Pierre Lechevallier

Curriculum Vitae

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General information

- 28 years old
- **Language**: French (native), English (fluent), German (fluent)
- **Current position**: 3rd year PhD, research focus on wastewater pollution monitoring
- **Academic age**: 2 years 1 month
- Work experience in France, Germany, Togo, Philippines and Switzerland

Education

Degree	Organization	Duration
M.Sc: Double degree in general engineering (Ecole Centrale de Lyon) and environmental engineering (Technical University of Darmstadt)	Ecole Centrale de Lyon, France	09/2015 – 08/2017 2 years
	TU Darmstadt, Germany	10/2017 – 03/2021 2 years 6 months
B.Sc: "Classes préparatoires": Two-year undergraduate courses to prepare for entrance exam for the top French engineer School.	Lycée Fabert, Metz, France	09/2013 – 08/2015 2 years
High school degree option ABIBAC: simultaneous completion of the French Baccalauréat (science) and the German Abitur.	Lycée Notre-Dame Saint Sigisbert, Nancy, France	09/2012 – 08/2013 3 years

Professional experience

Experience	Organization	Duration
Doctoral research: Development of real time and online wastewater monitoring technology based on reflection spectroscopy, in the scope of the EU-H2020 project ("Collaborative Urban drainage laboratories", Grant No. 101008626)	Eawag, Switzerland	08/2021 – present 2 years 1 month
Master's thesis: Study of the effect of hydrothermal carbonization temperature on effluent treatment.	TU Darmstadt, Germany	09/2020 – 02/2021 6 months
Mathematics teacher for bachelor student: leveling their knowledge before going to France for exchange.	TU Darmstadt, Germany	03/2020 – 08/2020 6 months
Civil service: Assisting professional integration of young adults from poor background.	LP4Y, Manilla, Philippines	08/2017 – 08/2018 13 months
Internship: study of concrete structure of electricity plants.	EDF DTG, Lyon, France	04/2017 – 07/2017 3 months
President of the student mountaineering club: organization of events, safety courses and initiations.	Ecole Centrale de Lyon, France	09/2015 – 09/2016 1 year

Main academic achievement

1. **Conducting a series of experiment** with cutting-edge hyperspectral imager, demonstrating the potential of the technology for wastewater monitoring. A peer-reviewed publication is under review, and the preprint reach 350 views and 100 downloads.
2. **Making an impactful presentation** in front of 100 peers at the Sewer Processes and Network conference that lead to a research collaboration with SUEZ, the French international water management company.
3. **Development of a network** of more than 50 experts across more than 20 scientific institutions and industries, in Europe, USA and Australia to contribute to my research.

Scientific contributions

Peer-reviewed journal publications	**Lechevallier, P.**; Villez, K.; Felsheim, C.; Rieckermann, J. *Towards Non-Contact Pollution Monitoring in Sewers with Hyperspectral Imaging*; 2023. Submitted to Environmental Science: Water Research and Technology, pre-print: https://doi.org/10.31219/osf.io/h7tzb
	Blach, T.; **Lechevallier, P.**; Engelhart, M. *Effect of Temperature during the Hydrothermal Carbonization of Sewage Sludge on the Aerobic Treatment of the Produced Process Waters.* Journal of Water Process Engineering 2023, 51, 103368. https://doi.org/10.1016/j.jwpe.2022.103368
Conference publications	**Lechevallier, P.**; Gruber, G.; Bares, V.; Pena-Haro, S.; Schimmer, C.; Böckmann, D.; Rieckermann, J. *Sewer Pollution Monitoring with Satellite Cameras? The World's First Flume Tests with Hyperspectral Camera*, Novatech international conference in Lyon, France, 03/07/2023, Poster presentation.
	Preitner, K.; Blanc, S.; Honzátko, D.; Kündig, C.; Pad, P.; Saeedi, S.; Peña-Haro, S.; **Lechevallier, P.**; Rieckermann, J.; Dunbar, L. A. *Intelligent Multispectral Vision System for Contactless Water Quality Monitoring for Wastewater*;. Proc. SPIE 12438, AI and Optical Data Sciences IV, 124380V, 2023, https://doi.org/10.1117/12.2649921
	Lechevallier, P.; Villez, K.; Felsheim, C.; Rieckermann *Towards Non-Contact Pollution Monitoring in Sewers with Hyperspectral Imaging*; Sewer Processes and Network international conference in Graz, Austria, 25/08/2022, Presentation

Student supervision

Karen Preitner, MSc, EPFL, co-supervision of her master thesis on wastewater monitoring and analysis with multispectral camera
Zixin Hu, BSc, ETH, supervision of her bachelor thesis on analysis of wastewater hyperspectral data cubes based on machine learning
Abhinit Mahajan, BSc, supervision of an internship on data-driven modelling of wastewater pollution