

KONRAD KOLLNIG

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EMPLOYMENT

Maastricht University 05/2023–
Assistant Professor, Law & Tech Lab, Faculty of Law

In my work, I strive to create a more equitable digital economy and make technology laws, like the GDPR and AI Act, work in practice. I am motivated by the fact that it is highly challenging to scale and enforce technology laws across millions of apps and websites. Thus, new approaches are needed to ensure online safety, which I try to address.

EDUCATION

University of Oxford 10/2018–04/2023
MSc and PhD in Computer Science

- PhD Title: ‘Regulatory Technologies for the Study of Data and Platform Power in the App Economy’. Supervisor: Prof Sir Nigel Shadbolt
- Graduated MSc with *Distinction*. Thesis: ‘Data protection in apps under GDPR’

University of Edinburgh 09/2016–12/2016
Visiting Student, 1 Semester

- Grade: *Distinction* (75%)

RWTH Aachen University 10/2014–09/2017
BSc in Computer Science and Mathematics

- *Best graduate of cohort* (of ~700 students) of the best German university for CS

AWARDS

- 2022: Winner of the United Nation’s Privacy Hackathon 2022 (among 196 teams)
- 2022: Winner of the Student Paper Award, Privacy Papers for Policymakers 2022, Future for Privacy Forum (awarded annually to one paper worldwide)
- 2019–2023: DeepMind–Oxford PhD Scholarship (£87,500)
- 2019: Merton College Award for Distinction in MSc
- 2018: Awarded Student Speaker of the German Mathematical Society (book prize)
- 2017: Schöneborn Award: best overall grades in BSc CS cohort of ~700 students
- 2015–2018: Dean’s List of RWTH Aachen University (awarded four times)

PUBLICATIONS

* denotes equal contribution

Conference Publications (Peer-Reviewed):

- [1]: **K Kollnig**, Q Li. (2023). Exploring Antitrust and Platform Power in Generative AI. *GenLaw ’23 (ICML’23 Workshop)*. <https://doi.org/10.48550/arXiv.2306.11342>
- [2]: **K Kollnig**, S Datta, T Şerban von Davier, M Van Kleek, R Binns, U Lyngs, N Shadbolt (2023): ‘We are adults and deserve control of our phones’: Examining the risks and

- opportunities of a right to repair for mobile apps. *ACM FAccT 2023*.
<https://doi.org/10.1145/3593013.3593973>
- [3]: **K Kollnig**, L Zhang, J Zhao, N Shadbolt (2023): Before and after China's new Data Laws: Privacy in Apps. *ConPro 2023*. <https://conpro23.ieee-security.org/papers/kollnig-conpro23.pdf>
- [4]: S Datta, **K Kollnig**, N Shadbolt (2022): GreaseVision: Rewriting the Rules of the Interface. *NAACL 2022 Workshop*. <https://doi.org/10.18653/v1/2022.dadc-1.2>
- [5]: **K Kollnig**, A Shuba, M Van Kleek, R Binns, N Shadbolt (2022). Goodbye Tracking? Impact of iOS App Tracking Transparency and Privacy Labels. *ACM FAccT 2022*.
<https://doi.org/10.1145/3531146.3533116>
- [6]: S Datta, **K Kollnig**, N Shadbolt (2022). Mind-proofing Your Phone: Navigating the Digital Minefield with GreaseTerminator. *ACM IUI 2022*.
<https://doi.org/10.1145/3490099.3511152>
- [7]: D Omeiza, **K Kollnig**, H Webb, M Jirotko and L Kunze (2021). Why Not Explain? Effects of Explanations on Human Perceptions of Autonomous Driving. *ARSO 2021*.
<https://doi.org/10.1109/ARSO51874.2021.9542835>
- [8]: **K Kollnig**, R Binns, P Dewitte, M Van Kleek, G Wang, D Omeiza, H Webb and N Shadbolt (2021). A Fait Accompli? An Empirical Study into the Absence of Consent to Third-Party Tracking in Android Apps. *SOUPS 2021*.
<https://www.usenix.org/system/files/soups2021-kollnig.pdf> – *Winner of the FPF Student Paper Award, Privacy Papers for Policymakers 2022*
- [9]: **K Kollnig***, S Datta* and M Van Kleek (2021). I Want My App That Way: Reclaiming Sovereignty Over Personal Devices. *ACM CHI 2021 LBW*.
<https://doi.org/10.1145/3411763.3451632>

