AUTODIDACTIC POLYMATH - RESEARCHER - AUTHOR - FOUNDER

Micah Blumberg

Independent AI & Neurophysics Researcher | Founder & Systems Architect | Author & Publisher

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SVGN.io | Self Aware Networks | 108-paper research index | GitHub / v5ma | ORCID 0009-0004-5175-9532

I develop research on mind and intelligence and build the systems that turn knowledge into products. My published work begins in 2010 and includes 108 public research papers and the 2024 book *Bridging Molecular Mechanisms and Neural Oscillatory Dynamics*. My work brings together Self-Aware Networks, information physics, custom research tools, and spatial publishing. As a founder, I am developing a connected program of knowledge systems, creator workspaces, interactive readers, and education products, combining interdisciplinary research with software architecture, publishing, and public communication.

108
public research papers with Zenodo and OSF links

2010
start of the published work record

2024
neuroscience book connecting molecular mechanisms and neural dynamics

WebXR
browser-based spatial products and research interfaces

SELECTED EXPERIENCE

Founder and independent researcher

2011 - Present

Self-Aware Networks / independent research practice

- Created an interdisciplinary research program connecting neural oscillations, cognition, conscious experience, artificial neurology, and computational models.
- Build research-search and knowledge tools, computational experiments, a public paper library, source maps, and manuscript workflows.
- Develop SAN Book 2 and its reading environment, translating hypotheses into diagrams, equations, evidence maps, audio, and interactive prototypes.

Founder, publisher, and technical journalist

2015 - Present

Silicon Valley Global News (SVGN)

- Founded and publish a technical media platform spanning AI, neuroscience, physics, neurotechnology, VR/AR, and scientific communication.
- Created the Neural Lace Podcast in 2017, interviewing builders and researchers working at the boundary of minds and machines.
- Evolved SVGN into a source-linked publishing graph that can move from articles to cards, decks, guided paths, and WebXR rooms.

WebXR builder and systems architect

2017 - Present

Independent spatial-computing work / current v5ma product program

- Build JavaScript, A-Frame, Three.js, and WebXR interfaces, including EEG-to-WebXR experiments, spatial navigation, persistent objects, and cross-device controls.
- Develop a connected spatial publishing platform: notes, media, timelines, portals, and workspaces designed for desktop, phone, and XR.
- Apply this work to SAN Book 2's searchable reader, audio narration, and walking-museum prototypes, alongside publishing and education product concepts.

Best fit: research and product partnerships connecting scientific ideas, software architecture, publishing, and humane technology.

Founder, applied neurotechnology venture

2012 - 2014

NeoMindCycle

- Built an early neurotechnology and neurofeedback venture exploring EEG, light and sound feedback, visualization, and compassionate brain-computer interaction.
- Connected applied experimentation with public education and the later SAN, media, and spatial-computing work.

RESEARCH AND PRODUCT FOCUS

Self-Aware Networks

Cross-modal neural rendering, oscillatory computation, conscious experience, artificial neurology, and cognitive architecture.

QGTCD / Super Information Theory

Proposed relationships among information, coherence, time density, gravitation, and quantum foundations.

SET / COT

Cellular signal processing, stateful computation, biological development, plasticity, heritability, and evolution.

Research to product

AI-assisted knowledge systems, spatial publishing, creator workspaces, and education products in development.

SELECTED BOOKS AND RESEARCH OUTPUTS

Bridging Molecular Mechanisms and Neural Oscillatory Dynamics 2024

Book-length synthesis connecting molecular memory mechanisms, neural oscillations, cognition, and Self-Aware Networks.

Open book listing

Building Sentient Beings co-authored

Co-authored with Michael S. P. Miller and available on ResearchGate. Ramesh Yerramsetti discussed the paper in his article on cognitive architectures in a post-LLM world.

Read on ResearchGate | Read the discussion

μ-GIL: A Spatial Abstraction Learner BICA 2026

Related work listed in the BICA 2026 conference program.

View the conference program

SAN Book 2 in development

A new source-linked research book and reading environment for desktop, phone, audio, and WebXR, with planned high-resolution 3D color graphics and spatial figure exploration.

Explore Self-Aware Networks

TECHNICAL TOOLKIT

Research: computational neuroscience, neural oscillations, information theory, dynamical systems, theoretical physics, scientific writing.

Software: Python, NumPy, SciPy, Pandas, PyTorch, TensorFlow, Jupyter, JavaScript, TypeScript, Node.js, HTML/CSS, SQL, Git, GitHub, LaTeX.

Spatial and knowledge systems: A-Frame, Three.js, WebXR, interactive visualization, knowledge graphs, semantic retrieval, provenance, AI-assisted workflows.

RESEARCH AND PRODUCT INFRASTRUCTURE

Develop Jigsaw, TurboVec, and Fit Census workflows for research discovery and source comparison. Connect knowledge tools with spatial publishing and IP/provenance product directions; maintain Python and formal-methods research on the Riemann/HSIT program.

COMMUNITY AND LEADERSHIP

NeurotechSF
Founder and organizer, 2018 - 2019

Noisebridge
EEG and WebXR community building

Neural Lace Podcast
Host, producer, and interviewer

SVGN
Founder, publisher, and platform architect

Workshops and talks
Coding meetups, lectures, and hands-on technology sessions

EDUCATION AND CONTINUING STUDY

IBM AI Engineering Professional Certificate
2023

Google Cybersecurity Professional Certificate
2023

Self-directed curriculum
Neuroscience, cognitive science, AI, physics, mathematics, and software engineering