Jan Tolsdorf

DR. RER. NAT. (EQUIVALENT TO PH.D.) · HE/HIM

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Research interests: human factors research, trustworthy AI, human-centered privacy & security

Education

Ph.D. in Computer Science (Dr. rer. nat., summa cum laude) · *07/2019 - 08/2022*
GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN · *Göttingen, Germany*
Advisors: Professors Dr.-Ing. Delphine Reinhardt and Dr.-Ing. Luigi Lo Iacono

M.Sc. in Media Technology · *09/2016 - 01/2019*
TECHNISCHE HOCHSCHULE KÖLN UNIVERSITY OF APPLIED SCIENCES · *Cologne, Germany*
Thesis Advisors: Professors Dr.-Ing. Luigi Lo Iacono and Dr.-Ing. Matthew Smith

B.Sc. in Media Technology · *09/2012 - 08/2016*
TECHNISCHE HOCHSCHULE KÖLN UNIVERSITY OF APPLIED SCIENCES · *Cologne, Germany*
Thesis Advisors: Professors Dr.-Ing. Luigi Lo Iacono and Dr.-Ing. Arnulph Fuhrmann

Professional Experience

Postdoctoral Associate (AI Fellow) · *02/2024 - present*
THE GEORGE WASHINGTON UNIVERSITY · *Washington D.C., USA*
Institute for Trustworthy AI in Law & Society
Department of Computer Science
Supervisor: Prof. Adam J. Aviv, Ph.D.

Part-Time Faculty · *08/2024 - 12/2024*
THE GEORGE WASHINGTON UNIVERSITY · *Washington D.C., USA*
Department of Computer Science

External Lecturer · *03/2023 - 09/2023*
HOCHSCHULE BONN-RHEIN-SIEG UNIVERSITY OF APPLIED SCIENCES · *Sankt Augustin, Germany*
Institute for Cyber Security & Privacy
Department of Computer Science

Research Associate · *06/2020 - 02/2024*
HOCHSCHULE BONN-RHEIN-SIEG UNIVERSITY OF APPLIED SCIENCES · *Sankt Augustin, Germany*
Institute for Cyber Security & Privacy
Department of Computer Science
Supervisor: Prof. Dr.-Ing. Luigi Lo Iacono

Research Associate · *03/2018 - 05/2020*
TECHNISCHE HOCHSCHULE KÖLN UNIVERSITY OF APPLIED SCIENCES · *Cologne, Germany*
Institute for Media and Photo Technology
Faculty of Information, Media, and Electrical Engineering
Supervisor: Prof. Dr.-Ing. Luigi Lo Iacono

Student Assistant
G&L Geißendörfer und Leschinsky GmbH
Team Software Development

Publications

Peer-Reviewed Research Articles

[INPROGRESSa] David Langer, **Jan Tolsdorf**, and Luigi Lo Iacono. "Development of the Psychometric Information Security Awareness Scale for Health Care Organizations (ISA-HCO): An Analysis of Enablers and Barriers to Information Security in Hospitals in Germany". In: *In progress*. 2025.

[INPROGRESSb] **Jan Tolsdorf**, Monica Kodwani, Alan F. Luo, Junho Eum, Mahmood Sharif, Michelle L. Mazurek, and Adam J. Aviv. "Perceptions and Exposures of Bias in AI Conversational Agents: Exploring Trust, Fairness, and Risk". In: *In progress*. 2025.

[INPROGRESSc] **Jan Tolsdorf**, David Langer, and Luigi Lo Iacono. "Phishing Susceptibility and the (In-)Effectiveness of Common Security Indicators in Large Hospitals with Heterogeneous Personnel". In: *In progress*. 2025.

[ConPro 25] **Jan Tolsdorf**, Alan F. Luo, Monica Kodwani, Junho Eum, Mahmood Sharif, Michelle L. Mazurek, and Adam J. Aviv. "On a Scale of 1 to 5, How Reliable Are AI User Studies? A Call for Developing Validated, Meaningful Scales and Metrics about User Perceptions of AI Systems". In: *IEEE SPW Workshop on Technology and Consumer Protection*. 2025.

[INPROGRESSd] **Jan Tolsdorf**, Alan F. Luo, Monica Kodwani, Junho Eum, Mahmood Sharif, Michelle L. Mazurek, and Adam J. Aviv. "Safety Perceptions of Generative AI Conversational Agents: Uncovering Perceptual Differences in Trust, Risk, and Fairness". In: *Under Submission*. 2025.

