

AI, Drones, Sensors and Robots for Smart Sewers and Urban Drainage 2025

2 - 3 April 2025 at IKT in Gelsenkirchen Germany



Key Topics: for Smart Sewer Systems and Urban Drainage:

- AI – How digitalization can transform their management
- Drones and Robotics – Improving safety and cost-effectiveness
- Robotics – Automating maintenance for efficiency
- Sensor Technologies for Inspection & Real-Time Data – Enhancing decision-making
- Predictive Analytics – Preventing failures before they happen

This international conference brings together experts and innovators to explore cutting-edge AI, robotics, and sensor technologies for real-time monitoring, predictive maintenance, and smarter infrastructure solutions.

Register now for the Conference!

Wednesday 2nd April 2025

8.30 h **Coffee and registration**

9.00 h **Welcome**

Roland W. Waniek, Managing Director, IKT,
Gelsenkirchen, Germany

9.10 h **Introduction to the day**

Dr. Iain Naismith, Conference convenor and
moderator, IKT, UK

Session I: AI - Smart Sewers – Urban Drainage

9.20 h **Overview of Use of AI – Future of smart sewers
and urban drainage**

Prof. Dr. Bert Bosseler, Scientific Director, IKT,
Germany

9.40 h **Storm Water Management & AI – Flooding, Water
Balance, Water Quality**

Dr. Maike Stover, IKT, Germany

10.00 h **Deep Learning applied to nowcasting of heavy
rainfall events – Results of the research project
KIWaSuS**

Juliana Koltermann da Silva, Hochschule Ruhr West,
Germany

10.20 h **Coffee break**

10.50 h **Use Cases of Smart Technologies in Wastewater
Management at Gelsenwasser AG**

Sajjad Tabatabaei, Gelsenwasser, Germany

11.10 h **Use of AI in Yorkshire Water and United Utilities,
UK**

Mr. Thomas Ogden, Yorkshire Water, UK
Mr. James Devereux, United Utilities, UK

11.30 h **Real-time Data from Water and Wastewater
Networks – The Foundation for Continuous AI
Analysis**

Mr. Bernhard Maier, Microtronics Engineering,
Germany

12.30 h **Lunch break**

13.00 h **Panel discussions on role of AI in managing
sewers and urban drainage**

Session II: Drones

14.00 h **Drones in Sewer Inspection: Above and Below**
Mr. Xinyi Zhang and Mr. Kadin Choi, Andrews
Engineers, Canada

14.30 h **Coffee break**

15.00 h **Drone Demonstrations**

16.00 h **Discussion on use of Drone Technology**

16.30 h **End Day 1**

Evening:

18.30 h **Onwards**

**Evening - Tour and Dinner at the Zollverein Coal Mine
Industrial Complex - a UNESCO World Heritage Site**



Thursday 3rd April 2025

8.30 h **Coffee**

9.00 h **Introduction to the day**

Dr. Iain Naismith, Conference convenor and moderator, IKT, UK

Session II: Drones continued

9.10 h **Inspection with a drone: a practical report from Duisburg**

Dr. Mirko Salomon, Wirtschaftsbetriebe Duisburg (Municipality), Germany

9.30 h **AI-Powered Drone Inspection for Sewer Condition Assessment**

Mr. Roger Roesselet, WinCan, Switzerland

Session III: Sensors

9.50 h **Application of new sewer inspection technologies: keeping track of data**

Mark Andrew, Andrews engineer, Canada

10.10 h **Sensors for sewers and urban drainage – findings from Co-UDlabs research**

Dr. Iain Naismith, IKT, UK

10.30 h **Coffee break**

11.00 h **AI-based Smart Diagnosis System for CCTV Camera Inspection in Tokyo**

Ms. Marie Noto, Tokyo Metropolitan Sewerage, Japan
Dr. Eng. Yasuaki Sugimoto, Nippon Koei Co. Ltd, Japan

11.20 h **Panel discussions on role of AI in managing sewers and urban drainage**

12.00 h **Lunch**

Session IV: Robotics

13.00 h **Replace or Repair? The MAC System for non-destructive structural assessment of pipes, liners and bedding**

Dr. Mark Klameth, IKT, Germany

13.30 h **MAC Demonstration**

Simon Torunski, M.Sc., IKT, Germany

14.00 h **Pipebots – autonomous robots for pipe inspection and repair**

Prof. Simon Tait, University of Sheffield, UK

14.30 h **Coffee break**

14.45 h **Robo-Dogs in Sewers: Potential applications**

Prof. Dr. Sebastian Hollermann, Jade Hochschule, Germany

15.05 h **Cleaning driven asset management**

Bart van der Zalm, Sewer Robotics, Netherlands

15.25 h **Panel Discussion on Robots**

15.50 h **Summary and takeaways**

Prof. Dr. Bert Bosseler, Scientific Director, IKT, Germany

16.00 h **End Day 2**

Seminar Moderator

Dr. Ian Naismith



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Conference date:

2 - 3 April 2025 in Gelsenkirchen

Organizer:

IKT - Institute for Underground Infrastructure

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Participation fees:

Regular:	895 Euro
Member of IKT Association:	805 Euro*
KomNetABWASSER participants:	free*

* reduced price for members of the IKT-Associations and KomNetABWASSER participants

- Municipal wastewater network: **100 % Discount**
www.komnetabwasser.de
- IKT-Associates: **10 % Discount**
www.ikt.de/foerdervereine

Hotel Recommendation:

We recommend you stay at the ibis Styles Gelsenkirchen
(Closest hotel to IKT)
Address: Ringstraße 3, 45879 Gelsenkirchen
Tel: +49 (0) 209 92550

Participant name

Institution

Telephone number

Street

Postal Code / Town

Participant's E-Mail

E-Mail for confirmation of registration

E-Mail for invoice

For more information on IKT knowledge transfer, please see the Training tab on www.ikt.institute.

Date

Stamp

Signature

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EXHIBITOR

