

# William TROULEAU

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French citizen  
Swiss C Permit  
Born 28.03.1991

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

## EDUCATION

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- 2015 – ongoing **Ph.D. in Machine Learning** – École Polytechnique Fédérale de Lausanne (EPFL)  
(Estimated June 2021)
- 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

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- 2019 **Research Intern** – Institute for Disease Modeling (Seattle, USA)  
(3 months)
- 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 for our team
  - Won the competition (out of 9 international teams)
- 2014 – 2015 **Research Intern** – Technicolor (Los Altos, CA, USA)  
(10 months)
- 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 **Research Intern** – Technicolor (Paris, France)  
(3 months)
- 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

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- 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

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- 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

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- Languages**
- o **French:** Native language
  - o **English:** Fluent, written and spoken
- Services**
- o Reviewer for machine learning conferences: ICML, NeurIPS, and AISTATS
  - o Initial study advisor for new EPFL M.Sc. students

## HONORS AND AWARDS

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- 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

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- 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