[PETS 24] Florian Dehling, **Jan Tolsdorf**, Hannes Federrath, and Luigi Lo Iacono. "Internet Users' Willingness to Disclose Biometric Data for Continuous Online Account Protection: An Empirical Investigation". In: *Proceedings on Privacy Enhancing Technologies (PoPETs)* 2024.2 (2024).

[HCICPT 24] **Jan Tolsdorf** and Luigi Lo Iacono. "Expert Perspectives on Information Security Awareness Programs in Medical Care Institutions in Germany". In: *Proceedings of the 6th International Conference on HCI for Cybersecurity, Privacy and Trust (HCI-CPT)*. 2024.

[BIT 22] **Jan Tolsdorf**, Florian Dehling, and Luigi Lo Iacono. "Data Cart – Designing a Tool for the GDPR-compliant Handling of Personal Data by Employees". In: *Behaviour & Information Technology (BIT)* 41.10 (2022). IF: 3.7.

[PETS 22] **Jan Tolsdorf**, Delphine Reinhardt, and Luigi Lo Iacono. "Employees' privacy perceptions: exploring the dimensionality and antecedents of personal data sensitivity and willingness to disclose". In: *Proceedings on Privacy Enhancing Technologies (PoPETs)* 2022.2 (2022).

[SPOSE 22] Stephan Wiefling, **Jan Tolsdorf**, and Luigi Lo Iacono. "Data Protection Officers' Perspectives on Privacy Challenges in Digital Ecosystems". In: *Proceedings of the 4th Workshop on Security, Privacy, Organizations, and Systems Engineering (SPOSE)*. 2022.

[TrustBus 21] Florian Dehling, Denis Feth, Svenja Polst, Bianca Steffes, and **Jan Tolsdorf**. "Components and Architecture for the Implementation of Technology-driven Employee Data Protection". In: *Proceedings of the 18th International Conference on Trust, Privacy and Security in Digital Business (TrustBus)*. 2021.

[DuD 21b] Svenja Polst, **Jan Tolsdorf**, Florian Dehling, and Denis Feth. "Verarbeitung von Beschäftigtendaten". In: *Datenschutz und Datensicherheit (DuD)* 45.1 (2021).

[DuD 21a] **Jan Tolsdorf**, Florian Dehling, and Denis Feth. "Benutzerfreundlicher Datenschutz in Cloud-basierten Office-Paketen". In: *Datenschutz und Datensicherheit (DuD)* 45.1 (2021).

[PETS 21] **Jan Tolsdorf**, Florian Dehling, Delphine Reinhardt, and Luigi Lo Iacono. "Exploring mental models of the right to informational self-determination of office workers in Germany". In: *Proceedings on Privacy Enhancing Technologies (PoPETs)* 2021.3 (2021).

[APF 21] **Jan Tolsdorf**, Michael Fischer, and Luigi Lo Iacono. "A Case Study on the Implementation of the Right of Access in Privacy Dashboards". In: *Proceedings of the 9th Annual Privacy Forum (APF)*. 2021.

[IWPE 21] Stephan Wiefling, **Jan Tolsdorf**, and Luigi Lo Iacono. "Privacy Considerations for Risk-based Authentication Systems". In: *Proceedings of the 7th IEEE International Workshop on Privacy Engineering (IWPE)*. 2021.

[IRIS 20]   Christian K. Bosse, Aljoscha Dietrich, Patricia Kelbert, Hagen Küchler, Hartmut Schmitt, **Jan Tolsdorf**, and Andreas Weßner. "Beschäftigtendatenschutz: Rechtliche Anforderungen und Technische Lösungskonzepte". In: *Tagungsband des 23. Internationalen Rechtsinformatik Symposions IRIS 2020*. 2020.

[DuD 20]   **Jan Tolsdorf**, Christian K. Bosse, Aljoscha Dietrich, Denis Feth, and Hartmut Schmitt. "Privatheit am Arbeitsplatz - Transparenz und Selbstbestimmung bei Arbeit 4.0". In: *Datenschutz und Datensicherheit (DuD)* 44.3 (2020).

[AsiaUSEC 20]   **Jan Tolsdorf** and Florian Dehling. "In Our Employer We Trust: Mental Models of Office Workers' Privacy Perceptions". In: *Proceedings of the 1st Asian Workshop on Usable Security (AsiaUSEC, FC workshop)*. 2020.

[ITG News 20]   **Jan Tolsdorf**, Florian Dehling, and Luigi Lo Iacono. "Take Back Control! The Use of Mental Models to Develop Privacy Dashboards". In: *ITG News* 8.3 (2020). Edited by Informationstechnische Gesellschaft im VDE.

