

Simon Röhl

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Founder & full-stack engineer and PhD researcher working on eye tracking, web technologies and AI. Runs RSites GmbH; doctoral researcher at the University of Eastern Finland with 20+ peer-reviewed publications. Builds end-to-end, works daily with Claude Code and Codex, and takes ideas to working products in days.

EDUCATION

- 03/2025 – present **PhD (Doctoral Researcher)**, University of Eastern Finland, Joensuu
Research on eye tracking and the web.
- 10/2023 – 03/2025 **Master of Applied Research in Engineering Sciences (M.Sc.)**, OTH Regensburg — final GPA 1.0 (every graded module “sehr gut”, 1.0)
Selected coursework (all 1.0): Deep Learning; Functional Safety & IT Security; Probability, Statistics & Optimization; Digitalization & Ethics; Eye Tracking in Engineering Sciences; Agile Software Development with Scrum; research methods (grant writing, scientific presenting, start-up case study).
- 10/2019 – 09/2023 **B.Eng. Electrical Engineering & Information Technology**, OTH Regensburg
Dual study programme with OSRAM.
- 09/2011 – 06/2019 **Abitur**, Johann-Michael-Fischer-Gymnasium Burglengenfeld.

PROFESSIONAL EXPERIENCE

- 08/2023 – present **Founder**, RSites GmbH, Teublitz ([Northdata](#))
- Corporate websites built accessibility-first (European Accessibility Act ready); 30+ websites delivered overall.
 - Recent frontends with agency partner Gessulat + Gessulat: [Suzuki](#) (corporate & careers), Lürssen, [LKQ Europe](#), [Teledata](#) redesign, [Wurzer/Wumas](#), Servero, VDW; other brands incl. IG Metall (BMW, Siemens).
 - Design-to-code tooling and rendering infrastructure.
 - Responsible for delivery, finance, accounting, legal/tax, marketing and hiring; manages a small freelancer team (freelancers employed for 3+ years).
- 03/2025 – present **Research Associate, project REACH**, OTH Regensburg
- Eye-tracking glasses and web usability with industry partners (WaveEye, Optomech).
 - Eye-tracker control via WebUSB; accuracy study with 34 participants using a frame-accurate evaluation method.
 - Usability study (25 participants, within-subjects) of a new eye-tracking-glasses prototype.
- 10/2023 – 03/2025 **Research Associate, project HASKI**, OTH Regensburg
- Full-stack development of an eye-tracking web platform (Node.js backend, Docker/Kubernetes, GitLab CI/CD); designed and ran 5+ eye-tracking usability studies.
 - Lab IT administration (Linux servers, Bash, Synology, DNS, certificates); supervised 10+ Bachelor’s/Master’s/project theses.
 - Co-led funding applications and international cooperation agreements leading to funded projects, incl. institutional cooperation Abertay University (Scotland) – OTH Regensburg.
 - Open-source Moodle plugin for AI learning paths (PHP/JS, SQL); session recording with rrweb for learning analytics; first-author paper on ethics of adaptive AI learning systems.
- 03/2022 – 09/2023 **Junior Web Developer**, Gessulat + Gessulat GmbH & Co. KG
- Delivered customer-facing sites end-to-end.
 - Led pixel-perfect frontend implementation for Aldi Süd IT Jobs, Mytheresa Careers, Akkodis, LKQ Europe Careers, Amapharm, Simplicity and Globl.Contact.
- 05/2021 – 02/2022 **Freelance Web Developer** (self-employed)
- Built and owned the full Shopify stack for Bears with Benefits (beauty/nutrition start-up, products at dm; later exited).
 - Shops, server-side tagging (GA + Facebook Conversions API), GDPR consent management, performance/SEO, landing pages, technical A/B testing.

07/2019 – 01/2022 **Dual Study & Apprenticeship (Elektroniker für Betriebstechnik)**, OSRAM Opto Semiconductors GmbH, Regensburg — completed apprenticeship 01/2022, alongside the dual B.Eng. programme.

