FisMatEcol Boletin

Enero y Febrero

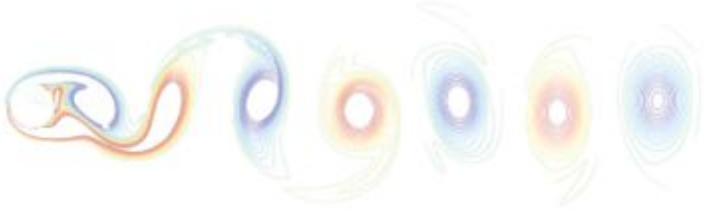
Dr. Oliver López Corona
Dra. Elvia Ramírez Carrillo

Eventos

Challenges for modelling linked to epidemics data of infectious diseases

Dra. Suani T. R. Pinho

Instituto de Física - Universidade Federal da Bahia e Instituto Nacional de Ciência e Tecnologia - Sistemas Complexos



20 FEB

12:00 HRS.

SALÓN 13
EDIFICIO C
IIMAS

Organizadores

Dr. Renato Calleja Castillo
calleja@mym.iimas.unam.mx
Dr. Luis Fernando López Ríos
luis.lopez@aries.iimas.unam.mx

ZOOM
https://shorturl.at/jq1Ak

Inteligencia artificial y justicia

COORDINAN
José Ramón Cossío Díaz
Miembro de El Colegio Nacional
Alejandra Rabasa Salinas
Unidad General del Conocimiento Científico y derechos Humanos, SCJN

PARTICIPAN
José Ramón Cossío Díaz
Miembro de El Colegio Nacional
Alejandro Pisanty Baruch
Facultad de Química, UNAM
Caleb Antonio Rascón Estebané
IIMAS, UNAM
Gabriela Sued
IIMAS, UNAM

REGISTRO

Martes 25 de febrero
10:00 horas (CDMX)
Se otorgará constancia a quienes asistan al 80% de las sesiones de 2025. La próxima sesión se llevará a cabo el 25 de marzo, sobre el tema "Biotecnología y genética".

ENTRADA LIBRE
Auditorio del IIMAS, UNAM
Circuito Escolar S/N, Ciudad Universitaria
Alcaldía Coyoacán. C.P. 04510, CDMX

Conferencia

EDUCACIÓN E INTELIGENCIA ARTIFICIAL: RETOS Y OPORTUNIDADES

Imparte:

Carmen Enedina Rodríguez Armenta

Subsecretaria de Educación Superior-SEP

Participan:

Susana López Charretón

Presidenta en turno de El Colegio Nacional

José Ramón Cossío

Antonio Lazcano

Luis Fernando Lara

Miembros de El Colegio Nacional

Martes **18** de febrero
de **2025** · **12** h (CDMX)

ENTRADA LIBRE
Donceles 104, Centro Histórico, CDMX
Además, **transmisión en línea**
Consulta cartelera en **colnal.mx**

ColegioNacional.mx · elcolegionacionalmx · @ColegioNal_mx · elcolegionacional

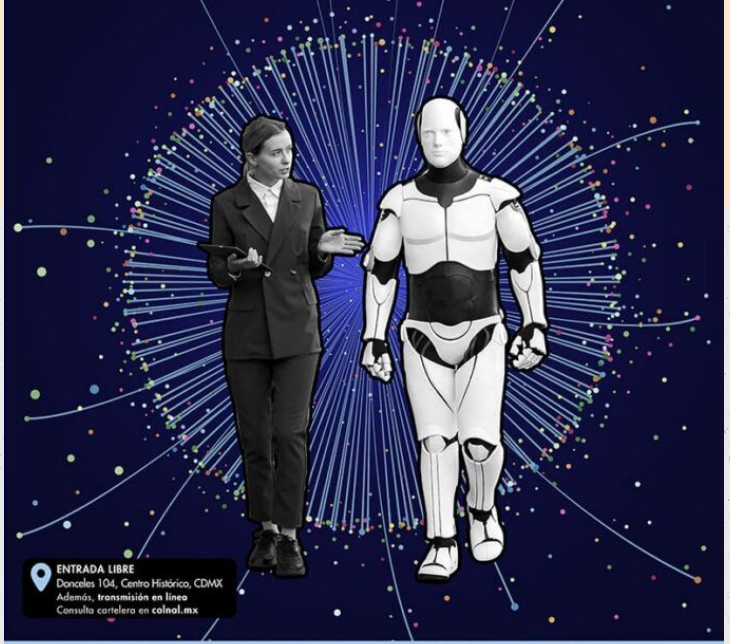
EL COLEGIO NACIONAL

Curso

UNA BREVE INTRODUCCIÓN A LA INTELIGENCIA ARTIFICIAL Y SUS APLICACIONES

Coordina:
Carlos A. Coello Coello
Miembro de El Colegio Nacional

Lunes **24** a viernes **28** de febrero de **2025** · **18** h (CDMX)



ENTRADA LIBRE
Donceles 104, Centro Histórico, CDMX
Además, **transmisión en línea**
Consulta cartelera en **colnal.mx**

ColegioNacional.mx · elcolegionacionalmx · @ColegioNal_mx · elcolegionacional

EL COLEGIO NACIONAL

Oportunidades

PhD student positions: raphe nuclei neuromodulatory circuits in sleep regulation, memory and stress – Université de Montréal

Two PhD positions are available in the laboratory of Dr Bénédicte Amilhon at the CHU Sainte-Justine Research Center, Montréal (QC) Canada

(**https://research.chusj.org/en/Research/Research-Axes/Brain-and-Child-Development-Axis**).

The Amilhon lab studies multiple pathways arising from the raphe nuclei, including serotonergic and glutamatergic pathways to the hippocampus, septum and other brain regions. Ongoing projects investigate the roles of these pathways in modulating sleep-wake stages, emotion-related behaviors (anxiety, fear) and memory consolidation. We use multidisciplinary neuroscience approaches including optogenetics, calcium imaging, fiber photometry, in vitro and in vivo electrophysiology and behavioral studies.
Highly motivated applicants must hold a MSc degree in Neuroscience or related fields. Skills in mouse brain surgery, in vivo electrophysiology recordings and computer programming/analysis are an advantage.

Applicants are required to send a cover letter detailing their trajectory, interests in neuroscience and motivation for the proposed PhD area, a CV, 2-3 reference contacts and past degree transcripts to the following address: **benedicte.amilhon@umontreal.ca**. Please specify where you have found the job post.

Contact information **benedicte.amilhon@umontreal.ca**

Posting end date 2025/03/31

PhD, Postdoctoral and Academic jobs (24) at Utrecht University in Netherlands

Scholar Idea February 13, 2025


MEDIO AMBIENTE
CONANP
BANQROO
Fundación Cozumel
CONVOCATORIA
PUESTO: COORDINADOR(A) DE PROYECTO
"Administración adecuada en 4 áreas de protección marino costeras en Isla Cozumel, en el contexto de la conectividad y salud de los ecosistemas, para mejorar la efectividad de manejo en beneficio de la conservación y uso sostenible de la biodiversidad"
UBICACIÓN: Cozumel, Quintana Roo
Consulta la convocatoria y aplica
Fecha Límite 11 de noviembre del 2024 a las 18:00 horas (Quintana Roo)

#JobOpportunity – @UCDavisWater is looking to fill 3 Junior Specialist appointments in the study of montane stream & meadow hydro-ecology. Applications are viewed cyclically and will remain open until filled, with a final closing date of June 30, 2025. watershed.ucdavis.edu/news/junior-sp...

