of EPANET and physics-informed neural networks for water quality modeling." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.081>

205. Goldshtein I., Perelman G., Schuster A., and **Ostfeld A.** (2025). "Large language models for water distribution systems modeling and decision-making." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.086>

206. Perelman G., Navon A., Housh M, and **Ostfeld A.** (2025). "Adjustable robust optimization for integrated power and water systems under uncertainty." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.090>

207. Boindala S. P., Perelman G. and **Ostfeld A.** (2025). "Robust sample average approximation for optimal chlorine disinfection under multiple uncertainties." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.093>

208. Korder K., Salomons E., **Ostfeld A.**, and Li P. (2025). "Optimal sensor placement and PRV localization under demand uncertainty." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.094>

209. Chan Y. F., Dziedzic R., Perelman G. and **Ostfeld A.** (2025). "Real-time pumping optimization of combined sewer overflow systems." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.069>

210. Shamaly R., Abhijith G. R., and **Ostfeld A.** (2025). "Streamlined models for predicting microbiological quality dynamics in distribution systems." EWRI Conference, Anchorage, Alaska, USA May 18-21 USA.
<https://doi.org/10.1061/9780784486184.098>

199. Boindala S. P., Abhijith G. R., Ijhas K., and **Ostfeld A.** (2025). "Equitable water access in systems with intermittent supply." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.

<https://doi.org/10.15131/shef.data.29920883.v1>

200. Bansal M., Salomons E., Abhijith G. R., and **Ostfeld A.** (2025). "Route delineation of water and irrigation networks using evolutionary optimization." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29921180.v1>
201. Penn R., Perelman G., and **Ostfeld A.** (2025). "Hybrid data-enabled predictive control for optimal operation of urban drainage systems." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29921174.v1>
202. Boindala S. P., Abhijith G. R., Aumeie B. M., Steger A., Salomons E., Roy Elkayam R., Drewes J. E., and **Ostfeld A.** (2025). "Challenges in mathematical modelling of anti-microbial resistance fate in water systems." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920910.v1>
203. Boindala S. P. , Perelman G., and **Ostfeld A.** (2025). "Optimal booster disinfection scheduling, considering demands and disinfection reaction rate uncertainty." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920868.v1>
204. **Perelman G.**, Housh M., Navon A., and Ostfeld A. (2025). "Adjustable robust optimization for integrated power and water systems via equality constraint elimination." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29921168.v1>
205. Wéber R., Sándor S., Horváth A., Kotay S., Mathers A., Abhijith G. R., Poretsky R., Hős C. and **Ostfeld A.** (2025). "Predicting biological activity in a p-trap using computational fluid dynamics." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920937.v1>
206. Boindala S. P., Yousefian R., Robles J., Duchesne S., and **Ostfeld A.** (2025). "Optimizing booster chlorination in water distribution networks under incomplete mixing conditions." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920871.v1>
207. **Shamaly R.**, Abhijith G. R., and **Ostfeld A.** (2025). "From numerical models to physics informed neural networks: advancing water quality predictions in distribution systems." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920877.v1>
208. **Hős C.**, Antal D., **Ostfeld A.**, and Abhijith G. R. (2025). "On the use of entropy for designing safe water distribution systems in the case of multiple sources." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.

<https://doi.org/10.15131/shef.data.29921255.v1>

209. Wéber R., Sándor L., Abhijith G. R., Boindala S. P., and **Ostfeld A.** (2025). "CFD simulations of incomplete mixing at pipe junctions: junction angle influence and predictive modelling." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29920880.v1>
210. Narwariya V. S., Cominola A., **Ostfeld A.**, and Abhijith G. R. (2025). "Machine learning-based surrogate modeling of water quality dynamics in a 'universal' distribution pipe." WDSA CCWI 2025 Conference, Sheffield, September 1-3 UK.
<https://doi.org/10.15131/shef.data.29921096.v1>

