

Krzysztof Wolski

I am a postdoctoral researcher at the Max Planck Institute for Informatics in Saarbrücken, Germany.

Education

- 01/2018 – 12/2023 **Max Planck Institute for Informatics and Saarland University**, Saarbrücken, Germany
Dr.-Ing. (PhD) in Computer Science (Summa Cum Laude)
Advisors: Prof. Dr. Karol Myszkowski, Prof. Dr. Hans-Peter Seidel
Marie Skłodowska-Curie fellowship
Thesis: Design and Applications of Perception-Based Mesh, Image, and Display-Related Quality Metrics
- 02/2015 – 07/2016 **West Pomeranian University of Technology**, Szczecin, Poland
Master of Science in Computer Science,
Master's Thesis: "Evaluation of Eye Tracking Accuracy"
- 10/2011 – 02/2015 **West Pomeranian University of Technology**, Szczecin, Poland
Bachelor of Technology in Computer Science,
Bachelor's Thesis: "Fast Detection of the Pupil Centre Using GPU"

Positions

- 08/2021 – 03/2022 **Meta**, Redmond, USA (Remote)
Research Intern in Applied Perception Science team under management of Alex Chapiro
- 11/2019 – 02/2020 **University of Cambridge**, Cambridge, United Kingdom
Research Visit
- 06/2018 – 07/2018 **Fraunhofer Institute for Integrated Circuits IIS**, Erlangen, Germany
Research Visit
- 09/2017 – 12/2017 **Max Planck Institute for Informatics**, Saarbrücken, Germany
Research Intern
- 10/2016 – 05/2017 **Max Planck Institute for Informatics**, Saarbrücken, Germany
Research Intern
- 04/2014 – 06/2014 **EXOR Studios**, Szczecin, Poland
Software Developer Intern
- 07/2013 – 08/2013 **Game Factory**, Szczecin, Poland
Software Developer Intern

Technical Skills

- Programming **C++, C#, Python, Matlab, VEX, Java**
- Deep Learning **PyTorch, TensorFlow, Caffe**
- 3D Graphics Tools **Houdini, Maya, Blender, Zbrush, Marvelous Designer, Substance Painter, Quixel Mixer, Renderman, Blender Cycles, Nuke**
- Others **Unity, OpenGL, L^AT_EX**

Awards and Honors

- 04/2022 **Best Artwork (Image) Award in Mardini 2022**, *Organizer: SideFX*
- 12/2020 **Honorable Mention in RenderMan "Magic Shop" Art Challenge**,
Organizer: Pixar's RenderMan
- 07/2020 **Finalist in RenderMan "Shipshape" Art Challenge**, *Organizer: Pixar's RenderMan*
- 10/2019 **Finalist in RenderMan "Woodville" Art Challenge**, *Organizer: Pixar's RenderMan*
- 06/2019 **Finalist in RenderMan "Rustic Cabin" Art Challenge**, *Organizer: Pixar's RenderMan*
- 06/2015 **Best Presentation Award on central European Seminar on Computer Graphics 2015**

Talks

- 08/2022 **Geo-metric: A perceptual dataset of distortions on faces**
Oral Presentation, Siggraph Asia 2022, Daegu, South Korea
- 08/2022 **Dark stereo: Improving depth perception under low luminance.**
Oral Presentation, Siggraph 2022, Vancouver, Canada
- 10/2019 **Selecting texture resolution using a task-specific visibility metric**
Oral Presentation, Pacific Graphics 2019, Seoul, South Korea
- 03/2019 **Dataset and metrics for predicting local visible differences**
HiGraphics Workshop
- 09/2018 **Dataset and metrics for predicting local visible differences**
Oral Presentation, Siggraph 2018, Vancouver, Canada

Teaching

- Teaching Assistant **West Pomeranian University of Technology**, Szczecin, Poland
Courses:
- Computer Graphics (Summer 2015)
 - Advanced Computer Graphics (Winter 2016)

