

LARS SCHÖBITZ

I am developing data science training and provide consulting services to manage the world's poop. My work experience includes every sector under the sun, which has formed me into a highly adaptable and empathetic individual. I like to crochet, bake, cook, run, code, and play in my free time. I am a 101% type of person.

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

📍 Wollyhood

2020
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2011

- **Multi-cultural work experience**
Mother Earth
 - South Africa, Uganda, Vietnam, India, Tanzania, Haiti, USA, Bhutan, Senegal

📍 Global

2018
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2017

- **Loved life in London**
London, UK
 - So much fun

📍 Brixton

2012
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2011

- **Sanitation enthusiast**
Durban, South Africa
 - Living with, and learning from Prof. CA Buckley

📍 49 Essex Grove

1986
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1986

- **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.

📍 Flat plains of Lower Saxony

EDUCATION

2020
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2019

- **RStudio Instructor Programme**
www
 - Certified as an RStudio Instructor⁷

📍 RStudio

2012
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2008

- **Environmental and Hygiene Engineering (Dipl. Ing.)**
Giessen, Germany
 - Thesis²: Performance Evaluation of a full-scale DEWATS plant in South Africa

📍 Mittelhessen University of Applied Sciences

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

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

Last updated on 2022-02-14.

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 2021	Open Science Specialist Zurich, Switzerland	ETH Zurich
	• Support faculty, PhD, and MSc. students in applying reproducible workflows in their research.	
	• Oversee aspects of reproducibility and open science principles for published journal papers	
	• Manage online and social media channels	
	• Setup organisational work, task, and project management tools	
now 2021	Data Science Instructor Zurich, Switzerland	Statistical Office of the Canton of Zurich
	• Teaching a data science with R course to civil servants	
	• Course website: https://rstatszh.github.io/website/	
now 2021	Data Science Instructor Boulder, USA	Colorado University
	• Developing and teaching an online module to teach R	
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	
2021 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	

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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2020

- **Data Science Intern**
Zurich, Switzerland  Statistical Office of the Canton of Zurich
 - Developed R Shiny Dashboard³ for analytics of incoming data analysis requests
 - Developed R package for web analytics with Matomo⁴
 - Published fully reproducible news article⁵
 - Supported activities on COVID19 monitoring⁶ and data analysis
 - Organised a session at DINacon 2020⁷
 - Responded to data analysis requests from civil society, politics, universities, private and public sector

2020
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2020

- **Consultant**
Duebendorf, Switzerland  Eawag/Sandec
 - Supported the preparation of factsheets for a publication on city-wide inclusive sanitation (CWIS) approaches and tools

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
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2021

- **R Instructor**
www 📍 Statistical Office of the Canton of Zurich
 - Developing a training for Data Science with R for⁸ civil servants

2017
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2017

- **Lecturer**
Giessen, Germany 📍 Mittelhessen University of Applied Sciences
 - Introduction to Faecal Sludge Management⁹ for environmental engineering students

2016
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2013

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

2016
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2016

- **Lecturer**
Switzerland 📍 Massive Open Online Course: Planning & Design of Sanitation Systems and Technologies
 - Prepared module on Shit Flow Diagrams¹⁰

now
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2018

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

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

2020
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2017

- **R Instructor**
Zurich, Switzerland
 - Teaching employees of Eawag/Sandec in using R for statistical computing software
 - Started out with lectures in 2017¹¹ and continued individual one-to-one support to date
- **Technical Expert**
Global 📍 ISO Project Committee 318
 - Member of the US Technical Advisory Group for emerging standard ISO/PC318 “Community scale resource oriented sanitation treatment systems”

TEACHING EXPERIENCE

PUBLICATIONS

2020
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2020
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2020
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2019
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2019
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2018

- **Corona veraendert Alltagssorgen nur wenig¹¹** 📍 Web article
 - Published source code and data as GitHub repository¹²
- **Hotel-Tourismus in Zuerich – Geschaeftstouristen und auslaendische Gaeste hinterlassen Luecke¹³**
- **Estimating Safely Managed Sanitation in Urban Areas; Lessons Learned From a Global Implementation of Excreta-Flow Diagrams¹⁴** 📍 Frontiers in Environmental Science
- **City Service Delivery Assessment for Citywide Inclusive Sanitation¹⁵** 📍 Inclusive Sanitation in Practice
 - Reviewer
- **Towards an off-grid fecal sludge treatment unit: demonstrating energy positive thermal treatment¹⁶**
Gates Open Research
 - Prepared fully reproducible research paper¹⁷
- **Methods to reliably estimate faecal sludge quantities and qualities for the design of treatment technologies and management solutions¹⁸** 📍 Journal of Environmental Management, 223, 898-907
 - Collection and laboratory analysis of 180 faecal sludge samples in Kampala, Uganda
 - Data analysis using R

I support open science principles.