Journal Publications (Peer-Reviewed):

- [10]: **K Kollnig**, N Shadbolt (2023). How Decisions by Apple and Google obstruct App Privacy. *Technology and Regulation*.
- [11]: **K Kollnig** (2023). Lessons from the GDPR: Five priorities for effective IT regulation. *Ad Legendum*, 2023 (2). <https://dx.doi.org/10.2139/ssrn.4372149>
- [12]: T Johnson*, **K Kollnig***, P Dewitte (2022). Responsible Collection and Sharing of Public Health Data: Ethical and Legal Aspects. *Internet Policy Review* 11 (1).
<https://doi.org/10.14763/2022.1.1638>
- [13]: **K Kollnig**, N Shadbolt (2022). TrackerControl: Transparency and Choice around App Tracking. *Journal of Open Source Software*, 7(75), 4270,
<https://doi.org/10.21105/joss.04270>
- [14]: **K Kollnig**, A Shuba, R Binns, M Van Kleek and N Shadbolt (2022). Are iPhones Really Better for Privacy? A Comparative Study of iOS and Android Apps. *PETS 2022*. <https://doi.org/10.2478/popets-2022-0033> – *This paper was nominated for the IETF Applied Networking Research Prize 2023 and was ranked the top 12 security and privacy paper of 2022: https://www.mlsec.org/topnotch/sec_ntop100.html*
- [15]: **K Kollnig**, R Binns, M Van Kleek, U Lyngs, J Zhao, C Tinsman and N Shadbolt (2021). Before and after GDPR: tracking in mobile apps. *Internet Policy Review*, 10(4).
<https://doi.org/10.14763/2021.4.1611>

- [16]: **K Kollnig**, P Bientinesi and E Di Napoli (2021). Rational spectral filters with optimal convergence rate. *Journal on Scientific Computing*.
<https://doi.org/10.1137/20M1313933> – *Bachelor's Thesis*
- [17]: Y Y Kolotaev* and **K Kollnig*** (2021). Political Influence of Online Platforms: YouTube's Place in European Politics. *Journal on International Relations of Saint Petersburg University*. <https://irjournal.spbu.ru/article/view/10176/8096>
- Technical Reports, Pre-Prints, Government Consultations, and Comments:
- [18]: T Şerban von Davier, **K Kollnig**, R Binns, M Van Kleek, N Shadbolt (2023). We Are Not There Yet: The Implications of Insufficient Knowledge Management for Organisational Compliance. <https://doi.org/10.48550/arXiv.2305.04061>
- [19]: A Shteyn, **K Kollnig** and C Inverarity (2023). Federated learning: an introduction – Considerations and practical guidance for prospective adopters. *Open Data Institute*. <https://www.theodi.org/article/federated-learning-an-introduction-report/>
- [20]: **K Kollnig**, R Binns, N Shadbolt (2022). Response to the public consultation by the UK Competition and Markets Authority.
https://assets.publishing.service.gov.uk/media/6229ac9b8fa8f526cf29aa2f/Konrad_Kollnig__Reuben_Binns__Nigel_Shadbolt__Department_of_Computer_Science__University_of_Oxford.pdf
- [21]: **K Kollnig**, R Binns (2022): The Cost of the GDPR for Apps? Nearly Impossible to Study without Platform Data. <https://arxiv.org/abs/2206.0973>
- [22]: Researchers from the Human Centred Computing Research Group and the Responsible Technology Institute (2021). Response to the public consultation on reforms to the UK's data protection regime by the Department for Digital, Culture, Media & Sport. https://kollnig.net/wp-content/uploads/2021/12/Oxford_HCC_RTI_DCMS_Consultation_Response.pdf
- [23]: D Beavan, F Barez, M Bell, J Fitzgerald, E Goudarouli, **K Kollnig**, B McGillivray, F Nanni, T Rashid, S Sousa, T Storrar, K Svetlov, L Talboom, A Vuillomenet, P Willcox (2021). Data Study Group Final Report: The National Archives.
<https://www.turing.ac.uk/research/publications/data-study-group-final-report-national-archives-uk>
- [24]: Y Y Kolotaev*, **K Kollnig*** (2020). Perceptions of YouTube's political influence.
<https://doi.org/10.48550/arXiv.2012.07745>
- [25]: **K Kollnig** (2019). Tracking in apps' privacy policies.
<https://doi.org/10.48550/arXiv.2111.07860>

