William **TROULEAU**

Avenue d'Ouchy 24C
1006 Lausanne
Switzerland

linkedin.com/in/william-trouleau
william.trouleau@gmail.com
https://trouleau.github.io
+41 (0)78 814 96 55

French citizen
Swiss C Permit
Born 28.03.1991

KEY COMPETENCES: **Machine Learning • Probabilistic Modeling • Data Mining**

EDUCATION

2015 – ongoing (Estimated June 2021) **Ph.D. in Machine Learning** – École Polytechnique Fédérale de Lausanne (EPFL)
- Information & Network Dynamics Lab (INDY), Prof. Matthias Grossglauser and Prof. Patrick Thiran
- Focus on the statistical and algorithmic aspects of **modeling**, **control** and **inference** of **networks** of **times series**; with applications in epidemiology, neuroscience, information diffusion and recommendation systems

2009 – 2015 **B.Sc. and M.Sc. in Communication Systems** – École Polytechnique Fédérale de Lausanne (EPFL)
- Master thesis on user behavior modeling in video-on-demand services (published at KDD 2016)

PROFESSIONAL EXPERIENCE

2019 (3 months) **Research Intern** – Institute for Disease Modeling (Seattle, USA)
- Participated in the *2019 KIT Tuberculosis (TB) Hackathon* to quantify the TB burden in Pakistan
- Took care of data collection, data cleaning, model design and performance evaluation
- Won the competition (out of 9 international teams)

2014 – 2015 (10 months) **Research Intern** – Technicolor (Los Altos, CA, USA)
- Designed a novel generative mixture model that presents a first-of-its-kind characterization of viewer binge-watching behavior on video-on-demand services
- Cleaned & processed >200GB of raw user logs into an accessible MongoDB database, kickstarting several projects for my fellow researchers

2013 (3 months) **Research Intern** – Technicolor (Paris, France)
- Designed a hierarchical topic model with Monte Carlo Markov Chain inference for legal document classification and exploratory analysis of patent portfolios
- Presented the results to both the research and legal teams

TEACHING AND OUTREACH EXPERIENCE

2015-2020 **Teaching Assistant** – EPFL
- Led the rapid conversion of 2 courses to an online format due to Covid-19 restrictions at EPFL
- Taught a number of lectures for several courses, including the cornerstone "Stochastic Models for Communications" course for undergraduate students at EPFL (~100 students)
- Designed data mining exercises in Python/Spark. Recruited and led several teams of teaching assistants for an undergraduate data mining course "Internet Analytics" (~50 students) Received Teaching Assistant Award for my work
- Oversaw exercise sessions and evaluated exams for undergraduate courses each semester

2015-2017 **Initial Study Advisor** – EPFL
- Helped the Deputy of Section with new M.Sc. students in "Communication Systems"
- Mentored >50 students over 3 years

Skills

Data Science Machine Learning, Optimization, Probabilistic Modeling, Applied Data Analysis, Information Theory, Statistical Signal Processing

Programming Python, Spark, R, Matlab, Bash, Java, SQL/NoSQL, HTML/CSS, LaTeX

Languages and miscellanea

Languages
- **French:** Native language
- **English:** Fluent, written and spoken

Services
- Reviewer for machine learning conferences: ICML, NeurIPS, and AISTATS
- Initial study advisor for new EPFL M.Sc. students

Honors and Awards

2020 In Top 33% of Reviewers, ICML'20
2019 Hackathon Winner, *2019 Hack TB, KIT*
2019 Teaching Assistant Award, EPFL
2016 Student Travel Award, ACM SIGKDD
2015 EDIC Fellowship, EPFL

Selected Publications

2021 **A Variational Inference Approach to Learning Multivariate Wold Processes**
J. Etesami, W. Trouleau*, N. Kiyavash, M. Grossglauser, P. Thiran.* ***AISTATS 2021****.*

2020 **Quantifying the Effects of Contact Tracing, Testing, and Containment Measures in the Presence of Infection Hotspots.**
L. Lorch, H. Kremer, W. Trouleau, S. Tsirtsis, A. Szanto, B. Schölkopf, M. Gomez-Rodriguez. *Preprint.*

2019 **Learning Hawkes Processes Under Synchronization Noise**
W. Trouleau, J. Etesami, M. Grossglauser, N. Kiyavash, P. Thiran. ***ICML 2019****.*

2019 **Learning Hawkes Processes from a Handful of Events**
F. Salehi, W. Trouleau*, M. Grossglauser, P. Thiran.* ***NeurIPS 2019****.*

2018 **Stochastic Optimal Control of Epidemic Processes in Networks**
L. Lorch, A. De, S. Bhatt, W. Trouleau, U. Upadhyay, M. Gomez-Rodriguez. Machine Learning for Health Workshop at NeurIPS, 2018. ***ML4H 2018****.*

2017 **Prev. chemotherapy to control soil-transmitted helminthiasis averted more than 500'000 DALYs in 2015**
A. Montresor, W. Trouleau, D. Mupfasoni, M. Bangert, S.A. Joseph, A. Mikhailov, C. Fitzpatrick. **Transactions of The Royal Society of Tropical Medicine and Hygiene**, 2017.

2016 **Just one more: Modeling binge watching behavior**
W Trouleau, A Ashkan, W Ding, B Eriksson. ***KDD 2016****.*

** Equal contribution*