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Renan Luigi Martins Guarese

Personal page: https://renghp.github.io/
Google Scholar: https://scholar.google.com/citations?user=VRK3wEcAAAAJ&hl
LinkedIn: https://www.linkedin.com/in/renan-guarese-9911429b/

Abilities

- Native Portuguese Speaker, Fluent in English, Advanced Spanish, and Basic French
    - Scored 640/677 on TOEFL ITP, 2019
- Unity3D, C, C#, Java, PHP, SQL, Vuforia, Git, Unix, Autocad, Photoshop
- AR/VR development, HCI/UX, academic research, teaching

Academic History

- **RMIT** - Melbourne, VIC - Australia
    - *Ph.D. in Computer Science* 2020 - 2024 (Graduate)
- **UFRGS** - Porto Alegre, RS - Brazil
    - *M.Sc. in Computer Science* 2019 - 2020 (Graduate)
- **Halmstad University** - Halmstad - Sweden
    - *Linnaeus-Palme Scholarship* Program - M.Sc. in Computer Science 2020 Spring
- **UFRGS** - Porto Alegre, RS - Brazil
    - *Bachelor in Computer Science* 2013 – 2018 (Graduate)
- **Radford University** - Radford, VA - United States
    - *BSMP Exchange* Program - Computer Science 2015 Fall - 2016 Spring
- **IFRS** – Porto Alegre, RS - Brazil
    - *IT Technician* 2013 – 2014 (Graduate)

Experience

- *Postdoctoral Researcher at* **KTH** / **AstraZeneca**
    - AR/VR Visualization for Pharmaceutical Industry Predictive Maintenance
    - 2024 - Present (Ongoing), Stockholm, Sweden
- *Teaching and Research Sessional* at **RMIT**
    - Tutoring BSc. and MSc. students in Mixed Reality, AI, Game and Web Dev classes
    - Research Assistant on Plastics NZ Digital Design project
    - 2022 - 2024, Melbourne, VIC, Australia
- *HCI Tutor* at **UFRGS** (Internship)
    - Tutoring BSc. students in Human-Computer Interaction
    - 2019-2019, Porto Alegre, RS, Brazil
- *Unity Developer* at **g.edu** (Freelance)
    - Developing an Educational Mobile App
    - 2019 - 2019, Porto Alegre, RS, Brazil
- *Unity Developer* at **UFRGS** (Internship)
    - Developing an Educational Augmented Reality Mobile App
    - 2017 - 2018, Porto Alegre, RS, Brazil
- *IT Tutor* at **Colégio de Aplicação UFRGS** (Internship)
    - Teaching Non-High School Graduates about Digital Culture
    - 2016, Porto Alegre, RS, Brazil
- *Undergrad Researcher* at **Illinois Institute of Technology** (BSMP Summer Internship)
    - CPU and GPU Parallelization of GAIL Routines in Matlab | 2016, Chicago, IL, US
- *iOS Developer* at **BEPiD** (Internship)
    - Creation, Design and Development of iOS Apps | 2015, Porto Alegre, RS, Brazil
- *Undergrad Researcher/Tutor* at **IFRS** (CNPQ Undergraduate Research)
    - Developing of a Learning Analytics Tool to Moodle / IT and English Tutor
    - 2013 - 2015, Porto Alegre, RS, Brazil
- *Undergrad Researcher* at **PUCRS** (CNPQ Undergraduate Research)
    - Network Simulations Research | 2012 - 2013, Porto Alegre, RS, Brazil

Selected Publications

- Exploring **audio interfaces** for **vertical guidance** in **augmented reality** via **hand**-based feedback
    IEEE Transactions on Visualization and Computer Graphics, 2024
    DOI: https://doi.org/10.1109/TVCG.2024.3372040

- **Immersive tele-guidance** towards evoking **empathy** with people who are **vision impaired**
    ISMAR 2023 - 2023 IEEE International Symposium on Mixed and Augmented Reality
    DOI: https://doi.org/10.1109/ISMAR-Adjunct60411.2023.00179

- Evoking **empathy** with **visually impaired people** through an **augmented reality** embodiment experience
    IEEE VR 2023 - 2023 IEEE Conference on Virtual Reality and 3D User Interfaces
    DOI: https://doi.org/10.1109/VR55154.2023.00034

- Evaluating **micro-guidance sonification methods** in manual tasks for Blind and Visually Impaired people
    OzCHI '22 - Proceedings of the 34th Australian Conference on HCI
    DOI: https://doi.org/10.1145/3572921.3572929

- **Augmented Situated Visualization** Methods towards Electromagnetic Compatibility Testing
    Computers & Graphics, 2020
    DOI: https://doi.org/10.1016/j.cag.2020.10.001

- 3DUI and the Phantom Limb**: multisensory** experience for **embodiment of amputation**
    IEEE VR 2020 - IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops
    DOI: https://doi.org/10.1109/VRW50115.2020.00110

- Development and Usability Analysis of a **Mixed Reality GPS Navigation** Application for the Microsoft HoloLens
    CGI 2019 - LNCS: Advances in Computer Graphics pp 431-437
    DOI: https://doi.org/10.1007/978-3-030-22514-8_41

- A comparative **analysis** of **augmented reality frameworks** aimed at the development of **educational applications**
    Creative Education 2017
    DOI: https://doi.org/10.4236/ce.2017.89101

Awards

- 2024 **Best Doctoral Thesis** - "Augmenting the dark: Exploring assistive micro-guidance in sonified mixed reality", SBC SVR '24
- 2023 **Best Paper Nominee** - "Evoking empathy with visually impaired people through an augmented reality embodiment experience", **IEEE VR** '23
- 2023 **Finalist** at the Student Competition - "Immersive tele-guidance towards evoking empathy with people who are vision impaired", **IEEE ISMAR** '23
- 2021 **Student Innovation Challenge: Audience Choice** - "Vibrotactile Data Physicalization of Covid Cases in South America", **IEEE WHC** '21.
- 2020 **Best Poster** - "A Usability Assessment of Augmented Situated Visualization", **IEEE VR** '20
- 2020 **3DUI Contest Winner** - "3DUI and the Phantom Limb: multisensory experience for embodiment of amputation", **IEEE VR** '20