Participation in organizing conferences

1. Environmental Water Research Institute, ASCE, First Symposium on Environmental and Water Resources Systems Analysis, Roanoke, Virginia, USA, May 2002, Session proposer and session moderator of: "Reliability Integration in Optimal Planning, Design, and Operation of Water Networks", session moderator of: "Decision Support Systems for Water Supply Management Strategies".
2. The IWA 9th International Specialized Conference on Watershed and River Basin Management, IWA, Edinburgh, Scotland, September 2002, Member of the organizing and program committee, session moderator of: "Water Supply Sources".
3. ASCE-EWRI (Environmental Water Research Institute) Annual Conference, Philadelphia, USA, June 2003, Member of the organizing and program committee of Water Distribution Systems Analysis, and moderator of four sessions.
4. CCWI03 (Computing and Control for the Water Industry & WATERSAVE Network, London, UK), September 2003, Member of the Scientific and Advisory Committee, and session chair of: "Network optimization I", and of "Water Economics."
5. IWA 4th World Water Congress, 20th – 24th September 2004, Marrakech, Morocco, workshop organizer and chair on "River Basin Management Using Machine Learning", and chair of sessions on "Systems for Circumstances: Modeling and Decision Support I & II."
6. The first International Mediterranean Modeling Multi-conference (13M), Genova, Italy, October, 2004, Member of the International Program Committee.
7. Decision Support in the Water Industry Under Conditions of Uncertainty, ESPRC Research Network Seminar ACTUI2004, 24th – 25th March 2004, University of Exeter, UK, Chair of Part Three: "General Decision Support".

8. ASCE-EWRI (Environmental Water Research Institute) Annual Conference, Salt Lake City, Utah, USA, June 2004, Member of the organizing and program committee of Water Distribution Systems Analysis, and moderator of: "Transient Analysis and Leak Detection".
9. International Conference on Hydro-Science and Engineering, Cairns, Australia, May – June 2004, member of the organizing committee for sessions on "Current Problems of Water Distribution Systems".
10. CCWI05 [Computer and Control in the Water Industry, Exeter, England], September 2005, member of the International Technical Committee, and chair of session on: "Steady-state and Transient Analysis, Modeling and Simulation."
11. 1st Open International Conference on Modeling & Simulation June 12th – 15th 2005 – ISIMA / Blaise Pascal University – France, Member of the International Program Committee.
12. The Annual Operations Research Society of Israel (ORSIS) Conference, May 2004, session organizer and session chair of: "Application of Operation Research to Natural Resources Systems".
13. The IWA 10th International Specialized Conference on Watershed and River Basin Management, IWA, Calgary, Canada, September 2005, Member of the organizing and program committee, and moderator of two sessions: "Monitoring and Modelling" and "Pollution Sources and Control/Water Resources Management".
14. The 8th Annual Water Distribution System Analysis Symposium, University of Cincinnati, Cincinnati, Ohio, USA, August 2006, Member of the international program committee.
15. Challenges in Water Research for Israel and the Region, Dedication of the Grand Water Research Institute Building, May 2005, Member of the Conference Organizing and of the Poster Session and Competition Committees.
16. Watermatex 2007: May 2007, Washington DC, USA: IWA Specialist Groups Conference on Systems Analysis and Integrated Assessment and on Watershed and River Basin Management, joint initiative with Prof. Peter Vanrolleghem, Chair of the IWA specialist group on Systems Analysis and Integrated Assessment.
17. US70, a National Symposium on Methods and Models for Decision Making in Water Resources Systems, the Grand Water Research Institute, November 2006, symposia organizer.
18. Waters in protected areas, Dubrovnik, Croatia, 2007, Member of the scientific committee.

