

LARS SCHÖBITZ

I am developing data science trainings¹ and provide consulting services for managing the world's poop. My work experience includes every sector under the sun, which has formed me into a highly adaptable and empathetic individual. In my free time I like to crochet, bake, cook, run, play, and code.

View this CV online with links at lse.de/cv

ME

now
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2012

- **Loving life in Zurich**
Zurich, Switzerland
 - Just Switzerland
- **Multi-cultural work experience**
Mother Earth
 - South Africa, Uganda, Vietnam, India, Tanzania, Haiti, USA, Bhutan, Senegal
- **Loved life in London**
London, UK
 - So much fun
- **Sanitation enthusiast**
Durban, South Africa
 - Living with, and learning from Prof. CA Buckley
- **German citizen**
Haemelhausen, Germany
 - Raised in a town of 600 people, I grew up with two generations, a large vegetable and fruit garden, animals and a christmas tree farm.

📍 Wollyhood

📍 Global

📍 Brixton

📍 49 Essex Grove

📍 Flat plains of Lower Saxony

EDUCATION

2020
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2019

- **RStudio Instructor Programme**
www
 - Certified as an RStudio Instructor²
- **Environmental and Hygiene Engineering (Dipl. Ing.)**
Giessen, Germany
 - Thesis³: Performance Evaluation of a full-scale DEWATS plant in South Africa

📍 RStudio

📍 Mittelhessen University of Applied Sciences

CONTACT

✉ lars@lse.de

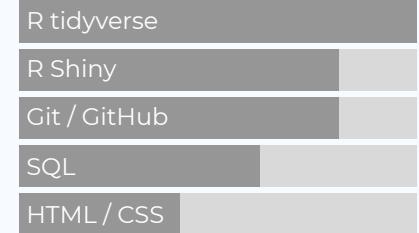
🐦 [larnsce](#)

🔗 [github.com/larnsce](#)

🔗 [lse.de](#)

🔗 [LinkedIn](#)

LANGUAGE SKILLS



Made with the R package
[pagedown](#).

The source code is available on
github.com/larnsce/cv.

Last updated on 2021-02-21.

2010 2010	Scholarship with ERASMUS (European Exchange Program) Umea, Sweden	 Umea University
	• Main subject: Northern Aquatic Systems, including sampling of different surface water and analysis of DOC, COD, main nutrients, heavy metals	
2009 2009	Change and Project Management Mikkeli, Finland	 Mikkeli University
2006 2003	General qualification for university entrance Verden, Germany	 Gymnasium am Wall

WORK EXPERIENCE

now 2018	Director, Founder Zurich, Switzerland	 Lars Schoebitz GmbH
	• Teaching Data Science with R	
	• Consultant for city-wide faecal sludge management systems	
	• Supporting organisations in establishing strong monitoring and evaluation frameworks	
now 2018	Data and Impact Expert Essex, UK	 Aquaconsult Limited
	• Venture Advisor for Transition to Scale Program in Urban Sanitation by Grand Challenges Canada	
	• Support to Clean Team, Ghana; Eau&Vie, Bangladesh; Safi Sana, Ghana	
2020 2020	Data Science Intern Zurich, Switzerland	 Statistical Office of the Canton of Zurich
	• Developed R Shiny Dashboard ⁴ for analytics of incoming data analysis requests	
	• Developed R package for web analytics with Matomo ⁵	
	• Published fully reproducible news article ⁶	
	• Supported activities on COVID19 monitoring ⁷ and data analysis	
	• Organised a session at DINACON 2020 ⁸	
	• Responded to data analysis requests from civil society, politics, universities, private and public sector	
2020 2020	Consultant Duebendorf, Switzerland	 Eawag/Sandec
	• Supported the preparation of factsheets for a publication on city-wide inclusive sanitation (CWIS) approaches and tools	

I believe in the opportunity of the human rights based approach to water and sanitation above the belief in a billion dollar sanitation economy.