- 2018
- **Remote Sensing, Mobile Applications and Open Data Science Tools for Better Monitoring of Sanitation Systems¹⁹**
📍 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 countries²⁰**
📍 Oxon, UK: Routledge; Earthscan. 816p
- 2018
- **Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation²¹**
📍 United Nations
- 2018
- **Progress on safe treatment and use of wastewater: piloting the monitoring methodology and initial findings for SDG indicator 6.3.1²²**
📍 World Health Organization and UN-HABITAT
- 2018
- **Country files for SDG 6.3.1 Proportion of wastewater safely treated²³**
📍 World Health Organization
- 2018
- **Guidelines on sanitation and health²⁴**
📍 World Health Organization
- 2017
- **GIS analysis and optimisation of faecal sludge logistics at city-wide scale in Kampala, Uganda²⁵**
📍 Sustainability, 9(2), 194
- 2017
- **GIS analysis and optimization of faecal sludge logistics at city-wide scale in Kampala, Uganda. Supplementary Report²⁶**
- 2017
- **Market driven approach for faecal sludge treatment products²⁷**
📍 In WEDC conference papers. WEDC conference 40 (p. 2807 (6 pp.))
- 2014
- **FAQ: faecal sludge quantification and characterization; field trial of methodology in Hanoi, Vietnam²⁸**



TECHNICAL REPORTS

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

2016
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2015

- **Sanitation service delivery context analysis and mapping of excreta flows along the sanitation service chain and throughout the city**

- Download Bignona/Senegal¹¹
- Download Danang/Vietnam¹²
- Download Dar es Salaam/Tanzania¹³
- Download Durban/South Africa¹⁴
- Download Hanoi/Vietnam¹⁵
- Download Kampala/Uganda¹⁶
- Download Khulna/Bangladesh¹⁷
- Download Nonthaburi/Thailand¹⁸
- Download Tikapur/Nepal¹⁹

SANDEC NEWS ARTICLE

2016
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2013

- **Sandec News Articles**

- Illustrating the Fate of Excreta: The SFD Methodology in Eight Cities¹¹
- Private Public Partnership Solutions for Faecal Sludge Management¹²
- FAQ: Faecal Sludge Quantification and Characterization; Kampala¹³
- Waste-based Business Models for Resource Recovery¹⁴

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

2020

- **DINAcon**

www

- Session organiser: Unsere Antwort auf COVID19: Ein Beispiel von Kollaboration und Gemeinschaft im Open Data Zeitalter¹¹

2019

- **Latinosan Conference**

San Jose, Costa Rica

- Invited presenter and moderator of session¹² on sludge management organized by the Inter-American Development Bank
- Presentation Slides¹³

2019

- **5th Faecal Sludge Management Conference**

Cape Town, South Africa

- Oral Presentation¹⁴ 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 Repository¹⁵

I am optimistic, direct, patient and empathetic.

- 2019
- **WaterLex, 1st World Summit on Leaving No One Behind**
Geneva, Switzerland
 - 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 Presentation¹⁶
- 2018
- **2nd meeting of ISO PC 318 WG 1**
Toulouse, France
 - Technical Expert for emerging standard representing the US technical advisory group
 - **Monitoring, Evidence, and Dissemination for Scale (MEDS) convening**
Dakar, Senegal
 - Hosted by the Bill & Melinda Gates Foundation (BMGF)
 - **13th International Hydroinformatics Conference**
Palermo, Italy
 - Oral presentation¹⁷ on Remote sensing, mobile applications and open data science tools for better monitoring of sanitation systems
 - **Stakeholder meeting for FSM laboratory of CSE at Anil Agarwal Environment Training Institute (AAETI)**
Tijara, India
 - Invited presenter
 - **Colorado WASH Symposium**
Boulder, USA
 - Oral presentation¹⁸ on Development of tools for efficient remote monitoring of faecal sludge treatment units
 - **Gather Hub Data Dive**
London, UK
 - Keynote speaker Gather Hub's data dive¹⁹ on urban sanitation for Lusaka, Zambia
 - Presentation Slides²⁰
- 2017
- **4th Faecal Sludge Management Conference**
Chennai, India
 - Monitoring Safely Managed Sanitation on the 2030 Agenda for Sustainable Development; Experience from Uganda
 - Presentation²¹
 - Abstract²²

- 2016
- **UNC Water and Health Conference**
Chapel Hill, USA
 - Safely-Managed Sanitation: Monitoring higher levels of service in SDG Target 6.2
 - Event support <https://kutt.it/p4toLj>
- 2016
- **Sandec Research Seminar**
Duebendorf, Switzerland
 - Shit-Flow-Diagrams and the potential for monitoring of Sustainable Development Goals
- 2015
- **UNC Water and Health Conference**
Chapel Hill, USA
 - City level excreta flow analysis; the SFD Promotion Initiative
 - Poster²³
- 2015
- **Stockholm World Water Week, Sweden**
Stockholm, Sweden
 - Side Event²⁴: Liveable Cities for All: Integrated Sanitation and Water Services
 - Side Event²⁵: SFD, a tool to foster sustainable urban sanitation programming
 - Sustainable City Sanitation; from planning to implementation. Event support²⁶
- 2015
- **4th AfricaSan Conference**
Dakar, Senegal
 - Side Event: SFD a tool to boost urban sanitation. Presentation Slides²⁷
 - 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. 6-8²⁸, Presentation²⁹
 - Scaling-up sanitation businesses in low- and middle-income countries Presentation³⁰
 - FSM / Treatment processes for resource recovery / Session 1: Moderation³¹
 - Workshop Preparation, Facilitation³². 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 Paper³³

- 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: Abstract³⁴ Presentation³⁵
- 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 Zurbruegg¹¹**
Duebendorf, Switzerland Eawag/Sandec
• Member of the Directorate & Group Leader Solid Waste Management
- now ● **Prof. CA Buckley¹²**
Durban, South Africa PRG, University of KwaZulu-Natal
• Co-Head
- now ● **Dr. Kate Medlicott¹³**
Geneva, Switzerland World Health Organization
• Team Leader Sanitation