SOPHIE KERGASSNER

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I am a PhD student under the supervision of Prof. Piotr Didyk at Università della Svizzera italiana in Lugano, Switzerland. My research interests lie at the intersection of human vision and computer graphics. More specifically, I am interested in the quantification of human vision and – based on these insights – the clever manipulation of images to improve their visual quality without increasing computational effort. My first PhD project investigated the impact of foveation on disparity perception. My current project focuses on ▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇ to enhance the visual quality of foveated content.

Education

2024 – **PhD Student – Perception, Display and Fabrication Lab** *USI, CH · started Jun '24*
Research focus: perception-driven optimization of graphics content for novel displays (vision science, computer graphics); supervised by Prof. Piotr Didyk

2021– 2024 **Master's Degree Audiovisual Media (M.Eng.)** *Stuttgart Media University, DE*
Final grade: 1.2; with distinction; thesis resulted in a publication
Focus: computer graphics
Exchange to IADE Lisbon, PT; Sep '22–Feb '23

2017– 2021 **Bachelor's Degree Audiovisual Media (B.Eng.)** *Stuttgart Media University, DE*
Final grade: 1.1; with distinction; thesis resulted in a publication
Focus: computer graphics and interactive technologies

Publications

[2026] *[under submission]*
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Sophie Kergaßner, Piotr Didyk
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2025 **ACM SIGGRAPH Conference**
Sophie Kergaßner, Taimoor Tariq, Piotr Didyk
Towards Understanding Depth Perception in Foveated Rendering
DOI PDF Project Page Video

2024 **ACM Mensch und Computer**
Sophie Kergaßner, Nina Doerr, Markus Wieland, Martin Fuchs, Michael Sedlmair
HiveFive360: Extending the VR Gaze Guidance Technique HiveFive to Highlight Out-Of-FOV Targets
Best Paper Award (Honorable Mention)
DOI PDF

2023 **IS&T Electronic Imaging (Stereoscopic Displays & Applications)**
Sophie Kergaßner, Jan Fröhlich
Evaluating the Angular Resolution of a Simulated Light Field Display in Regards to Three-Dimensionality, Motion Parallax and Viewing Experience
DOI PDF Talk

Experience

2025 **Participant, International Summer School for Computer Vision**
Competitive admission (~35%), attended lectures by leading academics and industry practitioners covering a broad range of computer vision topics

2021– 2024 **Working Student, Visualization & Prototyping** *Transsolar · Jan '21–Aug '22 & Nov '23–Apr '24*
Exploratory R&D prototyping for climate engineering: developed interactive tools (JavaScript/TypeScript/Unity-based data visualization tools); produced 2D visuals

2019– 2020 **Intern, Graphics – Postproduction & Exhibitions** *storz&escherich · Oct '19–Feb '20*
Worked on 2D/3D graphics and real-time interactive prototypes

Languages

German (native)
English (C1)
French (B1)
Italian (A1)

Coding

Python
C#
MATLAB
OpenGL
LaTeX

Tools

VS Code
Unity
Cinema4D
Blender
MATLAB
Adobe Creative Suite

Interests

hiking and nature
plants and gardening
badminton
craft and handwork
yoga and running
piano and violin

Skills

leadership
organization
rapid prototyping
creative problem solving
analytical thinking
scientific writing

Awards & Honors

2025   **Top 10 Fast Forward, Audience Choice, SIGGRAPH 2025**
For "Towards Understanding Depth Perception in Foveated Rendering"

2024   **Best Paper Award (Honorable Mention), ACM MUC**
For "HiveFive360: Extending the VR Gaze Guidance Technique HiveFive to Highlight Out-Of-FOV Targets"

2024   **Etzold Prize Nominee**
Nominated for the best and most innovative thesis at Stuttgart Media University

2021, 2022   **Awards for Student Projects**
I mainly worked in the real-time graphics/signal processing department on the projects listed below.
2022 – ADC Shortlist Award (Communication Arts) for the project "Psychotrop"
2021 – CommAwards Finalist / Shortlist (Talent Space) for the project "Somnium"
2021 – ADC Shortlist Award (Communication Arts) for the project "Somnium"

2020   **Nominated for a Scholarship – German Academic Scholarship Foundation**
University-nominated for the German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes) scholarship

2018   **Mensa International Member, MinD-Hochschul-Netzwerk**
Admitted to Mensa International;
Active in the MinD-Hochschul-Netzwerk, an open community for students, professors, and alumni

2017   **Abitur (Highschool)-Awards**
Award for best graduate;
German Mathematical Society (DMV) graduation award for best graduate in mathematics;
German Chemical Society (GDCH) graduation award for best graduate in chemistry

Teaching

Sep 2025 –   **Teaching Assistant for "Computer Graphics"**
Mar 2025 –   **Teaching Assistant for "Digital Image and Video Processing"**
Conducting excersise classes with the students, explaining concepts of the lecture and answering questions, developing and grading assignments and exams

Leadership & Volunteering

2025 –   **PhD Student Representative**
Elected representative for the PhD student body in the Faculty of Informatics

2025 –   **Erasmus Student Network Lugano – Volunteer**
Organizing social and cultural events to help integrate international students into campus and city life

2024   **Co-Organizer of the Neural Wave AI Hackathon**
Organization of a hackathon for 65 people in cooperation with Università della Svizzera italiana with a budget of ~20.000CHF and an orginization committee of 10 students

2023   **Appointments Committee – Student Representative**
Student representative during the faculty search for the position "IT-Based Media Systems"

2022 – 2024   **Study Commission – Student Representative**
Student representative on the Study Commission for the master's program "Audiovisual Media"

2020 – 2022   **Beekeeping and Sustainability Volunteer**
Maintained multiple beehives and supported sustainability initiatives for the student dormitory

2019   **Dormitory Spokesperson (Straussäcker 1)**
Represented the residence; responsible for finances, planning, and execution of the summer festival (~3,000 participants, €20,000+)

2015 – 2017   **Tutor for Mathematics and Chemistry**
Tutored students in grades 5–10