RESEARCH & ACADEMIC ACTIVITIES

- Initiated and chairs the METR workshop (Metrics in Eye Tracking Research, metr2026.com) at ETRA 2026, Marrakech, Morocco — the leading eye-tracking conference: own initiative from concept to programme, 7 workshop papers, own peer-review process, programme committee lead; community of ~68 researchers forming a working group on metric standardisation.
- 20+ peer-reviewed papers (first and co-author) on eye tracking, web technologies and AI; mathematical-theoretical and literature work on eye-tracking metrics on the web.
- Research stays in Finland, Morocco, the Netherlands and Spain; international collaborators at Utrecht, UEF Joensuu, Lund, Harvard, Clemson, Nebraska, Abertay (Scotland) and Universiti Malaya; Uni Stuttgart and Uni Saarland nationally.
- Supervised 10+ Bachelor's/Master's/project theses; co-led funding applications.

SELECTED PUBLICATIONS

1. S. Röhrl, R. Bednarik, J. H. Mottok. *Computational Operationalization Choices for Spatial Data Quality in Screen-Based Eye Tracking*. Proceedings of the 2026 Symposium on Eye Tracking Research and Applications (ETRA), 2026.
2. S. Röhrl, S. Staufer, F. Bugert, V. K. Nadimpalli, F. Hauser, L. Grabinger. *Ethical Considerations of AI in Education: A Case Study Based on Pythia Learning Enhancement System*. IEEE Access, 2025.
3. S. Röhrl, F. Hauser, T. Ezer, L. Grabinger, J. Mottok. *WebGazeTrack: A Web-Based Eye Tracking Tool*. Proceedings of the 6th European Conference on Software Engineering Education, 2025.
4. S. Röhrl, S. Staufer, V. K. Nadimpalli, F. Bugert, F. Hauser, L. Grabinger. *Pythia-AI Suggested Individual Learning Paths for Every Student*. INTED2024 Proceedings, 2024.
5. T. Ezer, F. Hauser, S. Röhrl, J. H. Mottok. *Inducing Global and Focal View in UML Class Diagram Comprehension*. Proceedings of the 2026 Symposium on Eye Tracking Research and Applications (ETRA), 2026.

Full list: Google Scholar profile (scholar.google.com/citations?user=UL63m84AAAAJ).

PROJECTS

- **BlitzFrames** (blitzframes.com, live, paying customers) — accelerated video rendering for Remotion Lambda on a dedicated server fleet: up to 11× faster and 5× cheaper than stock, billed per frame.
- **WebGazeTrack** — Chrome extension driving Tobii eye-tracking hardware directly via WebUSB (Tobii Pro SDK), plug-and-play, dynamic AOIs from DOM/CSS selectors (ECSEE 2025 paper).
- **LaS3 online study software** — web-based eye-tracking study platform (create/record/analyze, slideshow designer, webcam gaze recording, re-implemented Tobii I-VT fixation filter).
- **Dynamic AOI tracking with LLMs** — hybrid DOM structure + screenshots + LLM annotation to track moving web content pixel- and frame-accurately (ETRA 2026, “Tracing Dynamic AOIs on the Web”).
- **frontend-builder** (2026) — automated Figma-to-frontend pipeline generating the implemented frontend from the design file; built for a Munich client, in production.
- ecb-rates.com — derives expected ECB rate paths from futures pricing (work in progress).
- **Moodle plugin for AI learning paths** — open source (PHP/JS).

TECHNICAL SKILLS

- **Web:** TypeScript, React, Node.js, Remotion, rrweb, D3, Chart.js, WordPress/PHP, TYPO3, Shopify
- **Data/ML:** Python, NumPy, pandas, SciPy, matplotlib, TensorFlow
- **Infrastructure:** Docker, Kubernetes, GitLab CI/CD, Linux, Bash, Synology, DNS/TLS certificates
- **Agents/AI tooling:** Claude Code, Codex, MCP, Playwright/CDP
- **Analytics:** server-side tagging, GA & Facebook Conversions API, GDPR consent, SEO, performance
- **Methods:** Git, Scrum, agile development

AWARDS & ACTIVITIES

- Mathematics: 5th place Bavaria / 27th nationally, Pangea competition (10,000+ entrants); 1st prize Landeswettbewerb Mathematik 2014 and 2015; 1st prize Känguru 2013 and 2015; Fürther Mathematik-Olympiade (very good success, winners' seminar at OTH Regensburg).
- 1st Landespreis, Bundeswettbewerb Latein; winner Ostbayerisches ScienceCamp 2017.
- Athletics: current Bavarian runner-up, 400 m hurdles, 2026; 2x Bavarian youth runner-up (400 m, pentathlon) 2018/19; 2x North Bavarian champion (pentathlon) 2018/19.
- Languages: German (native), English (fluent).