

## CV for Peter Steen Mikkelsen (\*1962)

Orcid: 0000-0003-3799-0493



### Degrees:

1996 Ph.D., Environmental Engineering, Technical University of Denmark  
1990 M.Sc., Civil Engineering, Technical University of Denmark

### Positions:

2021- Head of Outreach, Department of Environmental and Resource Engineering, DTU  
2014-2022 Head of Water DTU, Center for Water Activities at DTU  
2013- Professor, Urban Water Systems, Technical University of Denmark  
2010-11 Visiting Academic, Centre for Water Sensitive Cities, Monash University, Melbourne/Australia  
1995-2013 Associate/Assistant Professor, Urban Water Engineering, Technical University of Denmark  
1993-94 Guest scientist, EAWAG - Swiss Federal Institute of Aquatic Science and Technology

### Research Area:

Urban water systems; stormwater management and urban drainage; climate change adaptation; nature based solutions; flooding and water quality; digitalization and digital twins; dynamic modelling, monitoring and predictive control; machine learning; multifunctional solutions and sustainability; innovation; socio-technical sciences.

### Distinctions and awards:

2017 Member of the Danish Academy of Technical Sciences (ATV)  
2015 Fellow of the International Water Association (IWA)  
2014 Mid-Career Achievement Award, IWA/IAHR Joint Committee on Urban Drainage (JCUD)

### Memberships of scientific committees, review:

2019- Scientific Advisory Board, MISTRA InfraMaint programme about asset maintenance of water, road and railway infrastructure, RISE/Sweden  
2018- International Sci. Advisory Board, H2O'Lyon - School of Integrated Watershed Sciences, France  
2017- Academic assessor for Full Professor positions at Aarhus University and Technical University of Denmark (DK), Norwegian University of Science and Technology (N), Luleå University of Technology (S), Delft University of Technology (NL) and Technische Universität Dresden (G)  
2009-2012 Programme Committee member, International Water Association (IWA)

**Web of Science publications:** 132; **Citations:** 4332; **h-index:** 32;

**Patents:** 0.

### Supervision of PhDs, 2017 – present (ongoing or finished in 2017 or later):

Main supervisor for 7 PhD and co-supervisor of 3 PhD in this period.

### Selected grants, 2017 – present (ongoing or finished in 2017 or later):

REACT-EU, “Water Data Space”, subproject of the Business Lighthouse Water Tech project in Central Region Denmark. Amount granted to Dept: 1.428 mill DKK. Project period: 2022-2023.

Danida Fellowship Center, “Water Sector Governance and Operations – the Danish model”, Amount granted to Dept: 5.172 mill DKK. Project period: 2017-2022.

The Capital Region of Denmark and EU, “Water Innovation in Small and medium-sized Enterprises (WISE)”, Amount granted to Dept: 12.896 mill DKK. Project period: 2017-2021.

Realdania Klimaspring programme, “Smart Real Time Control of Water Systems”, Amount granted to Dept: 2.925 mill DKK. Project period: 2014-2017.

#### Other significant contributions:

- 2016-2022      Steering Group and Joint Organising Committee member, IWA World Water Congress & Exhibition in Copenhagen/Denmark in September 2022 (moved from October 2020 due to Covid)
- 2018-2019      Lead professor, DTU’s sector development project “Let water and data flow”
- 2015            Think Tank on Green Identity and Urban Culture, City of Copenhagen, Denmark
- 2007-2017      Expert assessor for the Danish Environmental Board of Appeal (in Danish: Natur- og Miljøklagenævnet) in relation to the Water Framework Directive
- 2005-2011      Founder and three times member of the assessment committee (2005, 2008, 2011) for the Poul Harremoës Award for Best Urban Drainage Paper by a Young Author, which is since then issued every three years at the IWA/IAHR Joint Committee on Urban Drainage conferences.

#### Selected publications (2017 or later):

- Jensen, D.M.R., Sandoval, S., Aubin, J.-B., Bertrand-Krajewski, J.-L., Li, X., **Mikkelsen, P.S.**, Vezzaro, L. (2022) Classifying pollutant flush signals in stormwater using functional data analysis on TSS MV curves. *Water Research*, 217, 118394, 1-12.
- Lund, N.S.V., Kirstein, J., Madsen, H., Mark, O., **Mikkelsen, P.S.**, Borup, M. (2021) Feasibility of using smart meter water consumption data and in-sewer flow observations for sewer system analysis: a case study. *Journal of Hydroinformatics*, 23(4), 795-812.
- Palmitessa, R., **Mikkelsen, P.S.**, Law, A.W.K., Borup, M. (2021): Data assimilation in hydrodynamic models for system-wide soft sensing and sensor validation for urban drainage tunnels. *Journal of Hydroinformatics*, 23(3), 438-452.
- Pedersen, A.N., Borup, M., Brink-Kjær, A., Christiansen, L.E., **Mikkelsen, P.S.** (2021) Living Digital Twins of Urban Water Systems: Towards multi-purpose value creation using models and sensors. *Water*, 13(5), 592.
- Pedersen, A.N., Pedersen, J.W., Viguera-Rodriguez, A., Brink-Kjær, A., Borup, M., **Mikkelsen, P.S.** (2021): Belling: open data and models for community-wide urban drainage research. *Earth System Science Data*, 13, 4779-4798.
- Stentoft, P.A., Munk-Nielsen, T., Møller, J.K., Madsen, H., Valverde-Pérez, B., Mikkelsen, P.S., Vezzaro, L. (2021) Prioritize effluent quality, operational costs or global warming? – Using predictive control of wastewater aeration for flexible management of objectives in WWRFs. *Water Research*, 196, 116960.
- Jensen, D.M.J., Thomsen, A.T.H., Larsen, T., Egemose, S., **Mikkelsen, P.S.** (2020) From EU directives to local storm-water discharge permits: a study of regulatory uncertainty and practice gaps in Denmark. *Sustainability*, 12, 6317.
- Lund, N.L.S., Borup, M., Madsen, H., Mark, O., Arnbjerg-Nielsen, K., **Mikkelsen, P.S.** (2019) Integrated stormwater inflow control of sewers, green infrastructure and urban landscapes. *Nature Sustainability*, 2, 1003-1010.
- Madsen, H.M., **Mikkelsen, P.S.**, Blok, A. (2019) Framing professional climate risk knowledge: extreme weather events as drivers of adaptation innovation in Copenhagen, Denmark. *Environmental Science & Policy*, 98, 30-38.
- Lund, N.S.V., Falk, A.K.V., Borup, M., Madsen, H., **Mikkelsen, P.S.** (2018) Model predictive control of urban drainage systems: A review and perspective towards smart real-time water management. *Critical Reviews in Environmental Science and Technology*, 48(3), 279-339.
- Locatelli, L., Mark, O., **Mikkelsen, P.S.**, Arnbjerg-Nielsen, K., Deletic, A., Roldin, M., Binning, P.J. (2017) Hydrologic impact of urbanization with extensive stormwater infiltration. *Journal of Hydrology*, 544, 524-537.