19. The 9th Annual Water Distribution System Analysis Symposium, EWRI-ASCE Conference, Tampa, Florida, USA, May 2007, Member of the program committee.
20. Member of the Invited Scientific Committee for Water Management Challenges in Global Change CCWI2007 and SUWM2007 Conference, De Montfort University, Leicester, United Kingdom, and chair of sessions on Water Quality and Treatment, and on Hydraulic Modelling of Steady State and Transients.
21. International conference on water distribution systems, Kruger National Park, South Africa 2008, Member of the conference International Advisory Committee.
22. International Water Research (IWA) 11th International River Basin and Watershed Management Special Conference, September 2008, Budapest, Hungary, Member of the Program Committee.
23. Track chair of the Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Honolulu, Hawaii, USA, May 2008.
24. Track chair of the 11th Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Kansas City, Missouri, USA, May 2009.
25. CCWI09 [Computer and Control in the Water Industry, Sheffield, England], September 2009, member of the Scientific Advisory Committee.
26. The 12th Annual Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Tucson, Arizona, USA, September 2010, Member of the program and organizing committee.
27. Track chair of the Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Providence, RI, USA, May 2010.
28. Member of session's organization for Environmental Cyber-Sensing, EWRI-ASCE Conference, Providence, RI, USA, May 2010.
29. Track chair of the 13th Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Palm Springs, California, USA, May 2011.
30. Member of the WATERMATEX2011 International Scientific Committee for the WATERMATEX symposium, San Sebastian, Spain, June 2011.
31. CCWI11 [Computer and Control in the Water Industry, Exeter, England], September 2011, member of the International Scientific Committee, and moderator of: "Systems Modeling, Optimization and Decision Support."
32. International Water Research (IWA) 12th International River Basin and Watershed Management Special Conference, September 2011, Recife, Brazil, Member of the Program Committee.

33. The first annual Technion Environmental, Water, and Agricultural Engineering departmental symposium on Water Resources, Hydrology, and Marine Systems, January 2012 (with Uri Shavit and Carlos Dozoretz).
34. Track chair of the Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Albuquerque, NM, USA, May 2012.
35. Member of session's organization for Environmental Cyber-Sensing, EWRI-ASCE Conference, Albuquerque, NM, USA, May 2012.
36. Program Co-Chair jointly with Zheng Wu, 2013 Cloud Technology Symposium, EWRI-ASCE Conference, Cincinnati, Ohio, USA, May 2013.
37. Track chair (together with Morris Maslia and Kelly Brumbelow) of the 15th Water Distribution Systems Analysis Symposium, EWRI-ASCE Conference, Cincinnati, Ohio, USA, May 2013.
38. CCWI13 [Computer and Control in the Water Industry, Perugia, Italy], September 2013, member of the International Scientific Committee.
39. 1st Workshop on Computational Intelligence and Critical Infrastructures (CICS 2013), as part of the AIAI2013 9th International Conference on Artificial Intelligence Applications and Innovations, Cyprus, September 2013, member of the program committee.
40. The IWA 12th International Specialized Conference on Watershed and River Basin Management, IWA, San-Francisco, USA, September 2014, member of the program committee.
41. Member of the international scientific committee of the 16th Water Distribution Systems Analysis Conference, Bari, Italy, July 2014.
42. Member of the scientific program committee of the 9th IWA Symposium on Systems Analysis and Integrated Assessment, Gold Coast, Australia, 2015.
43. CCWI15 [Computer and Control in the Water Industry, Leicester, UK], September 2015, member of the International Scientific Committee.
44. 43rd Annual Conference on Science and the Environment, Hebrew University of Jerusalem, 2015, member of the program and scientific committee.
45. Watermatex 2015 [9th IWA Symposium on Systems Analysis and Integrated Assessment, Queensland, Australia, June 2015], member of the Scientific Committee.
46. Member of the organizing committee of the 17th Water Distribution Systems Analysis Conference, Cartagena, Colombia, July 2016.
47. Member of the organizing committee of the International Conference on Oil, Gas and Petrochemistry (Petrochemistry-2016,

<http://petrochemistry.madridge.com/themes.php>), Dubai, United Arab Emirates (UAE), December, 2016.