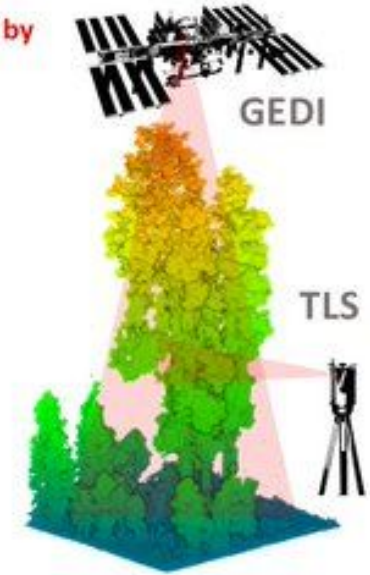
Traducir post

EMS4D: Multi-Scale Fuel Mapping and Decision Support System for Next Generation Fire Management

Forest Biometrics, Remote Sensing and AI Lab (Silvalab)
School of Forest, Fisheries, and Geomatics Sciences (SFFGS)
Institute of Food & Agricultural Sciences (IFAS)
University of Florida (UF)

Close Date: Dec 1st , 2024

Interested applicants should submit a cover letter and CV by December 1st , 2024, to Dr. Silva at c.silva@ufl.edu



SilvaLab

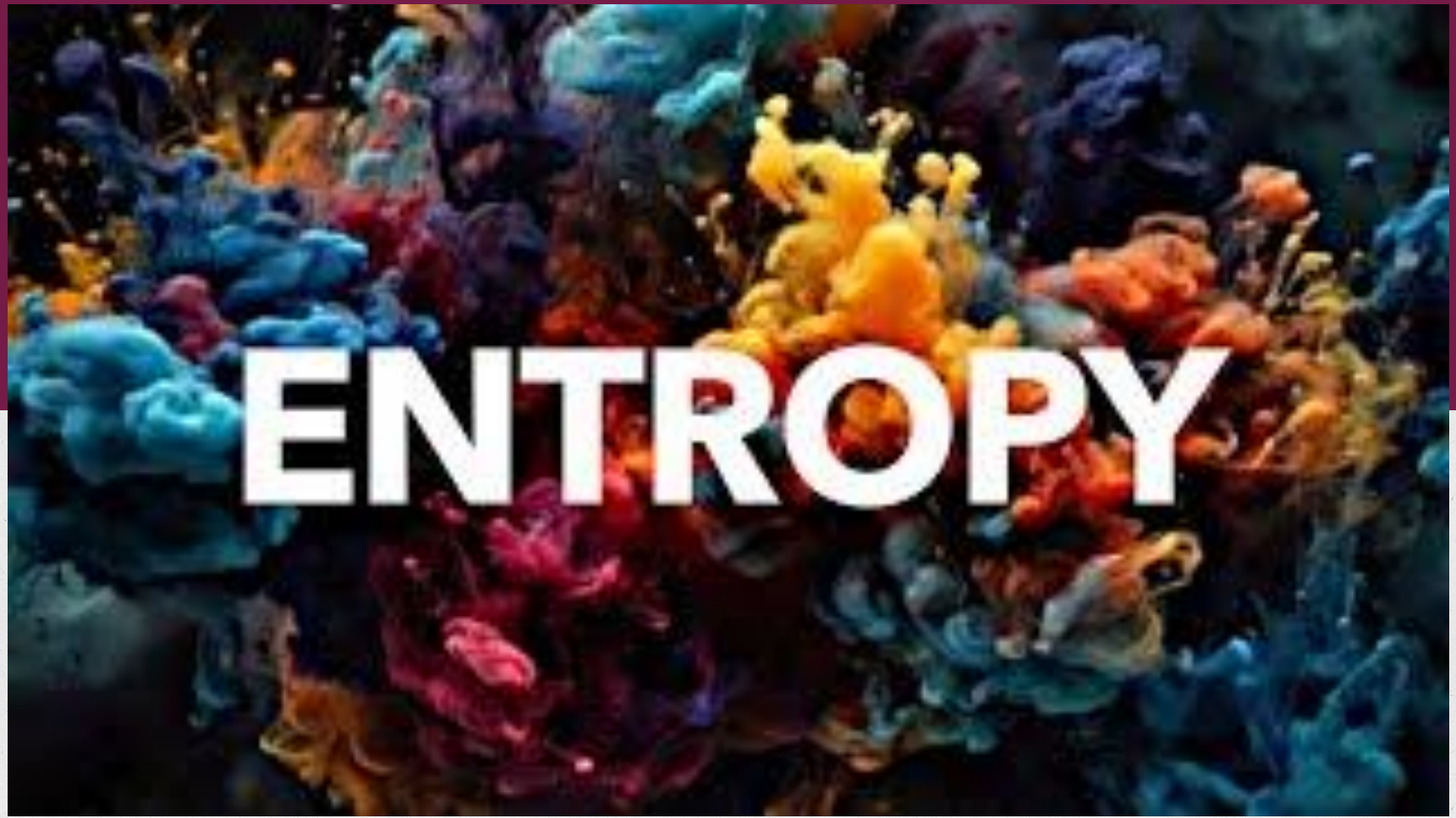