Opinion Articles (Op-eds):

- [26]: **K Kollnig**, P Dewitte (2023). "GDPR compliance is hard", but is it? – 20 hours to overcome privacy issues in mobile apps.
<https://policyreview.info/articles/news/gdpr-compliance-privacy-issues-mobile-apps/1678>
- [27]: **K Kollnig**, Yury Kolotaev (2019). YouTube: a new age for political campaigning? *Oxford Student*. <https://www.oxfordstudent.com/2019/10/29/youtube-a-new-age-for-political-campaigning/>

Organised Workshops:

- [28]: D Omeiza, S Anjomshoae, **K Kollnig**, O Camburu, K Främling and L Kunze (2021). Towards Explainable and Trustworthy Autonomous Physical Systems. *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*. <https://dl.acm.org/doi/10.1145/3411763.3441338>

Theses:

- [29]: **K Kollnig** (2019). Mission Control: Data protection in apps under GDPR. *MSc thesis at University of Oxford*. <https://kollnig.net/msc-thesis/>
- [30]: **K Kollnig** (2017). Constrained Optimisation of Rational Functions for Accelerating Subspace Iteration. *BSc thesis at RWTH Aachen*. <https://doi.org/10.48550/arXiv.1710.07771>

SERVICE

- 2023, Co-organiser of the 36th JURIX Conference on law and AI
- 2023, PC and Reviewer for PETS 2024 + ICAIL 2023 + SOUPS PEP '23 + Digital Legal Talks '23
- 2023: Signatory of Open Letter on Client-Side Scanning of 450+ leading academics
- Since 2022, Member of the Technology Advisory Panel of the Information Commissioner's Office (ICO), the UK data protection regulator
- Since 2022, Member of Pool of Experts of EU's European Data Protection Board
- Since 2022, Member of the W3C Privacy Community Group
- Since 2021: Advising various organisations and NGOs on data protection in apps (including noyb, Sitra, 5Rights, Big Brother Watch, Washington Post)
- Since 2019, Developer of TrackerControl (100k+ downloads) and maintainer of online community (1k+ members)
- 2022–2023, Member of the PETS Artifact Review Committee
- 2022–2023, Member of Computers and Law Research Group, Oxford Law Faculty
- 2022, Reviewer for PLOS ONE and the DFG, the German funding agency
- 2022, Co-founder of AIReg.net, a new blog on AI regulation
- 2022, Led report for public consultation of CMA in the UK
- 2019–2023, Student Researcher in the EPSRC-funded KOALA (Kids Online Anonymity & Lifelong Autonomy) project on privacy for kids
- 2019–2023, PhD student representative, Department of Computer Science Oxford
- 2021, Co-led report for public consultations on reforming UK data protection law
- 2021, Member of Tracking-Free Ads Coalition that made important amendments to the EU Digital Services Act relating to personalised advertising
- 2020, Co-organised CHI Workshop on Explainable and Trustworthy Autonomous Physical Systems
- 2020, Co-convenor HCC Safety Reading Group
- Member of Leos Mülheim, Corona School, Oxford Fintech and Legaltech Society, German Mathematicians' Association

SELECTED PRESS COVERAGE

- Digiday (2023). “Two years into Apple’s ATT, ad-tech still sees growth despite slowdowns”

