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N. Katherine Hayles

Analog Lifeworlds: How Organisms Evolved Analog Computing and Then Humans Reinvented It

Wednesday, October 28, 6:30 (CET), online

THINKING NATURE

(organised by Eva-Maria Aigner and Ralf Gisinger)

Digital computation is now so dominant that many forget the tradition of analog computing, which in the 1930s and 1940s was the preferred computing method for those who needed fast real-time results. This is especially unfortunate because the entire biosphere operates primarily on analog computation. The scientific discipline that explores the analog computational processes in living organisms is natural computing (sometimes also understood as including bio-inspired computing). This rapidly emerging field has an impressive array of research results that show the myriad subtle, complex, and multi-layered analog computational processes that organisms use to cognize, communicate, anticipate and learn—in short, to survive and flourish.

Because the area of the humanities interested in computation is called “Digital Humanities”, a sister branch called “Analog Humanities” should be launched. It can explore the important connections between biological and technological computing, as well as connect with the research results of natural computing to understand its implications for humanistic inquiry. This talk will offer a definition of computing, explain how analog computing differs from digital computing, assess its distinctive benefits and limitations, and discuss hybrid digital/analog technologies, such as Large Language Models (LLMs).

N. Katherine Hayles is the Distinguished Research Professor at the University of California, Los Angeles, and the James B. Duke Professor Emerita from Duke University. Her twelve print books include *Postprint: Books and Becoming Computational* (2021), *Unthought: The Power of the Cognitive Nonconscious* (2017), *How We Think: Digital Media and Contemporary Technogenesis* (2015), *How We Became Posthuman: Virtual Bodies in Literature, Cybernetics and Informatics* (1999). Her latest 2025 book is *Bacteria to AI: Human Futures with our Nonhuman Symbionts*.

Zoom-Link: <https://univiennea.zoom.us/j/62003446384?pwd=JVXK84VKSmpijMFWPf4kHCUEgSXPvu.1>

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THINKING NATURE

Lecture and Workshop Series, University of Vienna 2025–2026

Organised by **Eva-Maria Aigner** and **Ralf Gisinger**

Research Group “Poststructuralism, Gender Theory, Psychoanalysis”

More information: poststrukturalismus.univie.ac.at

