

# Rafael Vrecar



## About me

**Name:**

Rafael Vrecar

**Date & Place of Birth:**

Nov. 10, 1997 in Vienna

**Citizenship:**

Austria

**Phone:**

+43 664 912 73 24

**Email:**

rafael@vrecar.eu

**Website:**

vrecar.eu/rafael

**ORCID:**

0000-0001-6572-5254

**LinkedIn:**

in/rafael-vrecar

## Profile

I am an interdisciplinary HCI researcher with 2.5 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	<b>Informatics</b> 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	<b>Media &amp; Human-Centered Computing</b> MASTER PROGRAM · TU Wien graduated with honors; <i>Thesis</i> : Increasing User Satisfaction by Detecting Emotions in German-language Human-Robot Conversations with Q.bo One
2016–2020	<b>Software &amp; Information Engineering</b> BACHELOR PROGRAM · TU Wien graduated with honors; <i>Thesis</i> : 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	<b>Project Assistant at TU Wien</b> HCI GROUP · Institute of Visual Computing and Human-Centered Technology ÖAW DOC Fellowship 2024
since 2022	<b>Research Assistant at INSO GmbH</b> 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	<b>Project Assistant at Paris Lodron University of Salzburg</b> HUMAN-COMPUTER INTERACTION GROUP · Working on a project on <i>Diversity Computing Spaces</i> ( <a href="https://frauenberger.name/research/projects/05_divcomp">https://frauenberger.name/research/projects/05_divcomp</a> ) Implementation of prototypes, developing a study concept, conducting workshops.
2022–2023	<b>Project Assistant at TU Wien</b> 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	<b>Student Staff &amp; Project Assistant at TU Wien</b> 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	<b>Student Staff at TU Wien</b> 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	<b>Intern</b> 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	<b>Intern</b> 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><b>MAXimizeMe – XXLMontage für alle</b> INVESTIGATOR (TU WIEN) · funded by Austrian Chamber of Labor</p> <ul style="list-style-type: none"><li>• Digitalisierungsfonds Arbeit 4.0</li><li>• "Diversitätsfördernde Individualisierung von Arbeitssystemen in der industriellen Baustellenmontage"</li><li>• Conducted by Fraunhofer Austria and TU Wien</li><li>• Involvement:<ul style="list-style-type: none"><li>– 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</li><li>– Analyzing, evaluating, and curating the results of the user study</li><li>– Authoring (first author) of an industrial experiences paper (see below)</li><li>– On-site visits of Wiener Linien's and ÖBB's maintenance facilities</li><li>– Leading two workshops (topics: future &amp; diversity) based on said on-site visits to plan the aforementioned user study</li><li>– Communication with stakeholders</li></ul></li></ul>
2022–2023	<p><b>TREND – Transparency and Trust: Yes, but how?</b> INVESTIGATOR (TU WIEN) · funded by W/WTF and Wirtschaftsagentur Wien</p> <ul style="list-style-type: none"><li>• Roadmaps Digitaler Humanismus 2022</li><li>• Trust and data protection in a B2B platform context (focus: electronics manufacturing)</li><li>• Conducted by bee produced GmbH and TU Wien</li><li>• Involvement:<ul style="list-style-type: none"><li>– 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</li><li>– Analyzing, evaluating, and curating the results of the user study</li><li>– Currently working on a publication of said results for HCSE2024</li><li>– Communication with stakeholders</li></ul></li></ul>
2022	<p><b>AR in the Factory</b> INVESTIGATOR (TU WIEN) · funded by and conducted with PROFACTOR</p> <ul style="list-style-type: none"><li>• User study on how to use AR in a industrial assembly context</li><li>• Conducted by PROFACTOR GmbH and TU Wien</li><li>• Involvement:<ul style="list-style-type: none"><li>– 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</li><li>– Assisting in analyzing, evaluating, and curating the results of the user study</li><li>– Co-authoring (second author) of a corresponding full paper (see below)</li></ul></li></ul>

## Teaching

---

- 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), 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)