48. Member of the advisory committee of IWPE-2017 (Wuhan) conference.
49. Member of the program committee of HASE 2017, Singapore, January 2017.
50. CCWI17 [Computer and Control in the Water Industry, Sheffield, England], September 2017, member of the Scientific Advisory Committee.
51. 14th International Water Association Specialist Conference on Watershed and River Basin Management, Skukuza Camp, Kruger National Park, October 2017, member of the Scientific and Program Committee.
52. Member of the organizing committee of the International Conference on Oil, Gas and Petrochemistry (Petrochemistry-2017, October 23-25, 2017 Abu Dhabi, UAE, <http://scientificfederation.com/petrochemistry-2017/>).
53. WDSA/CCWI18 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Ontario, Canada, July 2018, member of the International Scientific Committee.
54. EPANET Summit, Reston VA, April 2018, member of the Organizing Committee.
55. Member of the international scientific committee of the 38th World Congress of IAHR (International Association for Hydro-Environment Engineering and Research), Panama, 2019.
56. Member of the organizing committee of the Cyber-Security of Water Distribution Systems: Policy Implications – Stakeholders Workshop, Grand Water Research Institute, Technion, Haifa, Israel, March, 2019.
57. Member of the 15th IWA Specialist Conference on Water Basin and River Management, Vietnam, February 2020.
58. WDSA/CCWI20 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Beijing, China, September 2020, member of the International Scientific Committee.
59. Member of the Organizing Committee of the 3rd Edition of World Congress on Geology & Earth Science (Geoscience-2020)], Rome, Italy September 2020.
60. Session chair of: "Advances in water distribution system water quality modeling 1", and of "Advances in water distribution system water quality modeling 2" at EWRI Annual Conference, Milwaukee, WI, June 7-11, USA.
61. WDSA/CCWI22 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Valencia, Spain July 2022, member of the Steering and Scientific Committee.

62. WDSA/CCWI22 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Valencia, Spain July 2022, sessions moderator.
63. CCWI23 [Computer and Control in the Water Industry], Leicester, UK, September 2023, member of the Scientific Committee.
64. AIMS Rwanda International Conference on Machine Learning, Optimization and Applications, Kigali, Rwanda, July 2023, member of the Scientific Committee.
65. WDSA/CCWI24 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Ferrara, Italy, July 2024, member of the Scientific Committee.
66. The 8th International Technical Conference on Frontiers of Hydraulic and Civil Engineering Technology (HCET 2023), Wuhan, China, September 23, member of the HCET Technical Program Committee
67. The 14th IWA Specialized Conference on the Design, Operation and Economics of Large Wastewater Treatment Plants, 8-12 September 2024, Budapest, Hungary, member of the Scientific Committee.
68. EWRI 2024 [Advances in water distribution system water quality modeling II], Milwaukee, USA, May 2024, session moderator.
69. EWRI 2024 [Water resources modeling, management, and policy-IV], Milwaukee, USA, May 2024, session moderator.
70. CCWI25 [Computer and Control in the Water Industry], Sheffield, UK, September 2025, member of the Scientific Committee.
71. EWRI 2025 [G.V. Loganathan memorial track on reservoir systems operation], Anchorage, USA, May 2025, session moderator.
72. EWRI 2025 [Technology and innovation for resiliency and adaptation], Anchorage, USA, May 2025, session moderator.
73. EWRI 2025 [Water distribution system data ,analytics, system operation, and control - II], Anchorage, USA, May 2025, session moderator.
74. CCWI 2025 [Intermittent water supply systems], Sheffield, UK, September 2025, session moderator.
75. CCWI 2025 [Data driven modelling for water distribution systems], Sheffield, UK, September 2025, session moderator.
76. ASCE 2027 Technical Committee member (representing the Planning and Management council)

SPECIAL PROFESSIONAL ACTIVITIES

Ostfeld A., "Flood Reservoirs", a one-day course at the joint Israeli, Palestinian, and Jordanian, Regional Operational Hydrology Training project, Ramala, March 2000.

October 2014 - Member of the User Advisory Group (UAG) for the FP7 SAFEWATER project on detection and mitigation of CBRN events in drinking water.

February 2017 - Advisor for the Center for Infrastructure Modeling and Management
<http://ncimm.org/AboutUs.html>

Conference presentations/seminars with abstract only

(Speakers underlined, graduate students/research assistants - in italics)

Shlomi S., **Ostfeld A.**, Rubin H., and Shoemaker C. A. (2003). "A polygonal cells approach for optimal selection of monitoring wells", AGU Fall 2004 Meeting.

Shlomi S., **Ostfeld A.**, Rubin H., and Shoemaker C. A. (2004). "Optimal selection of pumping wells for groundwater contamination monitoring", the Annual Operations Research Society of Israel (ORSIS) Conference (abstract in Hebrew).