2020
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2017

- **Data Scientist**
Putnam, USA  Biomass Controls PBC
 - Building tools for data visualisation and business intelligence using R Shiny framework
 - Support of R&D work and preparation of results for publications and conferences

2020
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2019

- **Lead Consultant**
Cap-Haitien, Haiti  Inter-American Development Bank
 - Team of Consultants: Berta Moya, Anthony Kilbride, Andy Peal
 - Development of city-wide faecal sludge management systems
 - Detailed review of design proposal for faecal sludge treatment plant
 - Preparation of shit-flow-diagram (SFD) for Cap-Haitien

2018
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2018

- **Data Scientist**
London, UK  Gather
 - Supported conceptualization of data dive for urban sanitation data
 - Cleaned and prepared toilet census data set of Kanyama compound (Lusaka, Zambia) for analysis

2018
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2016

- **Consultant**
Geneva, Switzerland  World Health Organization
 - Global Monitoring of the Sanitation Chain: Proof of concept testing for monitoring indicators on safely managed sanitation (Target 6.2) and safely treated wastewater (Target 6.3) in the SDG agenda
 - Production of country files for SDG 6.3.1 Proportion of wastewater safely treated

2016
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2012

- **Research Project Manager**
Duebendorf, Switzerland  Eawag/Sandec
 - Project management with global, multi-disciplinary teams and topics of wide spread interest (RRR Business Models, SFDs Methods and Tools development)
 - Research lead on several projects that aim to develop methods for diagnostic tools in faecal sludge management
 - Mentor, lecturer and effective networker

2012
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2011

- **Research Assistant**
Durban, South Africa  PRG, University of KwaZulu-Natal
 - Drove a 1950s Land Rover on Durban highways to collect water samples from DEWATS plant
 - Emptied pit latrines with spades and shovels
 - Built a snooker-like table to separate pit contents into their individual constituents



TEACHING EXPERIENCE

- 2021 | 2021
- **R Instructor** 📍 Statistical Office of the Canton of Zurich
www
 - Developing a training for Data Science with R for⁹ civil servants

2017 | 2017

 - **Lecturer** 📍 Mittelhessen University of Applied Sciences
Giessen, Germany
 - Introduction to Faecal Sludge Management¹⁰ for environmental engineering students

2016 | 2013

 - **Lecturer** 📍 Lecturer NADEL, ETH Zurich, EPF Lausanne
Switzerland
 - Teaching on basics of Faecal Sludge Management

2016 | 2016

 - **Lecturer** 📍 Massive Open Online Course: Planning & Design of Sanitation Systems and Technologies
Switzerland
 - Prepared module on Shit Flow Diagrams¹¹



PRO BONO

- now | 2018
- **Expert Advisor** 📍 Gather
London, UK
 - Providing support with my passion for open data science and by sharing knowledge on urban sanitation

2020 | 2017

 - **R Instructor** Zurich, Switzerland
 - Teaching employees of Eawag/Sandec in using R for statistical computing software
 - Started out with lectures in 2017¹² and continued individual one-to-one support to date

2020 | 2018

 - **Technical Expert** 📍 ISO Project Committee 318
Global
 - Member of the US Technical Advisory Group for emerging standard ISO/PC318 "Community scale resource oriented sanitation treatment systems"

I am passionate about teaching coding with R to novel users.



TEACHING EXPERIENCE



PUBLICATIONS

I support open science principles.

- 2020 • **Corona veraendert Alltagssorgen nur wenig¹²**
• Published source code and data as GitHub repository¹³
Web article
- 2020 • **Hotel-Tourismus in Zuerich – Geschaeftstouristen und auslaendische Gaeste hinterlassen Luecke¹⁴**
- 2020 • **Estimating Safely Managed Sanitation in Urban Areas; Lessons Learned From a Global Implementation of Excreta-Flow Diagrams¹⁵**
Frontiers in Environmental Science
- 2019 • **City Service Delivery Assessment for Citywide Inclusive Sanitation¹⁶**
Inclusive Sanitation in Practice
• Reviewer
- 2019 • **Towards an off-grid fecal sludge treatment unit: demonstrating energy positive thermal treatment¹⁷**
Gates Open Research
• Prepared fully reproducible research paper¹⁸
- 2018 • **Methods to reliably estimate faecal sludge quantities and qualities for the design of treatment technologies and management solutions¹⁹**
Journal of Environmental Management, 223, 898-907
• Collection and laboratory analysis of 180 faecal sludge samples in Kampala, Uganda
• Data analysis using R
- 2018 • **Remote Sensing, Mobile Applications and Open Data Science Tools for Better Monitoring of Sanitation Systems²⁰**
In HIC 2018. 13th International Conference on Hydroinformatics
• Conference paper
- 2018 • **Resource recovery from waste: business models for energy, nutrient and water reuse in low- and middle-income countries²¹**
Oxon, UK: Routledge; Earthscan. 816p
- 2018 • **Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation²²**
United Nations
- 2018 • **Progress on safe treatment and use of wastewater: piloting the monitoring methodology and initial findings for SDG indicator 6.3.1²³**
World Health Organization and UN-HABITAT
- 2018 • **Country files for SDG 6.3.1 Proportion of wastewater safely treated²⁴**
World Health Organization