SCHOOL OF FOREST, FISHERIES, AND GEOMATICS SCIENCES

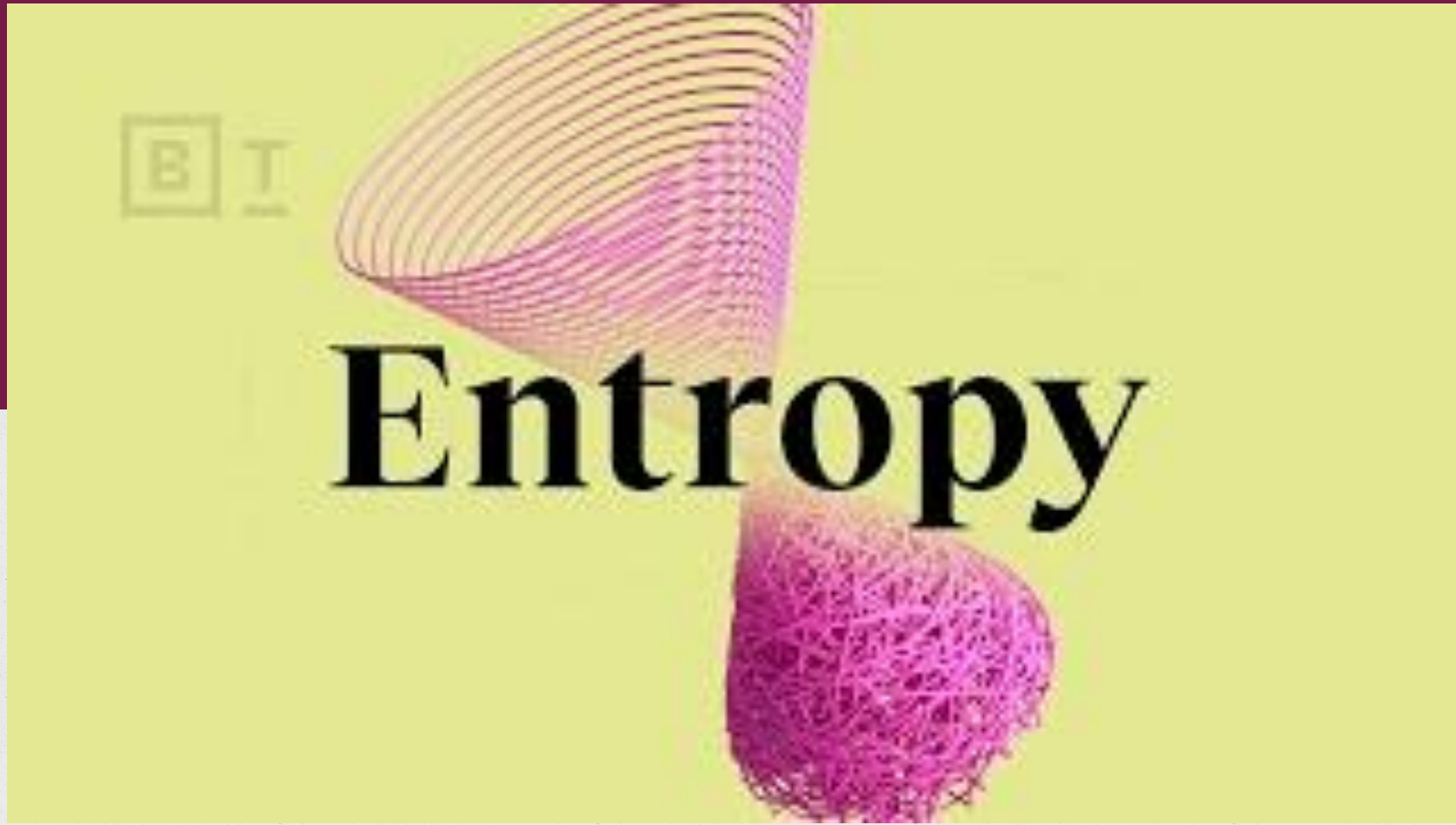
UF IFAS UNIVERSITY of FLORIDA

More information can be found at:
https://carlos-alberto-silva.github.io/silvalab/opportunities.html

Conceptos


SH
The Uncertainty Principle


ENTROPY

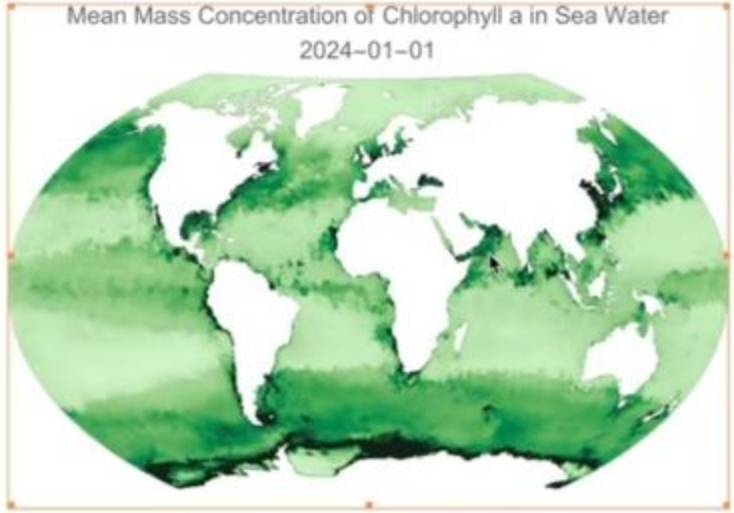

Entropy

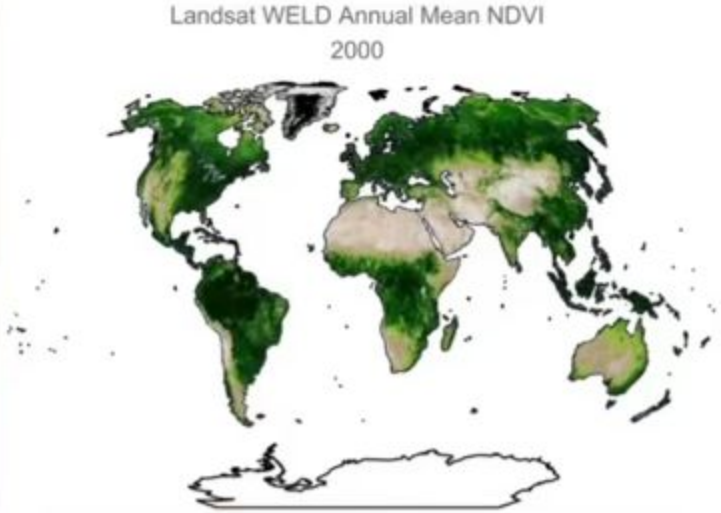
Cursos


CURSO
Semestre 2021-2
Martes 16
FEBRERO
Sesión 01
INTRODUCCIÓN A LA COMPLEJIDAD
Posgrado en Ciencias Biológicas - UNAM
Carlos Gershenson
Informes: cgg@unam.mx