Preis A. and **Ostfeld A.** (2004). "A machine learning model for quantity - quality flow predictions in watersheds", the Annual Operations Research Society of Israel (ORSIS) Conference (abstract in Hebrew).

Rom M., Kronaveter L., and **Ostfeld A.** (2005). "Use of data driven modeling for Blue Algae predictions in Lake Kinneret". Early project results presentation at a one day colloquium on "Causes and Processes Involved at the Instability of the Phytoplankton Population at Lake Kinneret", Nof Ginosar, Lake Kinneret, Israel.

Markel D., Evans B., Goldwasser K., **Ostfeld A.**, Friedler E., and Somma F. (2007). "Using a GIS-based load transfer model (AVGWL) for improving management of Lake Kinneret watershed, Israel", EGU General Assembly 2007, Geophysical Research Abstracts, 9, 10939.

Housh M., **Ostfeld A.**, Shamir U. (2008). "Optimal multi-year management of a water supply system under uncertainty", the Annual Operations Research Society of Israel (ORSIS) Conference (abstract in Hebrew).

Kronaveter L., Rom M., and **Ostfeld A.** (2008). "A neural network learning system for prediction of toxic Cyanobacteria in Lake Kinneret", the Annual Operations Research Society of Israel (ORSIS) Conference (abstract in Hebrew).

Perelman L. and **Ostfeld A.** (2010). "Sampling of rare events in large water supply systems for systems security", 12th Annual International Symposium on Water Distribution Systems Analysis, Tucson, Arizona, USA, published on CD.

Housh M., **Ostfeld A.**, Shamir U (2011). "Optimal multi-year management of a water supply system under uncertainty: robust counterpart approach", the Annual Operations Research Society of Israel (ORSIS) Conference (abstract in Hebrew).

Arad J., Perelman L., and Ostfeld A (2011). "Water security event detection in water distribution systems through water quality indicators", the 19th International Conference of Environmental Indicators, Haifa, Technion.

Housh M., **Ostfeld A.**, and Shamir U. (2011). "Optimal management of a water supply system under uncertainty: stochastic approach", EWRI ASCE Conference, Palm Springs, California, USA.

Housh M., **Ostfeld A.**, and Shamir U. (2011). "Optimal management of a water supply system under uncertainty: the Info-Gap approach", EWRI ASCE Conference, Palm Springs, California, USA.

Housh M., **Ostfeld A.**, and Shamir U. (2011). "Limited multi-stage programming: a case study for multiyear management of water supply system", EWRI ASCE Conference, Palm Springs, California, USA.

Ostfeld A. (2011). "Decomposition for optimal reliable design and operation of water distribution systems", EWRI ASCE Conference, Palm Springs, California, USA.

Ostfeld A. (2011). "Drinking water distribution systems security modeling and challenges", EWRI ASCE Conference, Palm Springs, California, USA.

Zimmer A., Minsker B., Schmidt A., and **Ostfeld A.** (2011). "Hydraulic modeling and evolutionary optimization for enhanced real-time decision support of combined sewer overflows." AGU Fall 2011 Meeting.

Zimmer A., Minsker B., Schmidt A., and **Ostfeld A.** (2013). "Computationally implicit sewer hydraulics for real-time decision support." EWRI Conference, 19-23 May 2013, Cincinnati, Ohio, USA.

Shamir U., Housh M., and **Ostfeld A.** (2014). "Management of water systems under hydrological uncertainty." Dooge Nash International Symposium, Dublin, Ireland.

Oliker N. and **Ostfeld A.** (2014). "Water quality event detection from multiple sensors." EWRI Conference, 1-5 June 2014, Portland, Oregon, USA.

Ostfeld A. (2014). "Management of water distribution systems." Environmental & Hydraulics/Hydrology Lyles School of Civil Engineering Seminar, August 25, 2014 Purdue University, West Lafayette, USA.

Ostfeld A. (2014). "Management of water distribution systems." Zachry Department of Civil Engineering Seminar, August 27, 2014 Texas A&M University, College Station, USA.