- RESET (2023): Why you need to constantly charge your smartphone and what it has to do with tracking
- Netzpolitik (2022). “Many ,tracking-free‘ apps in iOS secretly track users”
- Vox/Recode (2022). “The winners and losers of Apple’s anti-tracking feature”
- Forbes (2022). “Why The Crumbling Of Advertising Cookies Brings A New Recipe For Customer Engagement”
- Ars Technica (2022). “Your iOS app may still be covertly tracking you, despite what Apple says”
- Der Standard (2022). "Study: iPhone apps continue to track eagerly despite Apple's privacy changes"
- TechCrunch (2022). “Study of Apple’s ATT impact highlights competition concerns”
- Der Standard (2022). "Numerous iPhone apps spy on users, but claim the opposite"
- Der Standard (2021): "Study shows: Data collection with iPhone apps hardly better than under Android"
- The Register (2021): “What do iOS and Android have in common?”
- Wired UK (2021): “All those pub apps you’ve downloaded are a privacy nightmare”
- IEEE Spectrum (2021): “New Tool Strips Manipulative “Dark Patterns” From Mobile Apps”
- xataka (2020): “More privacy for your mobile with TrackerControl, an app that blocks trackers and analyses their connections”
- EL ESPAÑOL (2019): “The best app to check who's tracking your data”

TALKS

1. The Eyes-Off Data Summit, Dublin (2023): Ethics & GDPR in Privacy-Preserving Data Science
2. Marketing Department, Goethe University Frankfurt (2023): Identity (Crisis) for Advertisers? Studying the App Tracking Ecosystem
3. Competition and IP in Digital Markets Conference, Maastricht (2023): Ticketmaster, online bots and the price of concert tickets: competition, consumer protection and technical perspectives
4. SecHuman, Ruhr University Bochum (2023): Why CS must care about the law: priorities for more effective tech regulation
5. UK Competition and Markets Authority, London (2023): Big tech – why it matters to researchers and why it should matter to the regulators
6. FAccT Conference, Chicago (2023): ‘We are adults and deserve control of our phones’: Examining the risks and opportunities of a right to repair for mobile apps
7. ConPro Workshop – co-organised by the US Federal Trade Commission, San Francisco (2023): Before and after China’s new Data Laws: Privacy in Apps
8. Northeastern (2023): Why CS must care about the law: Priorities for more effective tech regulation
9. UC Davis (2023): Why CS must care about the law: Priorities for more effective tech regulation
10. HCI Research Workshop, Department of Computer Science, University of Oxford (2023): App Extensions: Imagining, Studying and Realising A Less Harmful App Ecosystem

11. Open Data Institute (2023): Personal Data Tracking and Control (together with Max Van Kleek)
12. 2nd DPSN Data Protection Day (2023): Ready for the EU Digital Services Act? How Decisions by Apple and by Google impede App Privacy
13. Horst Görtz Institute for IT Security in Bochum (2022): Identity (Crisis) for Advertisers? Studying the Tracking Ecosystems of Android and iOS
14. 5th International Computational Law Forum of Tsinghua University (2022): The Impact of China's New Data Laws on Apps' Privacy Practices – together with Lu Zhang
15. Digital Legal Talks (2022): Ready for the EU Digital Services Act? How Decisions by Apple and by Google impede App Privacy
16. Introduction of new MSc Students in CS (2022): Measuring App Privacy and Compliance At Scale
17. CNIL Privacy Research Day (2022): The Absence of Consent to Tracking in Apps – together with Pierre Dewitte
18. Lions Club Mülheim (2022): Effects of the GDPR on Privacy in Practice
19. Chat with Kohei Kurihara from the Privacy by Design Lab (2022)
20. Privacy Enhancing Technologies Symposium (2022): Are iPhones Really Better for Privacy? A Comparative Study of iOS and Android Apps
21. Conference on Fairness, Accountability, and Transparency (2022): Goodbye Tracking? Impact of iOS App Tracking Transparency and Privacy Labels
22. Oxford Internet Institute Connected Life Conference (2022): Mobile App Extensions: Selective User Choice over Harms in Mobile Apps
23. Oxford/UCL Colloquium on Tech Policy (2022): A right to repair for code? Exploring a new method against harms in apps
24. Venice Colloquium on AI Regulation (2022): Regulation of AI: New and Old
25. Stanford Security Lunch (2022): Analyzing app privacy at scale
26. Meetup of Data Protection Scholars' Network (2022): "Before and after GDPR: tracking in mobile apps"
27. Oxford Faculty of Law – Future of Technology and Society Discussion Group (2022): Assessing the Compliance of Mobile Apps with Data Protection Law
28. HCC Research Group (2021): Privacy. That's iPhone – is it really?
29. University of Copenhagen, Datified Living seminar (2021): Identity (Crisis) for Advertisers? Studying the App-Tracker Ecosystems of Android and iOS – together with Reuben Binns
30. Hertford College Oxford, Academic Soirée (2021): iOS is always more private than Android – and other myths
31. Oxford German Society Research Symposium (2021): Is iOS really more private than Android?
32. Berkeley Laboratory for Usable and Experimental Security (2021): App Tracking from an EU perspective
33. Symposium on Usable Privacy and Security (2021): A Fait Accompli? An Empirical Study into the Absence of Consent to Third-Party Tracking in Android Apps
34. The Rise of Privacy Tech (2021): Combatting Dark Patterns with Privacy Tech – together with Jennifer King and Kelly Huang
35. Human-Centred Computing Research Group, DPhil Colloquium (2021)