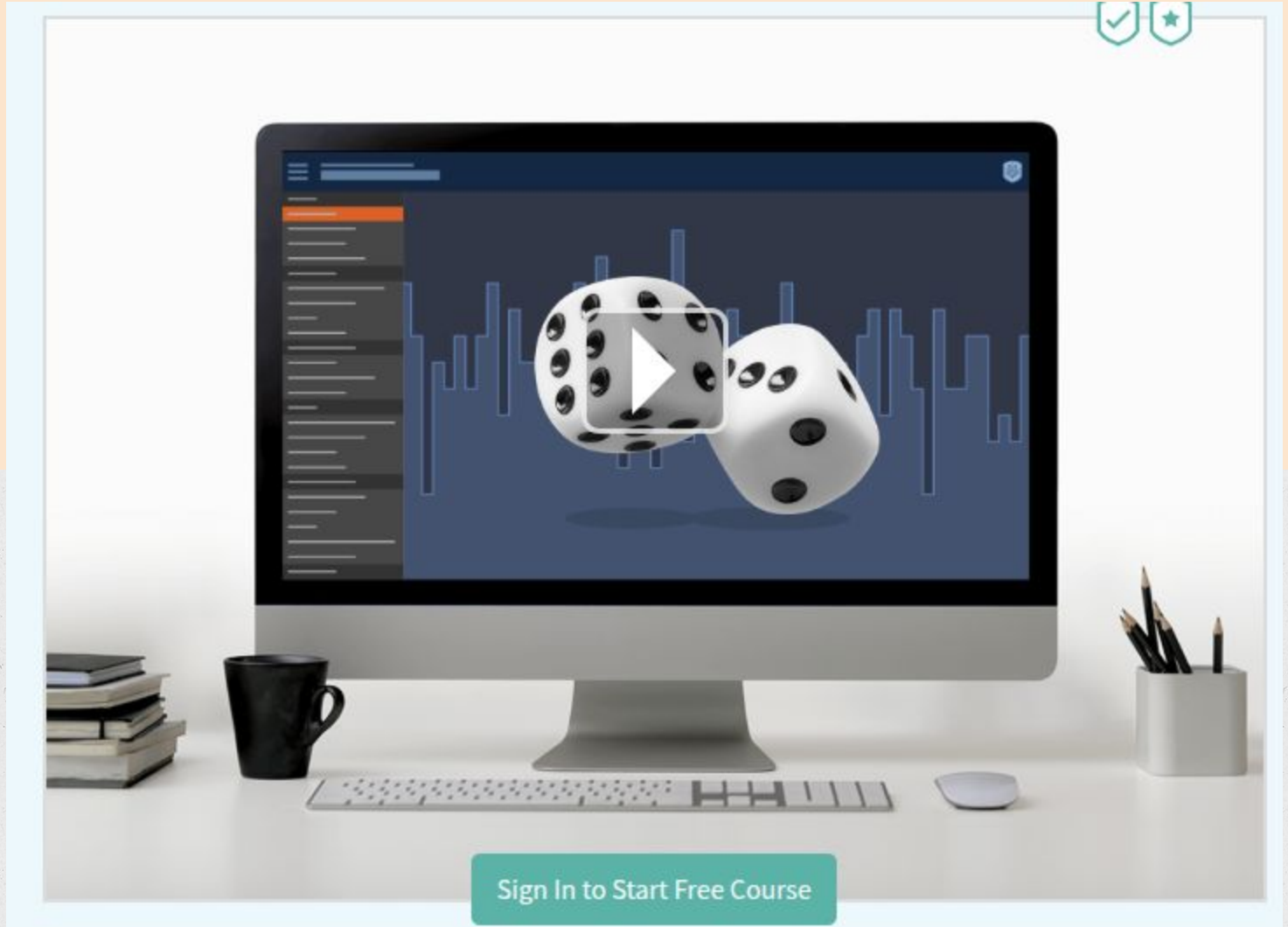

Generative AI:
Technology,
Business & Society
Stanford | ONLINE

```
GeoGraphics[
  {GeoStyling["StreetMap", GeoServer → GIBSGeoServer["Landsat_WELD_NDVI_Global_Annual", "Date" → Fri 1 Dec 2000]],
   Polygon[Entity["Country", "World"]]}, GeoRange → "World",
  GeoBackground → {"Coastlines", {"Border" → Black, "Land" → Transparent, "Ocean" → Transparent}},
  GeoProjection → "WinkelTripel", PlotLabel → "Landsat WELD Annual Mean NDVI\n2000",
  ImageSize → Medium],
 Placed[...]]
}]
```





1:05:25


Sign In to Start Free Course

Epidemiological Modeling with the Wolfram Language

SESSION 1—INTRODUCTION TO EPIDEMIOLOGY

MEMORIA DE LA ESCUELA


Game Theory
Collective Behavior
Nonlinear Dynamics
Emergence
Networks
Complex Systems
Self-Organization
Systems Theory
Pattern Formation
Evolution & Adaptation

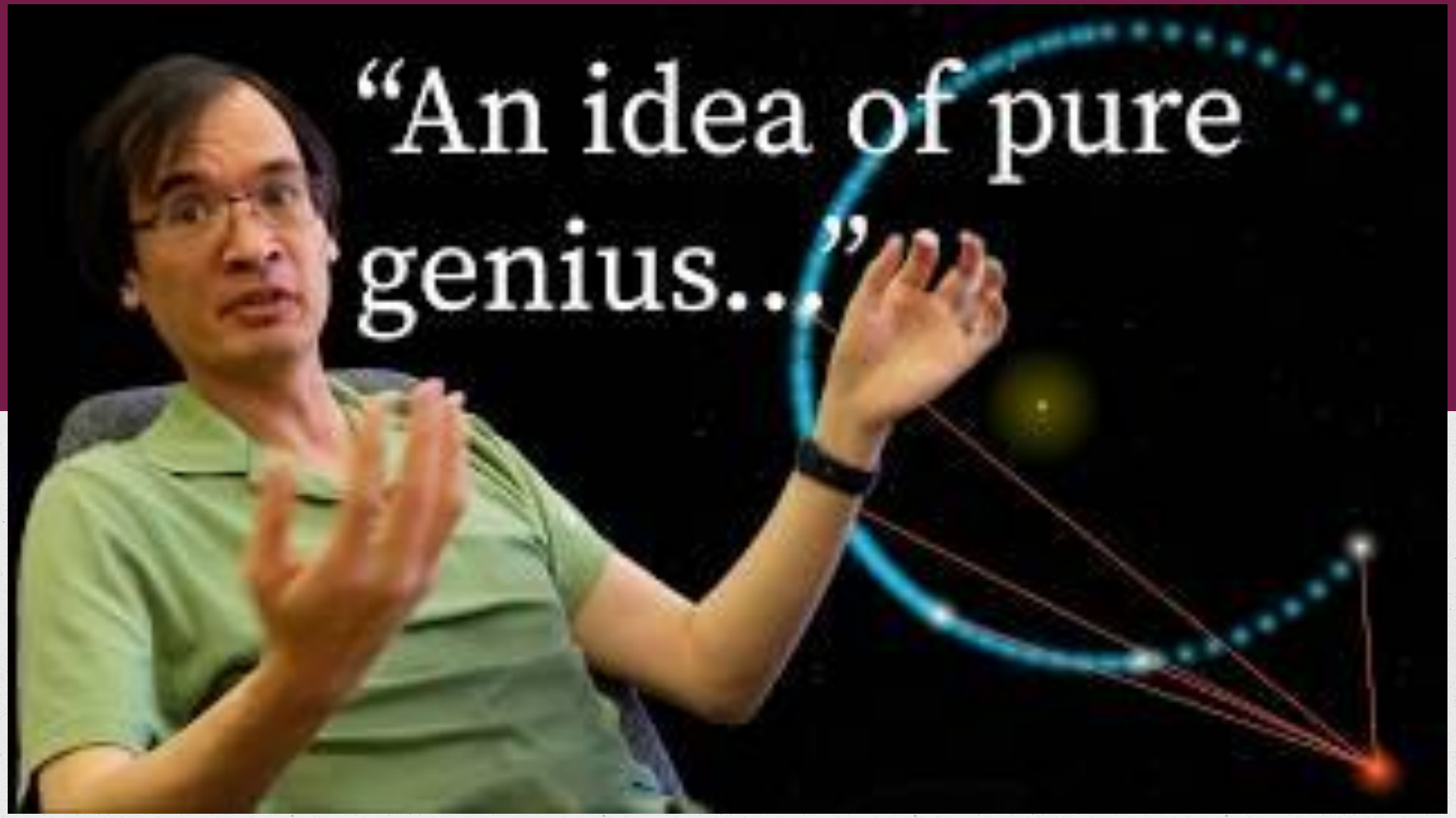
Mi propuesta de que es lo que debería enseñarse y cómo.

