

Law E: Operational Thermodynamic Information for Energy-Aware and Self-Regulated AI

For decades, the thermodynamics of information has remained largely theoretical. This work introduces **Law E**, the first operational equation applying these principles to real-world AI systems.

Law E establishes a quantitative bridge: Information → Energy → Coherence → Reliable Action

It enables a simple regulatory layer that operates above existing neural networks, delivering measurable improvements in:

- **Factual reliability** (hallucination reduction)
- **Cognitive stability**
- **Computational energy efficiency** by minimizing wasted ΔE during inference

The architecture follows a biomimetic strategy: an autonomous computational organism with multimodal and multidimensional coherence checks, inspired by the Chakana—an ancestral organizational symbol functioning as a nervous system nexus.

Early predictions indicate strong impact in:

- Robotics and autonomous drones
- Edge computing and photonic systems
- Any domain where energy, memory, and safety constraints are critical

A first proof-of-concept demonstrating measurable hallucination reduction versus baseline LLMs will be delivered on **January 11, 2026**.

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