

KATHLEEN (KAT) JOHNSON

Pattern + System Analysis | Investigative Genetic Genealogy | Science Writing

Email: [kjoh423@jh.edu](mailto:kjohn423@jh.edu) | [kjoh29@unh.newhaven.edu](mailto:kjohn29@unh.newhaven.edu)

Website: <https://katscratch.online> | Research Gate: [Kathleen Nielsen-Johnson](#)

ORCID: [0009-0066-8245-3488](https://orcid.org/0009-0066-8245-3488) | LinkedIn: <https://www.linkedin.com/in/thekatz/>

IDENTITY STATEMENT

Systems-science and investigative researcher integrating psychology, lineage science, geospatial patterning, and structured narrative inquiry to articulate how identity and adaptive processes emerge across time, space, and context; developer of the Autonomic, Interoceptive, Predictive, and Processual experiences (AIPP) framework—the architecture of regulation that bridges viability and success/failure.

RESEARCH INTERESTS

- Multisystem regulation + processing
- Intergenerational patterning + identity architecture
- Environmental determinants of regulation + adaptation
- Spatial-behavioral pattern mapping + health psychology
- Narrative science + physiological storytelling
- Investigative + forensic lineage reconstruction

CORE CAPABILITIES

Neuro-Tech + Wearable Metrics

EEG, HRV, fNIRS/ExG interpretation; biosignal-based insight

Processing Systems Architecture

Autonomic, Interoceptive, Predictive, and Processual experiences; Cross-domain pattern mapping

Performance + Human Adaptation

Regulation-capacity development, cognitive-load understanding; readiness-oriented physiology

Enterprise Design + Innovation

Neuro-tech integration, applied psychophysiology frameworks; ecosystem-level strategy

Lineage Science + Investigative Genealogy

Kinship reconstruction, intergenerational systems mapping, and lineage-based identity analysis

Science Writing + Investigative Narrative Physiology

Narrative-driven science communication; physiological storytelling; research translation for public + academic audiences

RESEARCH + SCHOLARSHIP

Primary Research Focus

Multisystem regulation, interoceptive patterning, predictive and experiential processing, and identity architecture across physiological, psychological, relational, and intergenerational domains. Lineage-based pattern transmission with emerging focus on geospatial determinants of regulation.

Manuscript Under Review

Nielsen-Johnson, K. (2026). AIPP: The Structural Architecture of Regulation in Viable Systems. *Systems Research and Behavioral Science*. <https://Preprint DOI:10.13140/RG.2.2.28768.24324>

Signature Contribution | AIPP

A unified regulatory ontology describing how humans form patterns, adapt, and regulate across systems; structurally isomorphic with neural regulatory architecture.

U.S. Copyright Registration: 1-15140098622

Working Papers

- AIPP-Based Analysis of Anxiety + Panic
- Persistent Somatic Symptoms Through the AIPP Lens
- ENS-Driven Predictive-Processing Patterns

ENTERPRISE LEADERSHIP

Founder + Principal — KatScratch.online

A multi-division ecosystem integrating neuro-innovation, applied psychophysiology, geospatial intelligence, identity architecture, and systems-based human development:

Vital Insights — Science + Systems Division

Inner Edge — Performance + Identity Division

PSYCH-ish — Media + Education Division

501c3 Leadership

- Spring Creek Ranch — Equine rescue + experiential systems
- Debra Louise Thompson Kucera Memorial Fund — Resilience access + community support

EDUCATION

Bachelor of Science — Psychology (Summa Cum Laude)

University of Northwestern – St. Paul

Concentrations: Health Psychology; Marriage + Family Counseling

Graduate Certificate — Organizational Leadership (GPA: 4.0)

University of Northwestern – St. Paul

Capstone: Leadership Systems Architecture + Organizational Communication

Master of Arts — Scientific Writing (GPA: 4.0)

Johns Hopkins University — In Progress

Graduate Certificate — Forensic Investigative Genetic Genealogy (GPA: 4.0)

University of New Haven — In Progress

Master of Arts — Ministry Leadership (GPA: 4.0)

University of Northwestern – St. Paul – In Progress

Capstone: Adaptive Ministry Leadership + Architecture for Faith

ADDITIONAL TRAINING

cert | neuro-science + neuro imaging – Johns Hopkins University

Neural Signaling + fMRI | EEG basics + neuroimaging principles and applied neuroscience

cert | biosignal processing - MIT

Biomedical Signal + Image Processing

cert | mindfulness in integrative healthcare – University of Minnesota

Integrative Therapies + Healing Practices

cert | machine learning - Harvard

Data Science: Machine Learning

DOCTORAL TRAJECTORY

Ph.D. Instructional Systems Technology (Research Track) — Target Start: Fall 2028

Focus: systems modeling, human + organizational systems, adaptive systems, geospatial pattern analysis, lineage-based identity architecture, predictive-processing as a systems lens, and environmental determinants of human adaptation.

STRATEGIC GOALS

- Advance AIPP as a systems-level regulatory + identity architecture
- Extend multisystem regulation research into lineage + environmental determinants
- Build and operationalize the mobile neuro-wellness lab + neuro-tech workflows