Zimmer A., **Ostfeld A.**, Schmidt A., and Minsker B. (2014). "Improving computational efficiency of model predictive control genetic algorithms for real-time decision support." AGU Fall Meeting, 15-19 December 2014, San Francisco, USA.

Salomons E. and **Ostfeld A.** (2015). "Multi-objective optimal disinfection for water distribution systems following a contamination event." EWRI Conference, 17-21 May 2015, Austin, Texas, USA.

Rasekh A., Sankary N., Wu R., Oliker N., **Ostfeld A.**, Banks M. K., and Porterfield M. (2015). "Use of computer modeling for operation of inline mobile sensors in water distribution systems." EWRI Conference, 17-21 May 2015, Austin, Texas, USA.

Cofalla C., Döring R., Nüßer L., Steffens S., Thomas-Benjamin Seiler T.-B., Oliker N., Salomons E., **Ostfeld A.**, Hollert H., and Schüttrumpf H. (2015). "Contaminants in urban water cycle detection by hydrotoxicological experiments." 9th International SedNet conference, 23-26 September 2015, Kraków, Poland.

Galelli S., Taormina R., Tippenhauer N., Salomons E., and **Ostfeld A.** (2016). "Vulnerability of water supply systems to cyber-physical attacks." Session HS5.6 Water Resources Management and Policy in a Changing World, Geophysical Research Abstracts Vol. 18, EGU2016, 17–22 April 2016, Vienna, Austria.

Wu R., Rasekh A., Cheng L., Aghashahi M., Vaddiraju S., **Ostfeld A.**, and M. Katherine Banks K. M. (2016). "Development of an inline mobile sensor for monitoring trace contaminant in water distribution system." EWRI Conference, 22-26 May 2016, West Palm Beach, Florida, USA.

Ostfeld A. (2016). "Management of water distribution systems: overview and challenges." KWR Watercycle Research Institute, 13 September 2016, Nieuwegein, Netherlands (invited seminar presentation).

Nuesser L., Salomons E., Skulovich O., Sara Hartmann S., Ganal C., Cofalla C., Schuettrumpf H., **Ostfeld A.**, Hollert H. and Seiler T.-B. (2016). "Sensitivity of zebrafish larvae behavior in the context of on-line contamination event detection in water distribution systems." 7th SETAC World Congress/SETAC North America 37th Annual Meeting, Orlando, FL.

Taormina R., Galelli S., Tippenhauer N. O., Salomons E., and **Ostfeld A.** (2017). "EpanetCPA: a MATLAB toolbox for simulating cyber-physical attacks on water distribution systems." EWRI Conference, 21-25 May 2017, Sacramento, California, USA.

Nuesser, L., Johann, S., Kreutzer, A., Salomons, E., Skulovich, O., Hartmann, S., Ganal, C., Cofalla, C., Schuettrumpf, H., **Ostfeld A.**, Jørgensen, K., Kõuts, T., Hollert H. and Seiler, T.B. (2017). "Zebrafish larvae behavior as a biological early warning system for aquatic systems." Proceedings, SETAC Europe Annual Meeting 2017, Brussels.

Nuesser L., Johann S., Kreutzer A., Salomons E., Skulovich O., **Ostfeld A.**, Jørgensen K., Kõuts T. A., Hollert H., and Seiler T-B. (2017). "Effekte verschiedener Modell Substanzen auf das Schwimmverhalten von Embryonen des Zebrabärblings." 22. Jahrestagung SETAC GLB 2017, Neustadt an der Weinstraße, Germany.

Nuesser L., Steffens S., Seiler T., Ruchter N., Schumann M., Doering R., Bruell C., Schuettrumpf H., **Ostfeld A.**, Salomons E., Hollert H., and Brinkmann, M. (2018) "A versatile and low-cost open source pipetting robot for automation of toxicological and

ecotoxicological bioassays." 28th SETAC Europe Annual Meeting 2018, Rome, Italy.

Qiu M., Housh M., and **Ostfeld A.** (2019). "WDSLlib 1.1: A demand- and pressure-dependent simulation testbed for water distribution systems." CCWI 2019, the 17th Computer and Control for the Water Industry Conference, 1 - 4 September 2019, University of Exeter, UK.