- 2018
 - Guidelines on sanitation and health²⁵
 - 📍 World Health Organization
- 2017
 - GIS analysis and optimisation of faecal sludge logistics at city-wide scale in Kampala, Uganda²⁶
 - 📍 Sustainability, 9(2), 194
- 2017
 - GIS analysis and optimization of faecal sludge logistics at city-wide scale in Kampala, Uganda. Supplementary Report²⁷
- 2017
 - Market driven approach for faecal sludge treatment products²⁸
 - 📍 In WEDC conference papers. WEDC conference 40 (p. 2807 (6 pp.))
- 2014
 - FAQ: faecal sludge quantification and characterization; field trial of methodology in Hanoi, Vietnam²⁹

TECHNICAL REPORTS

- 2016 | 2015
 - Sanitation service delivery context analysis and mapping of excreta flows along the sanitation service chain and throughout the city
 - Download Bignona/Senegal¹²
 - Download Danang/Vietnam¹³
 - Download Dar es Salaam/Tanzania¹⁴
 - Download Durban/South Africa¹⁵
 - Download Hanoi/Vietnam¹⁶
 - Download Kampala/Uganda¹⁷
 - Download Khulna/Bangladesh¹⁸
 - Download Nonthaburi/Thailand¹⁹
 - Download Tikapur/Nepal²⁰

I strive for efficiency and approach life with 'All or Nothing'.

SANDEC NEWS ARTICLE

- 2016 | 2013
 - Sandec News Articles
 - Illustrating the Fate of Excreta: The SFD Methodology in Eight Cities¹²
 - Private Public Partnership Solutions for Faecal Sludge Management¹³
 - FAQ: Faecal Sludge Quantification and Characterization; Kampala¹⁴
 - Waste-based Business Models for Resource Recovery¹⁵

I have a mindset of learning from failures and am a signatory of the [Nakuru Accord](#)

CONFERENCES & SEMINARS

- 2020
 - UN World Data Forum 2020
 - www

I am optimistic, direct, patient and empathetic.

2020	<ul style="list-style-type: none"> DINAcon WWW <ul style="list-style-type: none"> Session organiser: Unsere Antwort auf COVID19: Ein Beispiel von Kollaboration und Gemeinschaft im Open Data Zeitalter¹²
2019	<ul style="list-style-type: none"> Latinosan Conference San Jose, Costa Rica <ul style="list-style-type: none"> Invited presenter and moderator of session¹³ on sludge management organized by the Inter-American Development Bank Presentation Slides¹⁴
2019	<ul style="list-style-type: none"> 5th Faecal Sludge Management Conference Cape Town, South Africa <ul style="list-style-type: none"> Oral Presentation¹⁵ on Development of Tools for Efficient Remote Monitoring of Faecal Sludge Treatment Units Poster Presentation on Combined Heat and Power with Micro Organic Rankine Cycle for Off-Grid Sanitation Treatment Invited presenter at side meeting organised by Centre for Science and Environment India. Development of a Faecal Sludge Data Repository¹⁶
2019	<ul style="list-style-type: none"> WaterLex, 1st World Summit on Leaving No One Behind Geneva, Switzerland <ul style="list-style-type: none"> Finalist for project on human-rights based solutions to water and sanitation. Testing innovative technologies for Menstrual Hygiene Management in humanitarian and public settings Oral Presentation¹⁷
2018	<ul style="list-style-type: none"> 2nd meeting of ISO PC 318 WG 1 Toulouse, France <ul style="list-style-type: none"> Technical Expert for emerging standard representing the US technical advisory group
2018	<ul style="list-style-type: none"> Monitoring, Evidence, and Dissemination for Scale (MEDS) convening Dakar, Senegal <ul style="list-style-type: none"> Hosted by the Bill & Melinda Gates Foundation (BMGF)
2018	<ul style="list-style-type: none"> 13th International Hydroinformatics Conference Palermo, Italy <ul style="list-style-type: none"> Oral presentation¹⁸ on Remote sensing, mobile applications and open data science tools for better monitoring of sanitation systems
2018	<ul style="list-style-type: none"> Stakeholder meeting for FSM laboratory of CSE at Anil Agarwal Environment Training Institute (AAETI) Tijara, India <ul style="list-style-type: none"> Invited presenter

