

# THERESA STADLER

PhD Research Assistant, Security and Privacy

✉ [theresa.stadler@epfl.ch](mailto:theresa.stadler@epfl.ch)

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## EXPERIENCE

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### Teaching Assistant - EPFL (CH)

2019 – Present

Teaching Activities in Information Security and Privacy.

Lectures at BSc and MSc level on computer security and privacy, incl. technologies, such as, differential privacy and privacy-preserving machine learning.

### Research Scientist - Privitar (UK)

2016 – 2019

Research and Product Development.

Designed, developed, and prototyped enterprise software that implements privacy-enhancing technologies at scale.

### Graduate Student Research Assistant - Werner Reichardt Centre for Integrative Neuroscience (DE)

2015-2016

Experimental Research and Data Analysis.

Statistical models of visual information processing in retinal ganglion cells.

### Student Research Assistant - University of Erlangen (DE)

2012 - 2014

Experimental Research and Data Analysis.

Electrophysiology and biophysical modelling of voltage-gated sodium channels and the molecular mechanisms of chronic pain disorders.

## EDUCATION

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### PhD - SPRING Lab, EPFL (CH)

2019 - Present

Supervised by Prof. Carmela Troncoso.

Research in Privacy, Risk Assessments, and Machine Learning.

### MSc in Computational Neuroscience (GPA: 3.7/4.0) - University of Tübingen (DE)

2014 - 2016

Lectures in Statistics, Machine Learning, Dynamic Systems, and Neuroscience

### BSc in Biomathematics (GPA: 3.6/4.0) - University of Erlangen (DE)

2011 - 2014

Lectures in Statistics, Linear Algebra, Physics, and Biology

## GRANTS & AWARDS

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### Graduate Grant - Studienstiftung des Deutschen Volkes (DE)

2011 - 2016

## SELECTED INVITED TALKS

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Panel	<b>Looking beyond the EU data strategy: Where next for data use and regulation? - CPDP</b> Panel discussion on the future of data use and regulations	2023
Lecture	<b>Synthetic data as a privacy mechanism - A cautionary tale - MIT</b> Invited lecture in the Health Science and Technology Program	2022
Talk	<b>Why are Organisations Slow to Adopt PETs? Differential Privacy as a Case Study - EPFL</b> Invited talk on the challenges to adopt privacy-enhancing technologies in practice and at scale.	2018

## SELECTED MEDIA COVERAGE

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News Article	<b>Warum wollen plötzlich alle Luca? - Eva Wolfangel, Die Zeit</b> Available at <a href="https://www.zeit.de">zeit.de</a>	2021
Podcast	<b>#22 Luca vs. Datenschutz - She likes Tech Podcast, NDR</b> Available at <a href="https://www.ndr.de">ndr.de</a>	2021
News Article	<b>EU privacy experts push a decentralized approach to COVID-19 contacts tracing - TechCrunch</b> Available at <a href="https://techcrunch.com">techcrunch.com</a>	2020
News Article	<b>Coronavirus apps: the risk of slipping into a surveillance state. - Financial Times</b> Available at <a href="https://ft.com">ft.com</a>	2020

## ACADEMIC SERVICE & INVITED REVIEWS

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PC Member	<b>Conference on Fairness, Accountability, and Transparency - FAccT</b>	2024
PC Member	<b>Privacy Enhancing Technologies Symposium - PETS</b>	2019-2023
Invited Reviewer	<b>Workshop on Privacy in Machine Learning - NeurIPS'21</b>	2021
Invited Reviewer	<b>Workshop on Synthetic Data Generation - ICLR'21</b>	2021
External Reviewer	<b>Conference on Computer and Communications Security - CCS'19</b>	2019
Reviewer	<b>Rethinking data and balancing digital power</b> by the Ada Lovelace Institute Report on a future vision for data use and regulation. Available at <a href="http://adalovelaceinstitute.org">adalovelaceinstitute.org</a>	2022
Reviewer	<b>Privacy &amp; Online Rights</b> by Carmela Troncoso Chapter on Privacy & Online Rights in the Cyber Security Body of Knowledge. Available at <a href="http://cybok.org">cybok.org</a>	2019

## PUBLICATIONS

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- 2024**
- T. Stadler, B. Kulynych, N. Papernot, M. Gastpar, and C. Troncoso. The fundamental limits of least-privilege learning. In *Proceedings of the 41th International Conference on Machine Learning (ICML 24)*, 2024
- 2022**
- T. Stadler, B. Oprisanu, and C. Troncoso. Synthetic data – Anonymisation Groundhog Day. In *31st USENIX Security Symposium (USENIX Security 22)*, 2022
- T. Stadler and C. Troncoso. Why the search for a privacy-preserving data sharing mechanism is failing. *Nature Computational Science*, 2022
- C. Troncoso, T. Stadler, D. Bogdanov, E. Bugnion, S. Chatel, C. Cremers, S. Gürses, J.-P. Hubaux, D. Jackson, J. R. Larus, et al. Deploying decentralized, privacy-preserving proximity tracing. *Communications of the ACM*, 2022
- 2021**
- T. Stadler, W. Lueks, K. Kohls, and C. Troncoso. Preliminary analysis of potential harms in the luca tracing system. *arXiv preprint arXiv:2103.11958*, 2021
- 2020**
- C. Troncoso, M. Payer, J.-P. Hubaux, M. Salathé, J. Larus, E. Bugnion, W. Lueks, T. Stadler, A. Pyrgelis, D. Antonioli, et al. Decentralized privacy-preserving proximity tracing. *arXiv preprint arXiv:2005.12273*, 2020
- V. von Wyl, S. Bonhoeffer, E. Bugnion, M. A. Puhan, M. Salathé, T. Stadler, C. Troncoso, E. Vayena, and N. Low. A research agenda for digital proximity tracing apps. *Swiss Medical Weekly*, 2020
- M. Salathé, C. L. Althaus, N. Anderegg, D. Antonioli, T. Ballouz, E. Bugnion, S. Capkun, D. Jackson, S.-I. Kim, J. Larus, et al. Early evidence of effectiveness of digital contact tracing for sars-cov-2 in switzerland. *medRxiv*, 2020
- 2015**
- T. Stadler, A. O. O'Reilly, and A. Lampert. Erythromelalgia mutation q875e stabilizes the activated state of sodium channel nav1.7. *Journal of Biological Chemistry*, 2015

## PATENTS

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- 2023**
- J. D. McFALL, C. C. Cabot, T. J. Moran, K. F. P. Guinamard, V. M. Eatwell, B. T. Pickering, P. D. Mellor, T. Stadler, A. Petre, C. A. Smith, et al. Computer-implemented privacy engineering system and method, Nov. 9 2023. US Patent App. 18/349,223
- 2022**
- C. C. Cabot, K. F. P. Guinamard, J. D. McFALL, P.-a. Maudis, P. Hector, B. T. Pickering, T. Stadler, J.-a. Tay, and S. Weller. Method or system for querying a sensitive dataset, Sept. 1 2022. US Patent App. 17/618,765