

Ariamalar Selvakumar, Environmental Engineer in EPA's National Risk Management Research Laboratory

Water Systems Division

[Mailing Address](#)

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Areas of Expertise: I conduct research on green infrastructure and aging water infrastructure. Currently, I am monitoring the performance of permeable pavement in reducing the microorganism concentrations in stormwater runoff; and studying the seasonal effects on the performance of permeable pavement. Past research included state of the technology reports on rehabilitation of aging water infrastructure, conducting demonstrations of innovative technologies, and providing information to municipalities and developers. One demonstration resulted in a liner failure, leading the developer to remove the product from the market and reformulate it. Research has also informed municipalities, who have implemented the tested technologies.

Select Publications:

Selvakumar, A. and T. O'Connor. [Organism Detection in Permeable Pavement Parking Lot Infiltrates at the Edison Environmental Center, New Jersey](#). Water Environment Research, Volume 90, No. 1, pp. 21-29, January 2018.

Selvakumar, A. and J. Matthews. [Demonstration and Evaluation of Innovative Rehabilitation Technologies for Water Infrastructure Systems](#), ASCE Journal of Pipeline Systems - Engineering and Practice, Vol. 8, No. 4, 2017.

Selvakumar, A., J. Matthews, W. Condit, and R. Sterling. Innovative Research Program on the Renewal of Aging Water Infrastructure Systems, Journal of Water Supply: Research and Technology - AQUA IWA Publishing, Vol. 64.2, pp. 117-129, 2015.

Matthews, John, **A. Selvakumar**, S. P. Vaidya, and W. Condit. [Large-Diameter Sewer Rehabilitation Using a Spray Applied Fiber Reinforced Geopolymer Mortar](#), ASCE's Practice Periodical on Structural Design and Construction, Vol. 20, No. 4, November 2015.

Selvakumar, A., M.E. Tuccillo, K. Martel, J.C. Matthews, and C. Feeney. [Demonstration and Evaluation of State-of-the-Art Wastewater Collection Systems Condition Assessment Technologies](#), ASCE Journal of Pipeline Systems - Engineering and Practice, Vol. 5, No. 2, May 2014.

Matthews, J.C., **A. Selvakumar**, W. Condit, and R. Sterling. [Innovative Rehabilitation Technology Demonstration and Evaluation Program](#). Journal of Tunnelling and Underground Space Technology, Vol. 39, pp. 73–81, 2014.

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Education:

- Ph.D., New Jersey Institute of Technology, Newark, NJ; Civil and Environmental Engineering, 1988
- M.Eng., Asian Institute of Technology, Bangkok, Thailand; Environmental Engineering, 1984
- B.Sc. (Hons.), University of Sri Lanka, Colombo, Sri Lanka; Civil Engineering, 1980

Professional Experience:

- Professional Engineer of New Jersey and New York
- Task Lead for SSWR Project 5.02.A – Integrating GI into Communities
- COR for an Indefinite Delivery/Indefinite Quantity (IDIQ) Contract (EP-C-17-009)
- Interstate Technology & Regulatory Council (ITRC) Member for the Stormwater BMP Pollution-Reduction Determinations and Performance Verification.

Workgroups and Memberships

- Member of the workgroup for Alternative Work Practice for Asbestos Cement Pipe Replacement.
- Member of the North American Society for Trenchless Technology (NASTT) No-Dig Show Organizing Committee

Awards and Honors

- U.S. EPA NRMRL Honor Award - 2010
- Scientific and Technological Achievement Award (STAA) - Honorable Mention: 2016, 2013, 2011, and 2003
- International Society for Trenchless Technology (ISTT) Annual Award - 2012
- ORD Bronze Medal Award - ORD's Strategic Research Action Plans and Research Action Plan Teams - Safe and Sustainable Water Resources (SSWR) Project Leads - 2012
- Outstanding Paper of the North American Society for Trenchless Technology's (NASTT) 2011 No-Dig Show – 2012
- EPA Risk Reduction Engineering Laboratory STAR Award – 1994

[Science Matters: Parking Lots: Letting It Soak In
Experimental Permeable Pavement Parking Lot and Rain Garden for Stormwater Management](#)