36. Academy of Law (2021): Basics of AI, machine learning and law – together with Nick West
37. Hertford College Oxford, Academic Soirée (2020): The Power of App Stores
38. OpenRightsGroup Oxford (2020): Digital Security Lightning Talks
39. Human-Centred Computing Research Group, DPhil Colloquium (2020)
40. Hertford College Oxford (2019): Lives at risk: Excessive data collection in apps
41. Introduction of new MSc Students in CS (2019): Privacy in Apps
42. PhD Open Day, Department of Computer Science Oxford (2019): TrackerControl: Tame tracking in apps

TEACHING

- 2023: Advanced Legal Analytics (Teaching Assistant), Maastricht University
- 2023: Deep Learning in Healthcare (Teaching Assistant), University of Oxford
- 2022: Software Requirements (Teaching Assistant), University of Oxford
- 2021: Introduction to Machine Learning (Guest Lecture), AIFC Academy of Law
- 2021: Software Requirements (Teaching Assistant), University of Oxford
- 2020: Corona School – Provided free tuition for secondary school students
- 2020: Computational Game Theory (Marking Only), University of Oxford
- 2020: Machine Learning (Marking Only), University of Oxford
- 2020: Software Requirements (Teaching Assistant), University of Oxford
- 2016: Formal Systems, Automata and Processes (Teaching Assistant), RWTH
- 2009–2014: “Students help students” – free tuition for secondary school students

FUNDING

- €800 – Travel Fund for Young Research, Maastricht Faculty of Law (2023)
- £300 – Hertford College Travel Grant (2022): Funding to attend CPDP in Brussels
- £30,000 – Alchemist Accelerator (2021): Funding for Deriskly Limited
- \$3,750 – SIGCHI Development Fund Grant (2021): Funding to run a CHI workshop
- £2,000 – EPSRC Research Fund (2021): Coverage of research expenses during my PhD research
- £300 – Hertford College Travel Grant (2019): Funding to attend the 4th European Privacy Law Scholars Conference in Amsterdam and Mozilla MozFest in London in December 2019
- £500 – Merton College Graduate Fund (2019): Coverage for research expenses during my MSc research
- £75,000 – DeepMind-Oxford PhD Scholarship (2019): Funding for my PhD
- €3,600 – Germany Scholarship of RWTH Aachen University (2017)
- €3,600 – Germany Scholarship of RWTH Aachen University (2016)
- €3,600 – Germany Scholarship of RWTH Aachen University (2015)
- €1,200 – Erasmus+ scholarship (2016): To attend the University of Edinburgh

LANGUAGES

- German: Native
- English: Full proficiency (C2)
- French: Proficient (B2)
- Latin: Reading proficiency (B2)

REFERENCES

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