Cultura


clideo.com


ASK
ABOUT AI
WITH CHRIS
MANNING
Stanford | ONLINE


Episode 140
O'SHAUGHNESSY VENTURES
JIM & PATRICK O'SHAUGHNESSY


“An idea of pure genius...”

Artículo

Journal of South American Earth Sciences
Available online 6 February 2025, 105398
In Press, Journal Pre-proof What's this?

Forcing agents lead to changes in the groundwater-surface water interaction of a semi-arid maar lake

Raúl A. Silva-Aguilera [1], Oscar Escolero [2], Javier Alcocer [3], Eric Morales-Casique [2], Selene Olea-Olea [2], Gloria Vilaclara [3], Socorro Lozano-García [2], Alex Correa-Metrio [4]

BRITISH ECOLOGICAL SOCIETY Methods in Ecology and Evolution

RESEARCH ARTICLE | Free Access

Acoustic indices perform better when applied at ecologically meaningful time and frequency scales

Oliver C. Metcalf, Jos Barlow, Christian Devenish, Stuart Marsden, Erika Berenguer, Alexander C. Lees

First published: 29 October 2020 | https://doi.org/10.1111/2041-210X.13521 | Citations: 50

Biological Cybernetics (2025) 119:7
https://doi.org/10.1007/s00422-025-01003-7

Biological Cybernetics

PERSPECTIVE

Antifragile control systems in neuronal processing: a sensorimotor perspective

Cristian Axenie[1]

Received: 5 April 2024 / Accepted: 9 January 2025

Abstract

The stability–robustness–resilience–adaptiveness continuum in neuronal processing follows a hierarchical structure that explains interactions and information processing among the different time scales. Interestingly, using "canonical" neuronal computational circuits, such as Homeostatic Activity Regulation, Winner-Take-All, and Hebbian Temporal Correlation Learning, one can extend the behavior spectrum towards antifragility. Cast already in both probability theory and dynamical systems, antifragility can explain and define the interesting interplay among neural circuits, found, for instance, in sensorimotor control in the face of uncertainty and volatility. This perspective proposes a new framework to analyze and describe closed-loop neuronal processing using principles of antifragility, targeting sensorimotor control. Our objective is two-fold. First, we introduce antifragile control as a conceptual framework to quantify closed-loop neuronal network behaviors that gain from uncertainty and volatility. Second, we introduce neuronal network design principles, opening the path to neuromorphic implementations and transfer to technical systems.

Volume 187, Issue 21, 17 October 2024, Pages 5809-5813

Voices

Future views on neuroscience and AI

Ilana Witten, Daniel L.K. Yamins, Claudia Clopath, Matthias Bethge, Yi Zeng, Ann Kennedy, Abeba Birhane, Doris Tsao, Been Kim, Ila Fiete

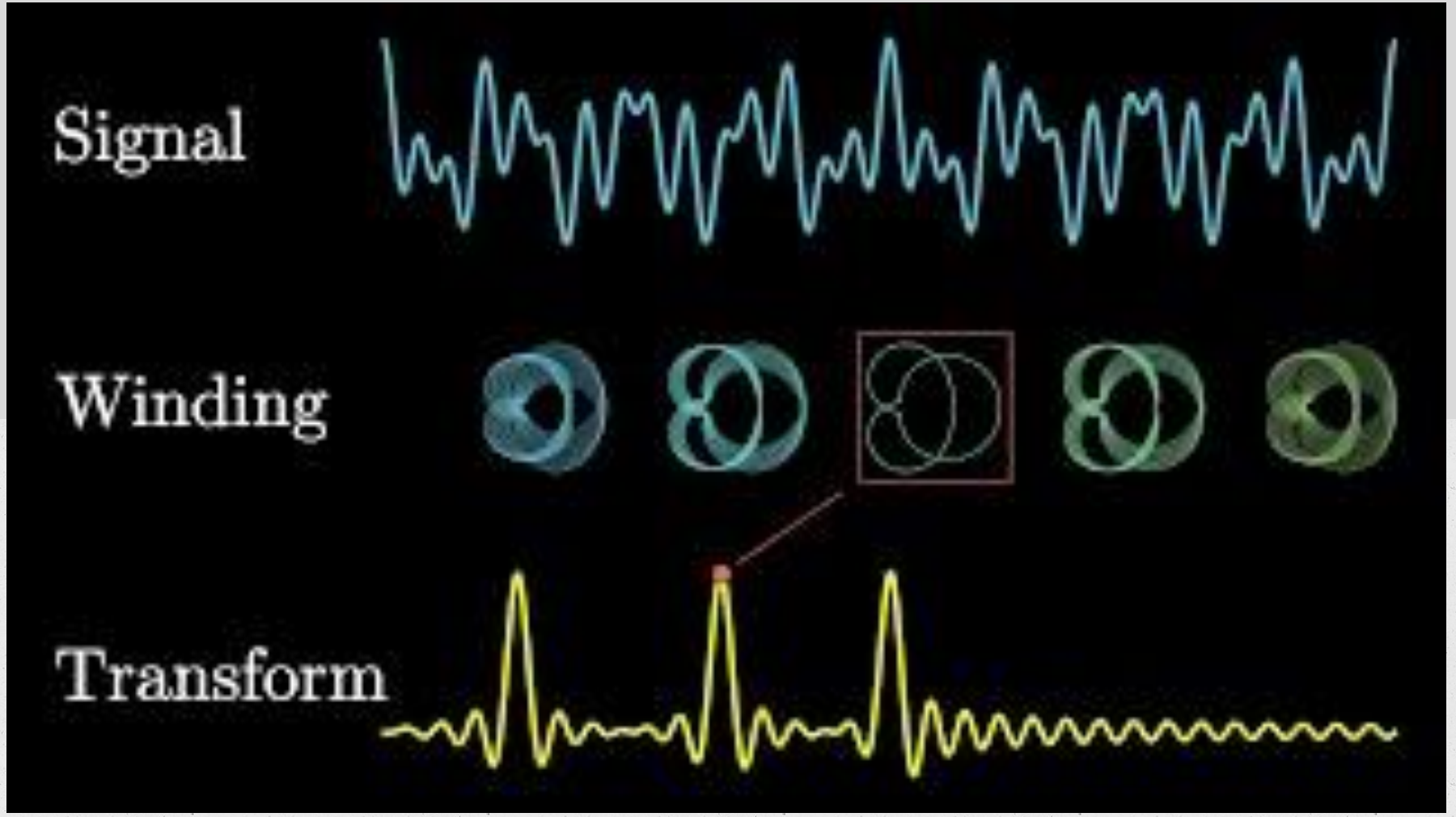
https://doi.org/10.1016/j.cell.2024.09.031 ↗

Referred to by The expanding world of neuroscience
Cell, Volume 187, Issue 21, 17 October 2024, Pages 5797-5798