Qiu M., Housh M., and **Ostfeld A.** (2019). "Distributed micro-storage tanks for pressure management in water distribution system." CCWI 2019, the 17th Computer and Control for the Water Industry Conference, 1 - 4 September 2019, University of Exeter, UK.

Qiu M. and **Ostfeld A.** (2019). "Dynamic clustering for real-time water distribution systems management." CCWI 2019, the 17th Computer and Control for the Water Industry Conference, 1 - 4 September 2019, University of Exeter, UK.

Zeidan M. and **Ostfeld A.** (2019). "Transient flow for water distribution system topology disclosure." CCWI 2019, the 17th Computer and Control for the Water Industry Conference, 1 - 4 September 2019, University of Exeter, UK.

Price E. and **Ostfeld A.** (2019). "Water distribution systems dynamic clustering using graph theory." CCWI 2019, the 17th Computer and Control for the Water Industry Conference, 1 - 4 September 2019, University of Exeter, UK.

Salomons S. and **Ostfeld A.** (2019). "A coupled K-means heuristic approach for single target signature identifications." Ministry of Science & Technology 2019 Workshop on the projects: "Resolving the "black box" of larval fish abundance and its sensitivity to climate change", and "Using a novel acoustic broadband echo sounder for fish identification and biomass assessment to optimize fisheries management in Lake Kinneret", 22 September 2019, Tel-Aviv University.

Taormina R., Galelli S., Salomons E., and **Ostfeld A.** (2020). "Simulating cyber-physical attacks altering water quality in water distribution systems." EWRI Conference, Henderson, NV, May 17-21, USA.

Babbar-Sebens M. and **Ostfeld A.** (2020). "Role of cyberinfrastructure for engaging multi-sectoral stakeholders in use-inspired and decision-relevant research on adaptation to climate change." AGU Fall Meeting, San Francisco, CA, December 7-11, iPoster <https://agu2020fallmeeting.agu.ipostersessions.com/default.aspx?s=B1-86-78-95-37-FE-CF-21-EE-D0-61-5D-88-F8-C1-DF&guestview=true>

Salcedo C., Lee S., Kadinski L., **Ostfeld A.**, and Boccelli D. L. (2021). "Improving contaminant spread estimation through the consideration of hydraulic uncertainty and identification of multiple confirmatory sampling locations." EWRI Conference, Milwaukee, WI, June 7-11, USA

Salcedo C., **Ostfeld A.**, and Boccelli D. (2022). "Incorporation of demand uncertainty in the optimal location of confirmatory sampling locations in contaminant spread forecasting algorithms." EWRI Conference, Atlanta, GA, June 5-8, USA

Abhijith G. R. and **Ostfeld A.** (2022). "Post-treatment PFAS contamination of drinking water." WDSA/CCWI22 [Water Distribution Systems Analysis/Computer and Control in the Water Industry], Valencia, Spain July 2022.

Amare R., Cunha M., Salomons E., **Ostfeld A.** (2022). "Improving multi-objective optimization method NSGA II of water distribution systems." WDSA/CCWI Joint Conference, Valencia, 18-22 July 2022 Spain.

Zeidan M. and **Ostfeld A.** (2023). "Laceration of pipeline inner walls using unsteady skin friction." EWRI Conference, Henderson Nevada, May 21-24 USA.

Zeidan M. and **Ostfeld A.** (2023). "Adopting the Tesla valve as a transient protection device." EWRI Conference, Henderson Nevada, May 21-24 USA.

Ormsbee L., Lingireddy S., Boulos P., Kamojala S., and **Ostfeld A.** (2023). "The history and legacy of Don J. Wood and KYPIPE." EWRI Conference, Henderson Nevada, May 21-24 USA.

Boindala S. P., Jayakrishnan G., and **Ostfeld A.** (2023). "Optimizing source treatment levels in water distribution systems under mixing uncertainty at cross junctions." EWRI Conference, Henderson Nevada, May 21-24 USA.

