

Rafael Vrecar



About me

Name:

Rafael Vrecar

Date & Place of Birth:

Nov. 10, 1997 in Vienna

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Profile

I am an interdisciplinary HCI researcher with three years of post master degree experience in Human-Computer Interaction, Usable Security, and additionally over five years practical experience in Software Engineering.

During my studies I have been working as teaching assistant in over ten different lectures within six years, while being head of tutors in three of them.

Education

since 2022

Informatics

DOCTORAL PROGRAM IN TECHNICAL SCIENCES · TU Wien

ÖAW DOC Fellowship 2024: "Perception vs. Reality: The Illusion of Security – Why We (Erroneously) Trust Technologies in the Age of AI Revolution"

2020–2022

Media & Human-Centered Computing

MASTER PROGRAM · TU Wien

graduated with honors; *Thesis*: Increasing User Satisfaction by Detecting Emotions in German-language Human-Robot Conversations with Q.bo One

2016–2020

Software & Information Engineering

BACHELOR PROGRAM · TU Wien

graduated with honors; *Thesis*: Conception and Implementation of a "Student Relationship Management" System

Areas of Expertise

- Human-Computer Interaction (HCI) theories and methodologies
- Usable Security
- Human-Robot Interaction (HRI)
- IT Security on Apple's platforms

Grants & Prizes

- ÖAW DOC Fellowship 2024: "Perception vs. Reality: The Illusion of Security – Why We (Erroneously) Trust Technologies in the Age of AI Revolution"
- Nomination for "Best Industrial Paper" and "Best Student Paper" for "Why Do(n't) You Trust Us? – Highlighting the Importance of Trust and Transparency for Designing B2B Platforms in Electronics Manufacturing" at CHIRA (2024)
- Admission as TU Wien TOP Fellow (2024)
- Nomination for the TU Wien Best Poster Award for my Diploma Thesis poster (2022)
- Huawei "Seeds for the Future" scholarship (2022)
- Ars Docendi State Prize Shortlist Nomination in the category "Distance learning methods and their sustainable use" (2021)
- TU Wien Bachelor with Honors (2021)
- TU Wien merit-based scholarship (2019, 2021, 2022)
- Dr. Hans Riegel Awards 2016, second place in Vienna (2016)

Positions

2025–2027	Project Assistant at TU Wien HCI GROUP · Institute of Visual Computing and Human-Centered Technology ÖAW DOC Fellowship 2024
since 2022	Research Assistant at INSO GmbH ESTABLISHING SECURITY GROUP (ESSE) · Inter-university Teaching Holding lectures on security on Apple's platforms, assisting in the organization of the lectures, exercises, etc.
2024–2025	Project Assistant at Paris Lodron University of Salzburg HUMAN-COMPUTER INTERACTION GROUP · Working on a project on <i>Diversity Computing Spaces</i> (https://frauenberger.name/research/projects/05_divcomp) Implementation of prototypes, developing a study concept, conducting workshops.
2022–2023	Project Assistant at TU Wien HCI GROUP · Institute of Visual Computing and Human-Centered Technology <i>Projects:</i> MAXimizeMe (with Fraunhofer Austria, Wiener Linien & ÖBB, funded by Austrian Chamber of Labor), TREND 2023 (with bee produced GmbH, funded by WWTF & Wirtschaftsagentur Wien), AR in the Factory (PROFACTOR)
2021–2023	Student Staff & Project Assistant at TU Wien CENTER FOR TECHNOLOGY & SOCIETY (CTS) · Rectorate: University's Development and Quality Management Assisting in the fields of research, documentation, public relations, and strategy planning
2017–2021	Student Staff at TU Wien THEORY & LOGIC, HCI, BUSINESS INFORMATICS, AND INDUSTRIAL SOFTWARE GROUPS · Institutes of Logic & Computation, Visual Computing & Human-Centered Technology, and Information Systems Engineering Assisting in over ten different lectures, being head of tutors in three of them

Internships

Feb. 2021	Intern RESEARCH INDUSTRIAL SYSTEMS ENGINEERING (RISE) FORSCHUNGS-, ENTWICKLUNGS- UND GROSSPROJEKTBERATUNG GMBH · Internship Development of wireframes and a React prototype with Material-UI for a web-based administration interface
Aug. 2019	Intern RESEARCH INDUSTRIAL SYSTEMS ENGINEERING (RISE) FORSCHUNGS-, ENTWICKLUNGS- UND GROSSPROJEKTBERATUNG GMBH · Internship Development of automated software tests in C++14, integration in continuous integration platform (GitLab)

Affiliations to Research Projects (only concluded projects)

