



Karel Kubicek

Curriculum Vitae

Education

- 2018–2024 **PhD Student**, *Dep. of Computer Science, ETH Zurich, CH*, Defended: Dec 14, 2023
Information Security Group. Supervisors: David Basin, Stefan Bechtold
- 2015–2017 **Master's Studies**, *Faculty of Informatics, Masaryk University, Brno, CZ*
Information Technology Security. Exchange semester at NTNU, Trondheim, NO.
- 2012–2015 **Bachelor's Studies**, *Faculty of Informatics, Masaryk University, Brno, CZ*
Computer Systems and Data Processing.

Experience

- 2024 Dec– **Postdoc at INRIA**, PRIVATICS, Sophia Antipolis
 - Funded by SNSF Postdoc.Mobility grant (equivalent of Marie Skłodowska-Curie Actions Postdoctoral Fellowships)
 - Topic: Reproducibility of Web Privacy Measurements, host: Nataliia Bielova
- 2024 Sep Nov **Paternity leave**
- 2024 Apr–Sep **Postdoc at ETH Zurich**, INFORMATION SECURITY GROUP, Zurich
- 2018–2024 **PhD Student at ETH Zurich**, INFORMATION SECURITY GROUP, Zurich
 - Led a novel project on websites' compliance with the EU privacy laws (GDPR, ePD)
 - Automated web privacy violation detection through crawling and ML (e.g., NLP)
- 2014–2018 **Research Assistant**, CENTRE FOR RESEARCH ON CRYPTOGRAPHY AND SECURITY
 - Developed randomness testing framework EACirc for analysis of cryptographic primitives
 - Three journal publications: cryptanalysis of Tiny Encryption Algorithm, new randomness testing methods, and evaluation of cryptoprimitives' security margins
- 2017 Jan–Sep **Network Security Researcher**, NEXA TECHNOLOGIES CZ, Brno
 - R&D project in the area of cryptography, privacy, and machine learning

Teaching

- 2022–2024 **Guest Lectures**
 - Introduction to LLMs in Law and Technology, University of Amsterdam
 - Automating Privacy Compliance in Capita Selecta: ePrivacy and Tracking Technologies, Utrecht University
 - Automating Privacy Compliance in Digital Society: Ethical, Societal and Economic Challenges, ETH Zurich
- 2019–2024 **Supervision, ETH Zurich**
 - Seven supervised MSc thesis, three resulting in A*/A conference publications
 - Six BSc theses and two semester project, one is part of a publication draft

- 2019–2021 **Seminar Tutor (BSc level courses)**, *ETH Zurich*
- 2019–2021 Information Security (BSc), tutoring PKI and privacy, 150 hours/semester
 - 2019 Algorithms and Data Structures (BSc), design and grading of coding exercises and exam, 300 hours/semester
- 2013–2017 **Seminar Tutor (BSc and MSc level courses)**, *Masaryk University*
- 2013–2017 Algorithms and Data Structures (BSc and MSc), 300 and 100 hours/semester
 - Composing an exercise book: 160 pages book with exercises and their solutions
 - Designing and grading assignments and final programming tasks
 - 2015–2016 Automata, Grammars, and Complexity (BSc), 150 hours/semester
- Service**
- 2019–2024 **Reviewer**
- IEEE Transactions on Privacy 2024 (journal)
 - ACM CCS 2019 (via assignment by colleague Esfandiar Mohammadi)
- 2013–2024 **Local responsibilities**
- *Academic Staff Organisation (VMI) at ETH Zurich*: treasurer, event organizer (retreats, career panels, social events), member of two hiring committees and helper to department evaluation team
 - *STEM Engagement Coordinator at Masaryk University*: Organizing informatics seminar, competitions, and puzzle hunts for both secondary-school and university students