 CSE AAETI

2018	<ul style="list-style-type: none">● Colorado WASH Symposium Boulder, USA	 University of Colorado
		<ul style="list-style-type: none">• Oral presentation¹⁹ on Development of tools for efficient remote monitoring of faecal sludge treatment units
2018	<ul style="list-style-type: none">● Gather Hub Data Dive London, UK	
		<ul style="list-style-type: none">• Keynote speaker Gather Hub's data dive²⁰ on urban sanitation for Lusaka, Zambia• Presentation Slides²¹
2017	<ul style="list-style-type: none">● 4th Faecal Sludge Management Conference Chennai, India	
		<ul style="list-style-type: none">• Monitoring Safely Managed Sanitation on the 2030 Agenda for Sustainable Development; Experience from Uganda• Presentation²²• Abstract²³
2016	<ul style="list-style-type: none">● UNC Water and Health Conference Chapel Hill, USA	
		<ul style="list-style-type: none">• Safely-Managed Sanitation: Monitoring higher levels of service in SDG Target 6.2• Event supporthttps://kutt.it/p4toLj
2016	<ul style="list-style-type: none">● Sandec Research Seminar Duebendorf, Switzerland	
		<ul style="list-style-type: none">• Shit-Flow-Diagrams and the potential for monitoring of Sustainable Development Goals
2015	<ul style="list-style-type: none">● UNC Water and Health Conference Chapel Hill, USA	
		<ul style="list-style-type: none">• City level excreta flow analysis; the SFD Promotion Initiative• Poster²⁴
2015	<ul style="list-style-type: none">● Stockholm World Water Week, Sweden Stockholm, Sweden	
		<ul style="list-style-type: none">• Side Event²⁵: Liveable Cities for All: Integrated Sanitation and Water Services• Side Event²⁶: SFD, a tool to foster sustainable urban sanitation programming• Sustainable City Sanitation; from planning to implementation. Event support²⁷
2015	<ul style="list-style-type: none">● 4th AfricaSan Conference Dakar, Senegal	
		<ul style="list-style-type: none">• Side Event: SFD a tool to boost urban sanitation. Presentation Slides²⁸• Panellist: Public-Private Partnerships to Meet the Sanitation Shortfall

- 2015 ● **3rd Faecal Sludge Management Conference**
Hanoi, Vietnam
- Quantification of FS by truck counting studies with the Private Emptiers Association in Kampala Abstract pp. 6-8²⁹, Presentation³⁰
 - Scaling-up sanitation businesses in low- and middle-income countries Presentation³¹
 - FSM / Treatment processes for resource recovery / Session 1: Moderation³²
 - Workshop Preparation, Facilitation³³: FSM Systems Approach for Implementation and Operation: Research into Practice: Towards standardization of FS quantification and characterization on a city-wide scale
- 2014 ● **37th WEDC International Conference**
Hanoi, Vietnam
- FAQ: Faecal Sludge Quantification and Characterization: field trial of methodology in Hanoi, Vietnam, Conference Paper³⁴
- 2014 ● **Stockholm World Water Week, Sweden**
Stockholm, Sweden
- Side Event: From Faecal Sludge to Fuel: Safe Sanitation with Business Opportunities
- 2013 ● **36th WEDC International Conference**
Nakuru, Kenya
- Espresso Shot Presentation on Resource, Recovery & Reuse
- 2012 ● **2nd Faecal Sludge Management Conference**
Durban, South Africa
- Business model innovations for scaling-up faecal sludge businesses in developing countries: Abstract³⁵ Presentation³⁶
- 2012 ● **Water Institute of Southern Africa (WISA) conference**
Cape Town, South Africa
- Practical experience and operating data from a full-scale decentralised wastewater treatment plant treating domestic wastewater



REFERENCES

- now ● **Dr. Christian Zurbruegg¹²**
Duebendorf, Switzerland Eawag/Sandec
- Member of the Directorate & Group Leader Solid Waste Management
- now ● **Prof. CA Buckley¹³**
Durban, South Africa PRG, University of KwaZulu-Natal
- Co-Head

now

● **Dr. Kate Medlicott⁴**
Geneva, Switzerland
• Team Leader Sanitation

📍 World Health Organization