2021–2023	<p>MAXimizeMe – XXLMontage für alle INVESTIGATOR (TU WIEN) · funded by Austrian Chamber of Labor</p> <ul style="list-style-type: none">• Digitalisierungsfonds Arbeit 4.0• "Diversitätsfördernde Individualisierung von Arbeitssystemen in der industriellen Baustellenmontage"• Conducted by Fraunhofer Austria and TU Wien• Involvement:<ul style="list-style-type: none">– Conceptualizing and leading a user study with over 25 participants; methods: semi-structured interviews, filming and audio-recording the interaction with a tram/bus part with in-situ projections; NASA-TLX, System Usability Scale– Analyzing, evaluating, and curating the results of the user study– Authoring (first author) of an industrial experiences paper (see below)– On-site visits of Wiener Linien's and ÖBB's maintenance facilities– Leading two workshops (topics: future & diversity) based on said on-site visits to plan the aforementioned user study– Communication with stakeholders
2022–2023	<p>TREND – Transparency and Trust: Yes, but how? INVESTIGATOR (TU WIEN) · funded by W/WTF and Wirtschaftsagentur Wien</p> <ul style="list-style-type: none">• Roadmaps Digitaler Humanismus 2022• Trust and data protection in a B2B platform context (focus: electronics manufacturing)• Conducted by bee produced GmbH and TU Wien• Involvement:<ul style="list-style-type: none">– Conceptualizing and leading a user study with over 10 participants; methods: semi-structured interviews and workshops in order to find out their requirements and concerns– Analyzing, evaluating, and curating the results of the user study– Currently working on a publication of said results for HCSE2024– Communication with stakeholders
2022	<p>AR in the Factory INVESTIGATOR (TU WIEN) · funded by and conducted with PROFACTOR</p> <ul style="list-style-type: none">• User study on how to use AR in a industrial assembly context• Conducted by PROFACTOR GmbH and TU Wien• Involvement:<ul style="list-style-type: none">– Assisting in conceptualizing and conducting a user study with over 15 participants; methods: semi-structured interviews, filming and audio-recording the interaction with an industry assembly work bench with in-situ projections; NASA-TLX, System Usability Scale– Assisting in analyzing, evaluating, and curating the results of the user study– Co-authoring (second author) of a corresponding full paper (see below)

Teaching

- Guest lecture on iOS Security as part of the course *Mobile Applications* (TU Graz, ESSE workgroup)
- Lecture on Mobile Security as part of the course *Fundamentals of IT Security* (FH Wiener Neustadt, ESSE workgroup)
- Conceptualization and teaching (first iteration) of the course *Quantified Self* at the Paris Lodron University of Salzburg in 2024w as main lecturer
- Holding delivery talks and exam supervisions in over ten different courses.
- Head of tutors in three of them.
- Heading student relations in three of them.
- (Co-)Authoring and holding the following lectures from winter term 2021 onward with ESSE at TU Wien:
 - (since 2021w) macOS Security Concepts – *Introduction to Security* (3 ECTS, BSc, mandatory)
 - (since 2023w) Usable Security & Trust – *Introduction to Security* (3 and 6 ECTS, BSc, mandatory)
 - (since 2023w) Security Implications of Typing in Programming Languages – *ibid.*
 - (since 2022s) Introduction to iOS Security – *Mobile Security* (3 ECTS, BSc, elective)
 - (since 2022s) iOS Environment Checks – *ibid.*
 - (since 2022s) Advanced macOS Security Concepts – *Security for Systems Engineering* (3 ECTS, BSc, elective)