Publications

- CSLAW 2025 *Multilingual Scraper of Privacy Policies and Terms of Service*, David Bernhard, Luka Nenadic, Stefan Bechtold, **Karel Kubicek**
- WWW 2024 *Automating Website Registration for Studying GDPR Compliance*, **Karel Kubicek**, Jakob Merane, Ahmed Bouhoula, David Basin
- USENIX Sec. 2024 *Automated Large-Scale Analysis of Cookie Notice Compliance*, Ahmed Bouhoula, **Karel Kubicek**, Amit Zac, Carlos Cotrini, David Basin
- PETS 2024 *Block Cookies, Not Websites: Analysing Mental Models and Usability of the Privacy-Preserving Browser Extension CookieBlock*, Lorin Schöni, **Karel Kubicek**, Verena Zimmermann
- CSLAW 2024 *Compliance Effort: The Timing and Content of Open Source Responses to Privacy Law Development* (presentation only), Aileen Nielsen, **Karel Kubicek**, Elias Datler
- PETS 2023 *Locality-Sensitive Hashing Does Not Guarantee Privacy! Attacks on Google's FLoC and the MinHash Hierarchy System*, Florian Turati, **Karel Kubicek**, Carlos Cotrini, David Basin
- PETS 2022 *Checking Websites' GDPR Consent Compliance for Marketing Emails*, **Karel Kubicek**, Jakob Merane, Carlos Cotrini, Alexander Stremitzer, Stefan Bechtold, and David Basin
- USENIX Sec. 2022 *Automating Cookie Consent and GDPR Violation Detection*, Dino Bollinger, **Karel Kubicek**, Carlos Cotrini, David Basin
- SECRYPT 2022 *Large-scale Randomness Study of Security Margins for 100+ Cryptographic Functions*, Dusan Klinec, Marek Sys, **Karel Kubicek**, Petr Svenda, Vashek Matyas
- ICETE 2017 *BoolTest: The Fast Randomness Testing Strategy Based on Boolean Functions with Application to DES, 3-DES, MD5, MD6 and SHA-256*, Marek Sys, Dusan Klinec, **Karel Kubicek**, Petr Svenda
- Infocom. Journal 2017 *New results on reduced-round Tiny Encryption Algorithm using genetic programming*, **Karel Kubicek**, Jiri Novotny, Petr Svenda, and Martin Ukrop

Awards

- 2024 SNSF Postdoc.Mobility grant for project *Reproducibility of Web Privacy Measurements*
- 2022 USENIX Security Distinguished Artifact Award for paper *Automating Cookie Consent and GDPR Violation Detection*
- 2022 1st place in CSAW'22 Europe Applied Research Competition for our USENIX paper *Automating Cookie Consent and GDPR Violation Detection*
- 2017 Awarded the 2nd place in the contest for the best thesis in the field of IT Security
- 2015–2017 Merit scholarships, top 5% students
- 2013–2017 Czech Science Foundation and University Foundation scholarship for research projects

Outreach

- 2024 Invited talk at Seminar on Cookies and Web Tracking (CNIL): Automating Website Registration for Studying GDPR Compliance
- 2024 Article at University of Amsterdam News: Said no to tracking cookies? Good chance your data are still being collected
- 2024 Invited talk at Masaryk University colloquium: Automated Analysis and Enforcement of Consent Compliance
- 2023 Two invited talks at French Data Protection Authority (CNIL) Privacy Research Day: Automating Cookie Consent and GDPR Violation Detection; Compliance Effort: Responses to Data Protection Statutes in Open Source Development
- 2022 Article at ETH Zurich News: Automatically filter and block cookies
- 2022 Article at NZZ: Most websites violate cookie policies (available upon request)
- 2022 Invited talk at 20. Gulaschprogrammierenacht Chaos Computer Club: Automating Cookie Consent and GDPR Violation Detection

Featured Skills

- Technical PYTHON, C(++), L^AT_EX, data science, ML (NLP and LLMs), Privacy Enhancing Technologies (*PETs*), cryptography, optimisation methods, DevOps, secure coding
- Legal GDPR, ePrivacy Directive, DMA, DSA, privacy law implementation and enforcement
- Languages Czech (Mother tongue), English (C2), German (B2)

Interests

- Paragliding, mountaineering
- Outdoor sports
- Work in education system
- Puzzlehunting, board games

References

- ETH Zurich David Basin, Stefan Bechtold
- PhD defense Nataliia Bielova, Hamza Harkous
- Masaryk Uni. Vashek Matyas, Petr Svenda
- Nexa Tech. Jaroslav Šeděnka, Martin Stehlík