Zeidan M., Németh M., Wéber R., and **Ostfeld A.** (2023). "Assessing the efficacy of Tesla valves as transient protection devices in water distribution systems." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Shmaya T., Perelman G., and **Ostfeld A.** (2023). "Coupled systems design optimization – water and power networks." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Vizanko B., Kadinski L., Hailu A. H., Berglund E. Z., and **Ostfeld A.** (2023). "Coupling machine learning and agent-based modeling to manage contamination of water distribution systems under changing demands." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Abhijith G. R., Leonidou N., Dräger A., and **Ostfeld A.** (2023). "Exploring the cause-effects of quality fluctuations in drinking water distribution systems by applying systems biology approaches." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Abhijith G. R., Naidu M. N., Boindala S. P., Vasan A., and **Ostfeld A.** (2023). "Exploring the consumer behavior in water supply systems with uncertain and irregular intermittency." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Abhijith G. R., Daniel I., Cominola A., **Ostfeld A.** (2023). "Hybrid mechanistic and machine learning-based modeling approach for predicting quality fluctuations in drinking water distribution systems." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Amare M., Cunha M., Salomons E., and **Ostfeld A.** (2023). "Improving multi-objective optimization method NSGA II of water distribution systems." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Abhijith G. R. and **Ostfeld A.** (2023). "Introducing EPyT-C: An independent Python-based water quality modeling extension for EPANET." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Boindala S. P., Jaykrishnan G., and **Ostfeld A.** (2023). "Optimal booster chlorination injection in water distribution systems under uncertainty: a robust optimization approach." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Perelman G. and **Ostfeld A.** (2023). "Optimal operation of water distribution systems under uncertainty using adjustable robust optimization." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Wéber R., Sándor L., Abhijith G. R., and **Ostfeld A.** (2023). "Predicting chlorine distribution with computational fluid dynamics on a sample network." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Abhijith G. R. and **Ostfeld A.** (2023). "Redefined entropy index for water distribution systems analysis." CCWI 2023, the 19th Computer and Control for the Water Industry Conference, 4 - 7 September 2023, De Montfort University, Leicester, UK.

Levy M., Hadar I., Hartman A., Housh M., Ayalon O., Nir B., and **Ostfeld A.** (2023). "Muddy waters: design thinking for understanding the multi- organizational problem space of the water sector." REFSQ Conference, Mon 8 - Thu 11 April 2024 Winterthur, Switzerland.

Diao K., Abhijith G. R., Salomons E., **Ostfeld A.**, and Ulanicki B. (2025). "The e-Favor modeling approach for detecting water leakage in water distribution systems." EWRI Conference, Anchorage, Alaska, USA, May 18-21.

Perelman G. and **Ostfeld A.** (2025). "Data enabled predictive control for water systems optimal operation." EWRI Conference, Anchorage, Alaska, USA, May 18-21.

Perelman G. and **Ostfeld A.** (2025). "Equitable water access in intermittent water supply systems." EWRI Conference, Anchorage, Alaska, USA, May 18-21.

Korder K., Salomons E., **Ostfeld A.**, and Li. P. (2025). "Optimal operational planning under uncertain demand and flexible electricity tariffs." EWRI Conference, Anchorage, Alaska, USA, May 18-21.

Boindala S. P. and **Ostfeld A.**, and Li. P. (2026). "Distributionally robust data-enabled predictive control for optimal chlorine control in water distribution systems." EWRI Conference, Mobile, Alabama, USA, April 26-29 (to be presented).

Boindala S. P., Abhijith G. R., Ijhas K., and **Ostfeld A.**, and Li. P. (2026). "Rethinking Hydraulic Modelling in Intermittent Water Supply: Capturing the Infrastructure–Consumer Feedback Loop." EWRI Conference, Mobile, Alabama, USA, April 26-29 (to be presented).

Hosseini S. H. , Zolghadr-Asli B., Tenkanen H., Madani K., Matin M. A., Demir I., **Ostfeld A.**, Singh V. P., and Savic D. (2026). "Large language model-based multi-agent systems: the next frontier in digital water engineering." EGU General Assembly, Vienna, Austria, May 3-8 (to be presented).