[EuroUSEC 20]   **Jan Tolsdorf** and Luigi Lo Iacono. "Vision: Shred If Insecure – Persuasive Message Design as a Lesson and Alternative to Previous Approaches to Usable Secure Email Interfaces". In: *Proceedings of the 5th European Workshop on Usable Security (EuroUSEC)*. 2020.

[ECCWS 18]   Nils Gruschka, Luigi Lo Iacono, and **Jan Tolsdorf**. "Classification of Android App Permissions: Tell Me What App You Are and I Tell You What You Are Allowed to Do". In: *Proceedings of the 17th European Conference on Cyber Warfare and Security (ECCWS)*. 2018.

[TrustBus 17]   Hoai Viet Nguyen, **Jan Tolsdorf**, and Luigi Lo Iacono. "On the Security Expressiveness of REST-Based API Definition Languages". In: *Proceedings of the 14th International Conference on Trust, Privacy and Security in Digital Business (TrustBus)*. 2017.

Further Publications and Reports

[KTM 23b]   **Jan Tolsdorf** and Luigi Lo Iacono. "Faktor Mensch: Risiko und Chance: Informationssicherheitsbewusstsein in medizinischen Einrichtungen – Expertenansichten (Teil 2)". In: *Krankenhaus Technik+Management (KTM)* 2023.9 (2023).

[KTM 23a]   **Jan Tolsdorf** and Luigi Lo Iacono. "Medizinisches Personal sensibilisieren: Bewusstsein für Gefährdungen der Patientenversorgung aus dem Cyberraum schaffen – Teil 1". In: *Krankenhaus Technik+Management (KTM)* 2023.7-8 (2023).

[BMBF 22]   Luigi Lo Iacono and **Jan Tolsdorf**. *Schlussbericht des Teilvorhabens "Konzeptionierung, Implementierung und Evaluation von Privacy-Dashboards im Arbeitnehmerdatenschutz" im Rahmen des Verbundprojekts "TrUSD - Transparente und selbstbestimmte Ausgestaltung der Datennutzung im Unternehmen"*. Technical report. Hochschule Bonn-Rhein-Sieg, 2022.

[DISS 22]   **Jan Tolsdorf**. "Investigation of Information Privacy in Employment: Fundamental Knowledge and Practical Solutions for the Human-Centered Design of Measures to Preserve the Right to Informational Self-Determination in Employment". Dissertation. 2022.

Book Chapters

[Book 23b]   Eduard C. Groen, Denis Feth, Svenja Polst, **Jan Tolsdorf**, Stephan Wiefling, Luigi Lo Iacono, and Hartmut Schmitt. "Achieving Usable Security and Privacy Through Human-Centered Design". In: *Human Factors in Privacy Research*. Edited by Nina Gerber, Alina Stöver, and Karola Marky. 2023.

[GI 23]   **Jan Tolsdorf**. "Informationelle Privatheit im Beschäftigungsverhältnis". In: *Ausgezeichnete Informatikdissertationen 2022 (Band D23)*. 2023.

[Book 23a]   **Jan Tolsdorf** and Luigi Lo Iacono. "Data Cart: A Privacy Pattern for Personal Data Management in Organizations". In: *Human Factors in Privacy Research*. Edited by Nina Gerber, Alina Stöver, and Karola Marky. 2023.

Awards, Fellowships, & Grants

Nominee for the Dissertation Award 2022 of the German Informatics Society, 2023
Georg-August-Universität Göttingen

Doctoral Thesis Award Bonn-Rhein-Sieg University Society 2022, *€ 1,000* 2023
Hochschulgesellschaft Bonn-Rhein-Sieg e. V.

GAUSS Book Award in recognition of outstanding doctoral achievements, 2022
Georg-August-Universität Göttingen

Invited Talks & Guest Lectures

Invited talk, GCI Seminar Series, Rochester Institute of Technology, Rochester, New York, USA Fall '24
"Enabling Human-Centered Privacy and Security Engineering"

Guest lecture, Barnard College, Columbia University, New York, USA Fall '24
"Conceptualizations of Privacy"

Invited talk, The George Washington University, Washington, D.C., USA Spring '23
"Enabling Human-Centered Privacy and Security Engineering"

Invited talk, Stammtisch Cyber Security Cluster Bonn e. V., Bonn, Germany Winter '23
"'Das Verfahren ist nicht neu […] aber Sie erreichen damit niemanden mehr' – Maßnahmen zur Steigerung von Informationssicherheitsbewusstsein in medizinischen Versorgungseinrichtungen. (Engl.: Measures to increase information security awareness in medical care facilities.)"