Academic Services

- Prog. Committee **Conferences:**
- ACM Symposium on Applied Perception (SAP 2022, 2023)
- Reviewing **Conferences:**
- IEEE VR (2023)
 - ACM SIGGRAPH (2022, 2023, 2024)
 - ACM SIGGRAPH Asia (2022, 2023)
 - ACM Symposium on Applied Perception (SAP 2022, 2023)
- Reviewing **Journals:**
- ACM Transaction on Graphics (TOG 2022)
 - The Visual Computer - International Journal of Computer Graphics (TVCG 2022)
 - Journal of the Society for Information Display (SID 2022)

Volunteer Experience

- 2023 **Eurographics 2023**
Video editing of Papers Fast Forward
- 2020 **SIGGRAPH Asia 2020**
Video editing of Technical Papers Trailer and Technical Papers Fast Forward
- 2010 – 2011 **Radio Plus Gryfice**, Gryfice, Poland
Radio Presenter, IT Technician

Publications

- [1] Chao Wang, Ana Serrano, Xingang Pan, **Wolski, Krzysztof**, Bin Chen, Karol Myszkowski, Hans-Peter Seidel, Christian Theobalt, and Thomas Leimkühler. An implicit neural representation for the image stack: Depth, all in focus, and high dynamic range. *ACM Trans. Graph.*, 42(6), dec 2023. ISSN 0730-0301. doi: 10.1145/3618367. URL <https://doi.org/10.1145/3618367>.
- [2] Martin Balint, **Krzysztof Wolski**, Karol Myszkowski, Hans-Peter Seidel, and Rafał Mantiuk. Neural partitioning pyramids for denoising monte carlo renderings. In *ACM SIGGRAPH 2023 Conference Proceedings*, SIGGRAPH '23, New York, NY, USA, 2023. Association for Computing Machinery. ISBN 9798400701597. doi: 10.1145/3588432.3591562. URL <https://doi.org/10.1145/3588432.3591562>.
- [3] **Krzysztof Wolski**, Laura Trutoiu, Zhao Dong, Zhengyang Shen, Kevin MacKenzie, and Alexandre Chapiro. Geo-metric: A perceptual dataset of distortions on faces. *ACM Transactions on Graphics (TOG) - Proc. of SIGGRAPH Asia 2022*, 2022a.
- [4] **Krzysztof Wolski**, Fangcheng Zhong, Karol Myszkowski, and Rafał K. Mantiuk. Dark stereo: Improving depth perception under low luminance. *ACM Trans. Graph.*, 41(4), jul 2022b. ISSN 0730-0301. doi: 10.1145/3528223.3530136. URL <https://doi.org/10.1145/3528223.3530136>.
- [5] Akshay Jindal, **Krzysztof Wolski**, Karol Myszkowski, and Rafał K. Mantiuk. Perceptual model for adaptive local shading and refresh rate. *ACM Trans. Graph.*, 40(6), dec 2021. ISSN 0730-0301. doi: 10.1145/3478513.3480514. URL <https://doi.org/10.1145/3478513.3480514>.
- [6] **Krzysztof Wolski**, Daniele Giunchi, Shinichi Kinuwaki, Piotr Didyk, Karol Myszkowski, Anthony Steed, and RK Mantiuk. Selecting texture resolution using a task-specific visibility metric. In *Computer Graphics Forum*, volume 38. Wiley-Blackwell, 2019.
- [7] Nanyang Ye, **Krzysztof Wolski**, and Rafal K Mantiuk. Predicting visible image differences under varying display brightness and viewing distance. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 5434–5442, 2019.
- [8] **Krzysztof Wolski**, Daniele Giunchi, Nanyang Ye, Piotr Didyk, Karol Myszkowski, Radosław Mantiuk, Hans-Peter Seidel, Anthony Steed, and Rafał K Mantiuk. Dataset and metrics for predicting local visible differences. *ACM Transactions on Graphics (TOG)*, 37(5):172, 2018.
- [9] **Krzysztof Wolski** and Radosław Mantiuk. Cross spread pupil tracking technique. *Journal of Electronic Imaging*, 25(6):063012, 2016.