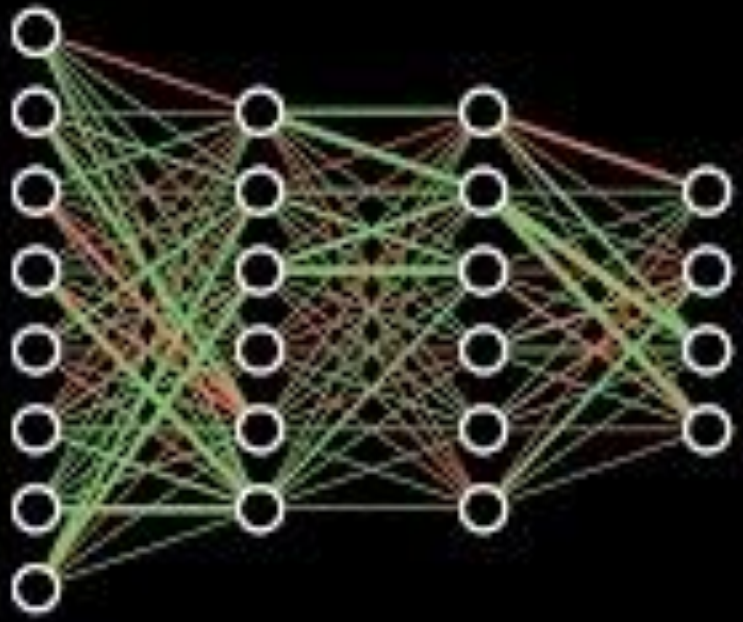
The relationship between neuroscience and artificial intelligence (AI) has evolved rapidly over the past decade. These two areas of study influence and stimulate each other. We invited experts to share their perspectives on this exciting intersection, focusing on current achievements, unsolved questions, and future directions.