Invited talk, Hochschulgesellschaft Bonn-Rhein-Sieg e. V., Sankt Augustin, Germany Winter '22
"Employee-Centered Design of Technical and Organizational Privacy Measures"

Invited talk, CS Colloquium, Karlstad University, Karlstad, Sweden Winter '22
"Employee-Centered Design of Technical and Organizational Privacy Measures"

Invited talk, AFSecurity Seminar, University of Oslo, Oslo, Norway Winter '22
"Employee-Centered Design of Technical and Organizational Privacy Measures"

Guest lecture, Friedrich-Alexander-Universität, Erlangen-Nürnberg, Germany Summer '22
"Employees' Mental Models of the Right to Privacy: Insights from Germany"

Inited talk, Usable Security and Privacy (USP) Day, VDE ITG, Online, Germany Summer '22
"Data Cart - Designing a tool for the GDPR-compliant handling of personal data by employees"

Guest lecture, Georg-August-Universität, Göttingen, Germany Winter '21
"Employees' Mental Models of the Right to Privacy: Insights from Germany"

Guest lecture, Georg-August-Universität, Göttingen, Germany Winter '20
"Employees' Mental Models of the Right to Privacy: Insights from Germany"

Invited talk, Georg-August-Universität Göttingen, Göttingen, Germany Spring '19
"Das Privacy-paradoxon – Der Scheinbare Widerspruch Zwischen Bedenken Und Verhalten Beim Datenschutz (Engl.: The Privacy Paradox - the Apparent Contradiction Between Privacy Concerns and Behavior)"

Teaching & Mentoring

LECTURER/ INSTRUCTOR

Co-Instructor in "**CSCI 4533/6533 Introduction to Usable Security and Privacy**"	*BS, MS, PhD course*	Fall '24
Instructor / External Lecturer in "**Privacy Engineering**"	*B.Sc. Course*	Summer '23

TUTOR & TEACHING ASSISTANCE

Teaching Assistant in "**Privacy and Security**" Supervising and evaluating seminar papers	*B.Sc. Course*	Winter '23/'24 Winter '22/'23
Teaching Assistant in "**Data Protection, IT Law and Privacy**" Preparing courses and exercises	*B.Sc. Course*	Winter '21/'22 Winter '20/'21
Teaching Assistant in "**Advanced Topics in Security and Privacy**" Supervising and evaluating seminar papers	*M.Sc. Course*	Summer '21
Teaching Assistant in "**Privacy and Security**" Supervising and evaluating seminar papers	*M.Sc. Course*	Summer '20 Winter '19/'20
Teaching Assistant in "**Web Programming**" Supervising lab exercises	*B.Sc. Course*	Summer '20 Summer '19 Summer '18
Teaching Assistant in "**Informatics 1**" Tutoring and reviewing programming exercises	*B.Sc. Course*	Winter '14/'15

STUDENT MENTORING

Arwa Alshadi, Ph.D. student
Junho Eum, Ph.D. student
Wellington Esposito Barbosa, Ph.D. student
Monica Kodwani, Ph.D. student
Cole Knie, MS student
Joseph Staller, Undergrad student
Philip Erdmann, BS student, Alumni
Marian Hönscheid, BS student, Alumni

SUPERVISED STUDENT THESIS

A. Portz. "Datenschutzkonformität von Dashcams. (Engl.: Data Protection Compliance of Dashcams.)"	*B.Sc. Thesis*	2024
L. Rohé. "Auswirkung von Nudging auf Security Fatigue am Beispiel Passwortwahl. (Engl.: Effects of Nudging on Security Fatigue Using the Example of Password Selection.)"	*B.Sc. Thesis*	2022
M. Fischer. "Privacy Dashboards – Untersuchung verschiedener Dashboards von Unternehmen im Hinblick auf die Anforderungen der DSGVO. (Engl.: Privacy Dashboards - Examination of Various Dashboards of Companies Regarding the Requirements of the GDPR.) "	*B.Sc. Thesis*	2021

F. Dehling. "Investigations on Utilizing Web Browser Caches for User Tracking." *M.Sc. Thesis* 2020

Service

PC Member

Annual Privacy Forum: 2023, 2024, 2025
ACM CCS: 2025
EuroUSEC: 2023, 2024, 2025
Usable Security and Privacy Workshop: 2020, 2021, 2022, 2023, 2024, 2025
PETS: 2025

Ext. Reviewer

ACM CHI: 2022, 2025
International Journal of Human-Computer Interaction: 2022, 2023, 2024
Behaviour & Information Technology: 2022

Examiner

Bachelor Thesis Bonn-Rhein-Sieg University of Applied Sciences: 2024
Master Thesis University of Oslo: 2021