Publications

Peer Reviewed

- **Vrecar, Rafael**, Astrid Weiss, Wilfried Lepuschitz, Aaron Wedral, and Michaela Gaea Čolakovová. "Why Do(n't) You Trust Us? Highlighting the Importance of Trust and Transparency for Designing B2B Platforms in Electronics Manufacturing". In: *Computer-Human Interaction Research and Applications*. Ed. by Hugo Plácido da Silva and Pietro Cipresso. Cham: Springer Nature Switzerland, 2025, pp. 177–192. ISBN: 978-3-031-82633-7. DOI: 10.1007/978-3-031-82633-7_12
- Aaron Wedral, **Vrecar, Rafael**, Gerhard Ebenhofer, Thomas Pönitz, Paul H. Wührer, Astrid Weiss, and Gernot Stübl. "Spatial Augmented Reality in the Factory: Can In-Situ Projections Be Used to Communicate Dangers and Health Risks?" In: *Human-Computer Interaction – INTERACT 2023*. Ed. by José Abdelnour Nocera, Marta Kristin Lárusdóttir, Helen Petrie, Antonio Piccinno, and Marco Winckler. Cham: Springer Nature Switzerland, 2023, pp. 574–594. ISBN: 978-3-031-42283-6. DOI: 10.1007/978-3-031-42283-6_31
- **Vrecar, Rafael**, Markus Steinlechner, Patrick Rupprecht, Aaron Wedral, Marlies Negele, Maciej Palucki, Brigitte Ratzler, and Astrid Weiss. "How to Bring Diversity into Industry: Industrial Experiences in Public Transport Repair and Maintenance". In: *Human-Computer Interaction – INTERACT 2023*. Ed. by José Abdelnour Nocera, Marta Kristin Lárusdóttir, Helen Petrie, Antonio Piccinno, and Marco Winckler. Cham: Springer Nature Switzerland, 2023, pp. 267–272. ISBN: 978-3-031-42293-5. DOI: 10.1007/978-3-031-42293-5_20
- Astrid Weiss, **Vrecar, Rafael**, Joanna Zamiechowska, and Peter Purgathofer. "It's Only a Bot! How Adversarial Chatbots can be a Vehicle to Teach Responsible AI". in: *Responsible Artificial Intelligence: Challenges for Sustainable Management*. Ed. by René Schmidpeter and Reinhard Altenburger. Cham: Springer International Publishing, 2023, pp. 235–250. ISBN: 978-3-031-09245-9. DOI: 10.1007/978-3-031-09245-9_12
- Astrid Weiss, **Vrecar, Rafael**, Joanna Zamiechowska, and Peter Purgathofer. "Using the Design of Adversarial Chatbots as a Means to Expose Computer Science Students to the Importance of Ethics and Responsible Design of AI Technologies". In: *Human-Computer Interaction – INTERACT 2021*. Ed. by Carmelo Ardito, Rosa Lanzilotti, Alessio Malizia, Helen Petrie, Antonio Piccinno, Giuseppe Desolda, and Kori Inkpen. Cham: Springer International Publishing, 2021, pp. 331–339. ISBN: 978-3-030-85613-7. DOI: 10.1007/978-3-030-85613-7_24

Others

- **Vrecar, Rafael**, Anna Blumenkranz, Moritz Kubesch, and Christopher Frauenberger. "Abstract Presentation | Designing Diversity Computing Spaces: How to Foster Meaningful Interactions for Early Adolescents – Two Hands-on Examples". In: *Abstract Presentation at the 8th International Conference on Computer-Human Interaction Research and Applications (CHIRA 2024)*. 2024. URL: <https://repositum.tuwien.at/handle/20.500.12708/204799>
- **Vrecar, Rafael**, Anna Blumenkranz, Moritz Kubesch, and Christopher Frauenberger. "Demo | Designing Diversity Computing Spaces: How to Foster Meaningful Interactions for Early Adolescents – Two Hands-on Examples". In: *Demo at the 8th International Conference on Computer-Human Interaction Research and Applications (CHIRA 2024)*. 2024. URL: <https://repositum.tuwien.at/handle/20.500.12708/204833>
- **Vrecar, Rafael**. *Student Review: "Sustainability" – a Term with Various Meanings and Implications*. Vienna, 2023. URL: <https://repositum.tuwien.at/handle/20.500.12708/192255>
- **Vrecar, Rafael**. *Dare to Care – Designing Differently, Imagining Collaboratively*. Vienna, 2023. URL: <https://repositum.tuwien.at/handle/20.500.12708/192253>
- Ana-Catalina Sabie, Katharina Brunnmayr, Kristina Weinberger, Renée Sophie Singer, **Vrecar, Rafael**, and Katta Spiel. "This is not the new normal: studying during a pandemic". In: *Interactions* 27.4 (July 2020), pp. 12–15. ISSN: 1072-5520. DOI: 10.1145/3406111

Academic Service

- Serving as Associate Chair (AC) for "Mensch und Computer" (MuC) 2025
- Reviewing four full papers for the 20th IFIP TC13 International Conference on Human-Computer Interaction (2025), 1 full paper for C&T 2025 – Communities & Technologies 2025, and serving as 1AC for five full papers and 2AC for another five full papers at MuC 2025 (see above: Serving as Associate Chair).
- Serving as ConfTool Chair for "Mensch und Computer" (MuC) 2025
- Reviewing three full papers and one short paper for the 2025 ACM CHI conference on Human Factors in Computing Systems (2024)
- Reviewing a full paper for the 16th ACM SIGCHI Symposium on Engineering Interactive Computing Systems (2024)
- Reviewing a full paper and a short paper for "Mensch und Computer 2024". Both reviews were regarded as "highly helpful" by the corresponding chairs. In addition, the review of the short paper received a "Special Recognition for Outstanding Reviews".
- Reviewing a talk proposal for the 18th IFAC Symposium on Information Control Problems in Manufacturing (2024)
- Reviewing a full paper for the 16th International Conference on Social Robotics (ICSR24, 2024)
- Mentor for first-term informatics students of TU Wien (TU Wien mentoring program, 2018–2019)
- Representing TU Wien at the BeSt job fair: informing prospective students about studying at TU Wien and demonstrating a 3D printer (2025)