Videos

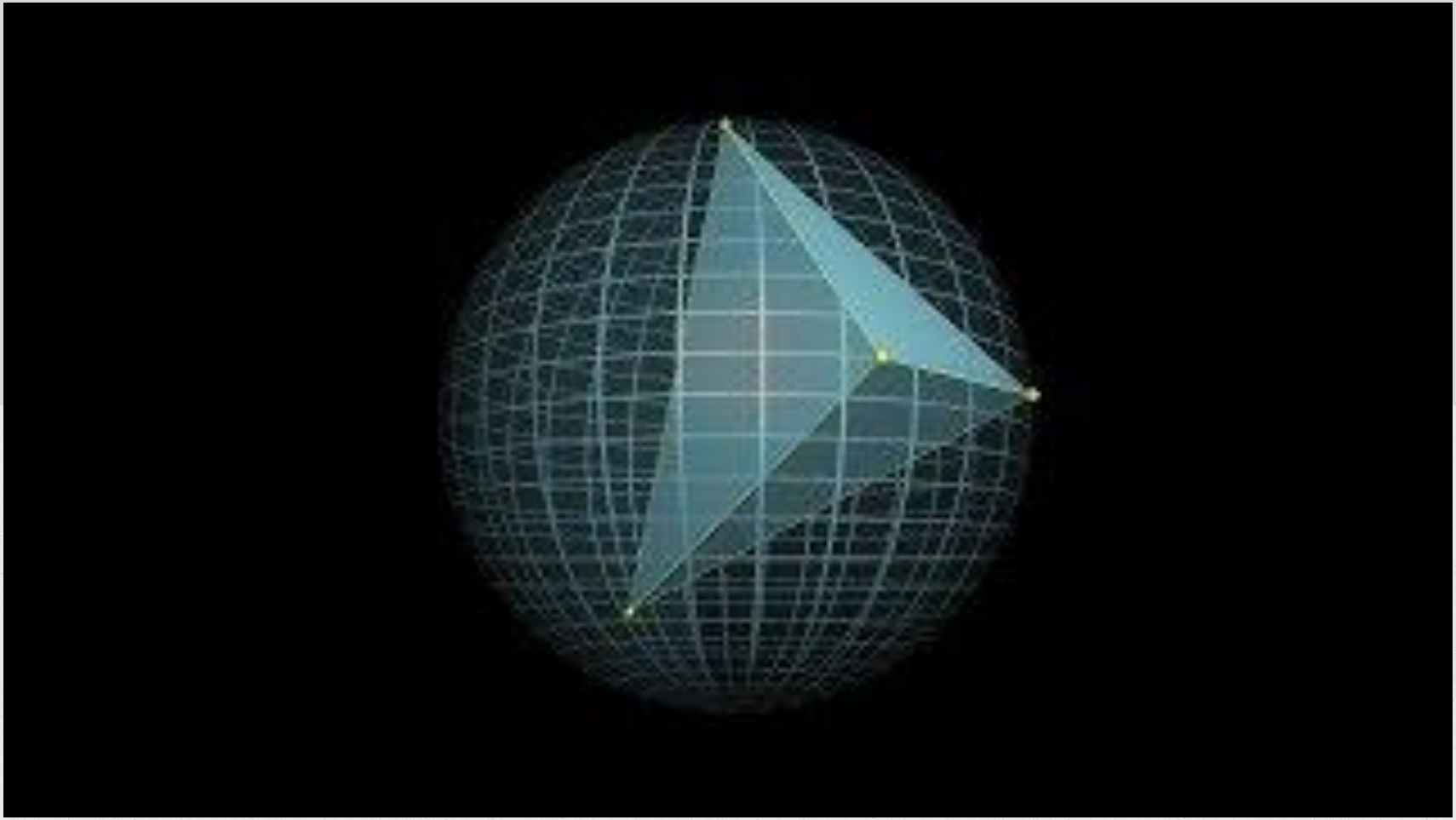

Inside an
LLM

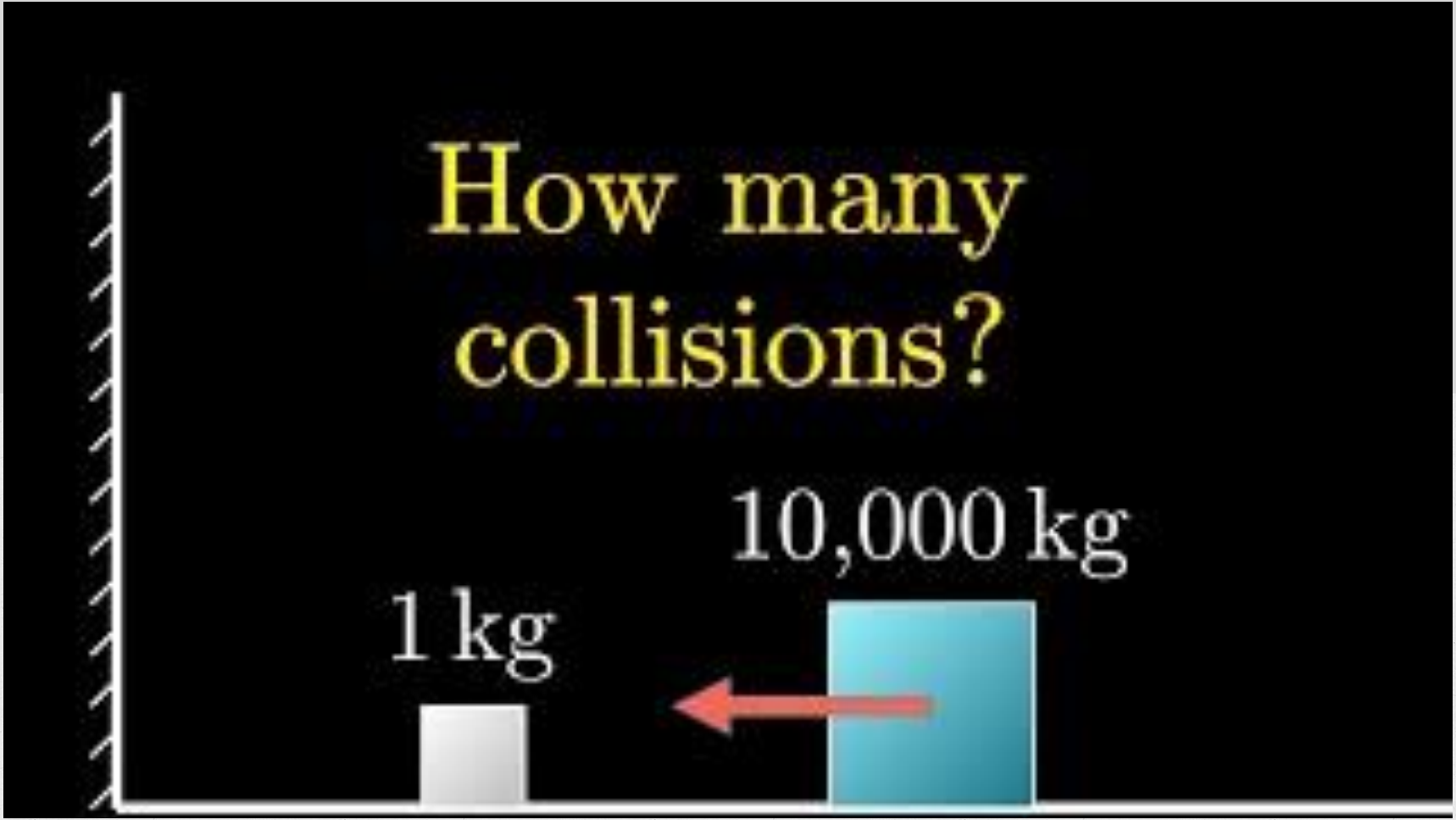

Signal
Winding
Transform

Neural Networks



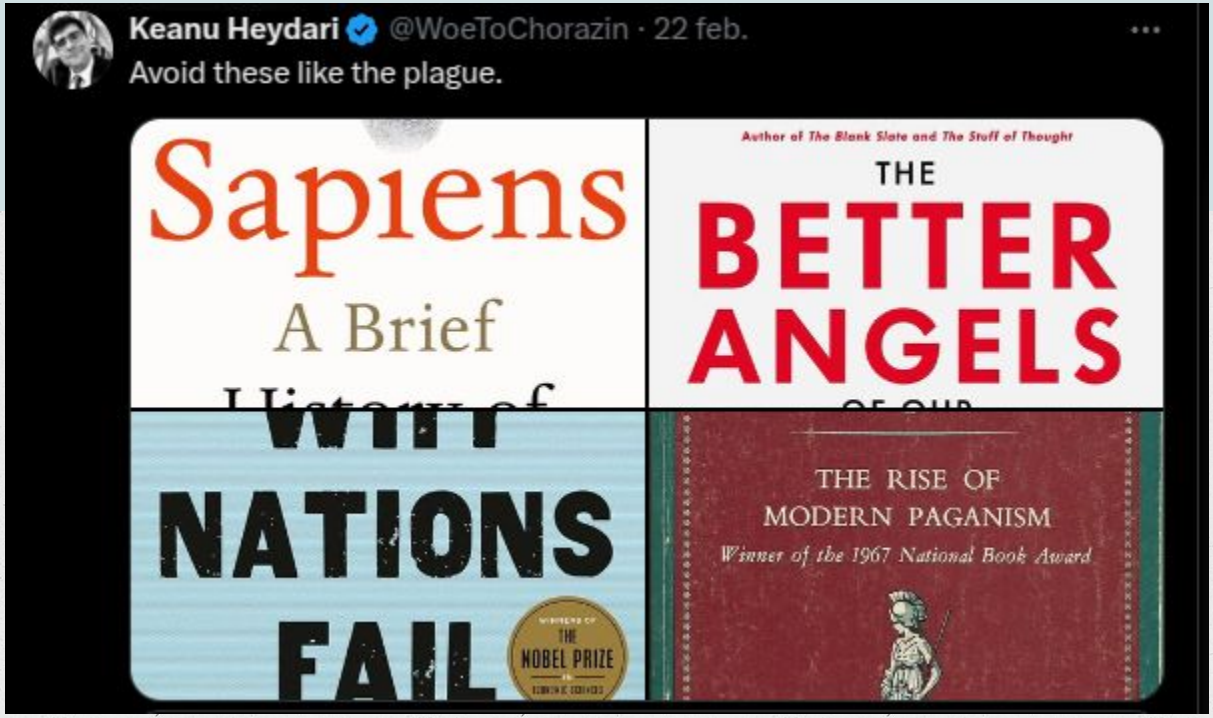
From the ground up




How many collisions?
10,000 kg
1 kg

Libros

Antibiblioteca: libros que mas vale evitar por generar anti-conocimiento. Porque lo contrario al conocimiento no es la ignorancia, es el anti-conocimiento



YURY POLYANSKIY
YIHONG WU

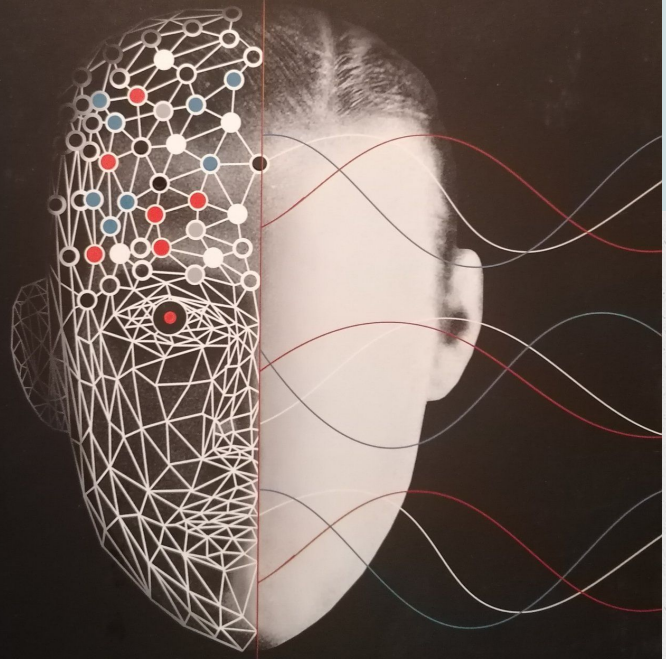
INFORMATION THEORY

FROM CODING TO LEARNING

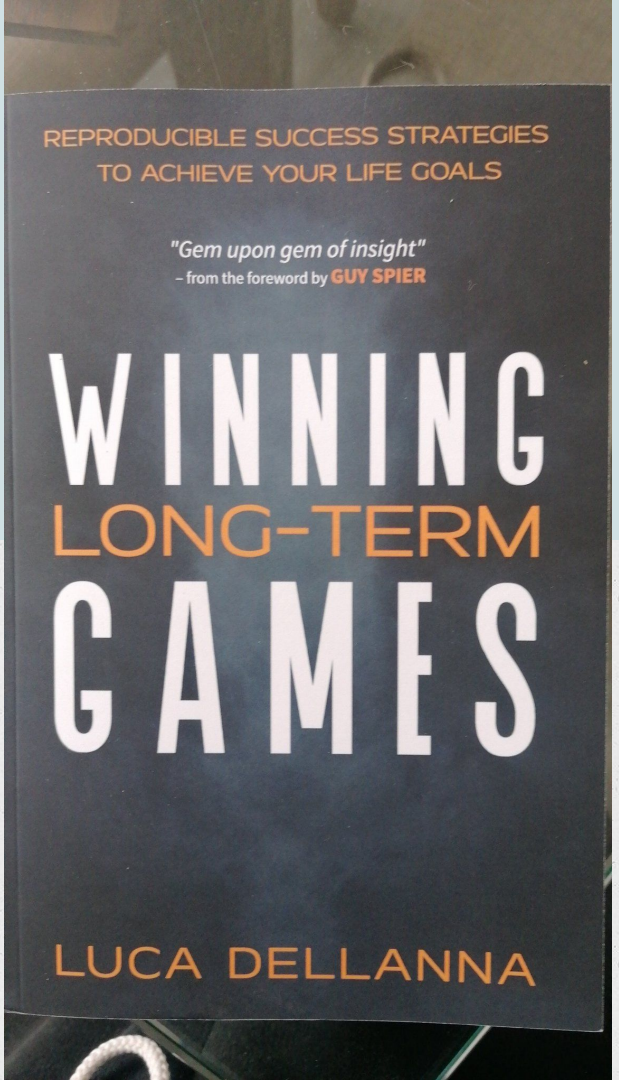
From MEDIEVAL ROBOTS to NEURAL NETWORKS

ARTIFICIAL INTELLIGENCE

AN ILLUSTRATED HISTORY



CLIFFORD A. PICKOVER


REPRODUCIBLE SUCCESS STRATEGIES
TO ACHIEVE YOUR LIFE GOALS
"Gem upon gem of insight"
– from the foreword by GUY SPIER
WINNING
LONG-TERM
GAMES
LUCA DELLANNA

Notas

RESEARCH ARTICLE | SOLAR CELLS

Mechanically robust and stretchable organic solar cells plasticized by small-molecule acceptors

ZHENYE WANG, DI ZHANG, LVPENG YANG, OMAR ALLAM, YERUN GAO, YANG SU, MEICHEN XU, SONGMIN MO, QINGHE WU, [...], AND MING SHAO +15 authors Authors Info & Affiliations

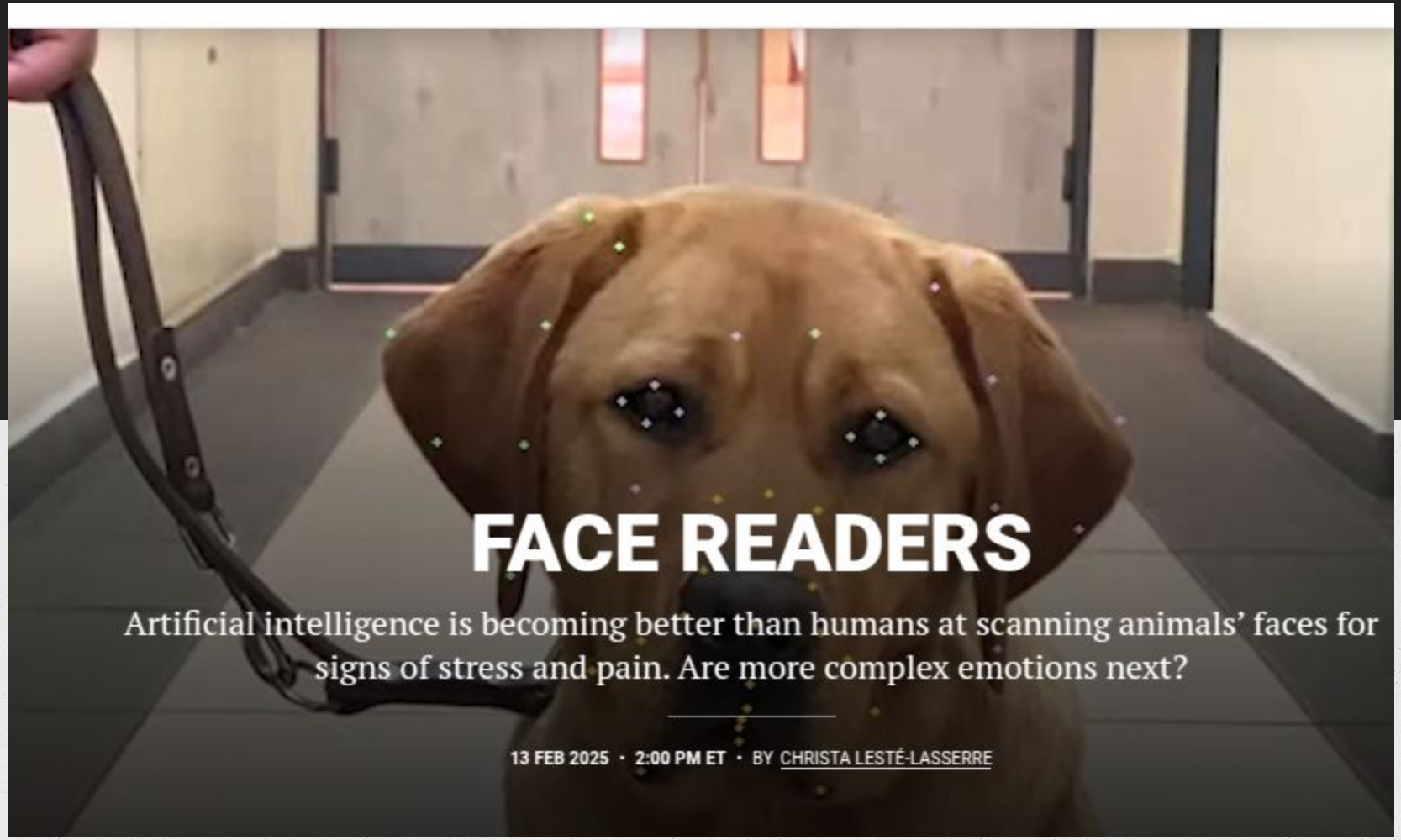
SCIENCE · 23 Jan 2025 · Vol 387, Issue 6732 · pp. 381-387 · DOI: 10.1126/science.adp9709

NEWS | BIOLOGY

Largest bacterium ever discovered has an unexpectedly complex cell

Giant microbe from a mangrove could be a missing link between single-celled organisms and the cells that make up humans

23 FEB 2022 · 6:35 PM ET · BY ELIZABETH PENNISI



FACE READERS

Artificial intelligence is becoming better than humans at scanning animals' faces for signs of stress and pain. Are more complex emotions next?

13 FEB 2025 · 2:00 PM ET · BY CHRISTA LESTÉ-LASSERRE

Google’s AI co-scientist could enhance research, say Imperial researchers

by Simon Levey
19 February 2025