

FisMatEcol Boletín

Marzo y Abril

Dr. Oliver López Corona
Dra. Elvia Ramírez Carrillo



Eventos



2025 INTERNATIONAL CONFERENCE ON
PHILOSOPHY OF COMPUTING

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UNAM, Mexico

CALL FOR ABSTRACTS

Submission deadline: June 31, 2025.
Submission acceptance notice: July 15, 2025.

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SEMINARIO DEPARTAMENTAL MMSS IIMAS

Híbrido

MODELOS PARA EL ESTUDIO DE LA ESTRUCTURA SOCIAL: INTEGRACIÓN SOCIAL Y SU RELACIÓN CON EL ÉXITO REPRODUCTIVO EN MONOS ARAÑA

Cristina Jasso del Toro
Sandra Elizabeth Smith Aguilar
Posdoctorantes del DMMSS, IIMAS-UNAM



 <https://bit.ly/Seminario-MMSS>

 5 de mayo de 2025

 12:00 horas

 Salón 206, Edificio B-IIMAS
Circuito Escolar, Ciudad Universitaria

 Israel García Solares:
israel.garcia@iimas.unam.mx

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AI Summit

HOTEL PRESIDENTE, CDMX.

29 -30 MAY.



OpenAI

Fintual

platanus



UNIVERSIDAD NACIONAL
AUTÓNOMA DE MÉXICO



Hormigas y plasticidad fenotípica. Explorando la base molecular de la conducta social

Ingrid Fetter Pruneda

Instituto de Investigaciones Biomédicas, UNAM

2 de mayo, 12:30h
Auditorio Carlos Vázquez
Yanes

Transmisión en vivo



Seminario



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Oportunidades

Concurso de Oposición Abierto

Convocatorias de reciente publicación (tomadas del sitio <http://www.gaceta.unam.mx>) de GACETA UNAM.

Universidad Autónoma Metropolitana

Sistema de Ingreso del Personal Académico

Listado de Concursos Vigentes

Los datos en este portal son de carácter Informativo , la Difusión e Información OFICIAL de las CONVOCATORIAS se puede consultar en [UAM.CONVOCATORIAS](https://uam.mx/convocatorias)



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Especialistas nacionales y extranjeros analizan las razones

¿Por qué ningún país logrará la Agenda 2030?

Los 17 Objetivos para el Desarrollo Sostenible se han mirado de forma aislada, cuando en realidad son interdependientes

Aleida Rueda / C3 — Abr 7, 2025

Compartir



ODS

EL DIABLO ESTÁ EN LAS INTERACCIONES

of the whole Earth system
being at risk,

¿Qué es un sistema complejo?

"Es un sistema termodinámico abierto compuesto por componentes interconectados que, a través de sus interacciones y procesos evolutivos —restringidos por condiciones externas—, se autoorganiza hacia la criticalidad. Esta criticalidad se manifiesta como dinámicas invariantes a escala que equilibran procesos generadores de orden con aquellos que introducen aleatoriedad. El sistema maximiza sus capacidades computacionales e inferenciales, permitiéndole adaptarse, responder y prosperar en medio de la incertidumbre, estresores, perturbaciones y, en última instancia, el paso del tiempo —esforzándose por ser lo más antifrágil posible. Fundamentalmente, un sistema así puede entenderse mediante un *tripleto contextual*, que constituye la verdadera ontología de todos los sistemas adaptativos complejos: (1) el sistema mismo y la información que genera; (2) su entorno inmediato y la información intercambiada con él; y (3) la forma en que el sistema responde a ese intercambio informacional dentro de un contexto específico." **Oliver López-Corona**

Cursos



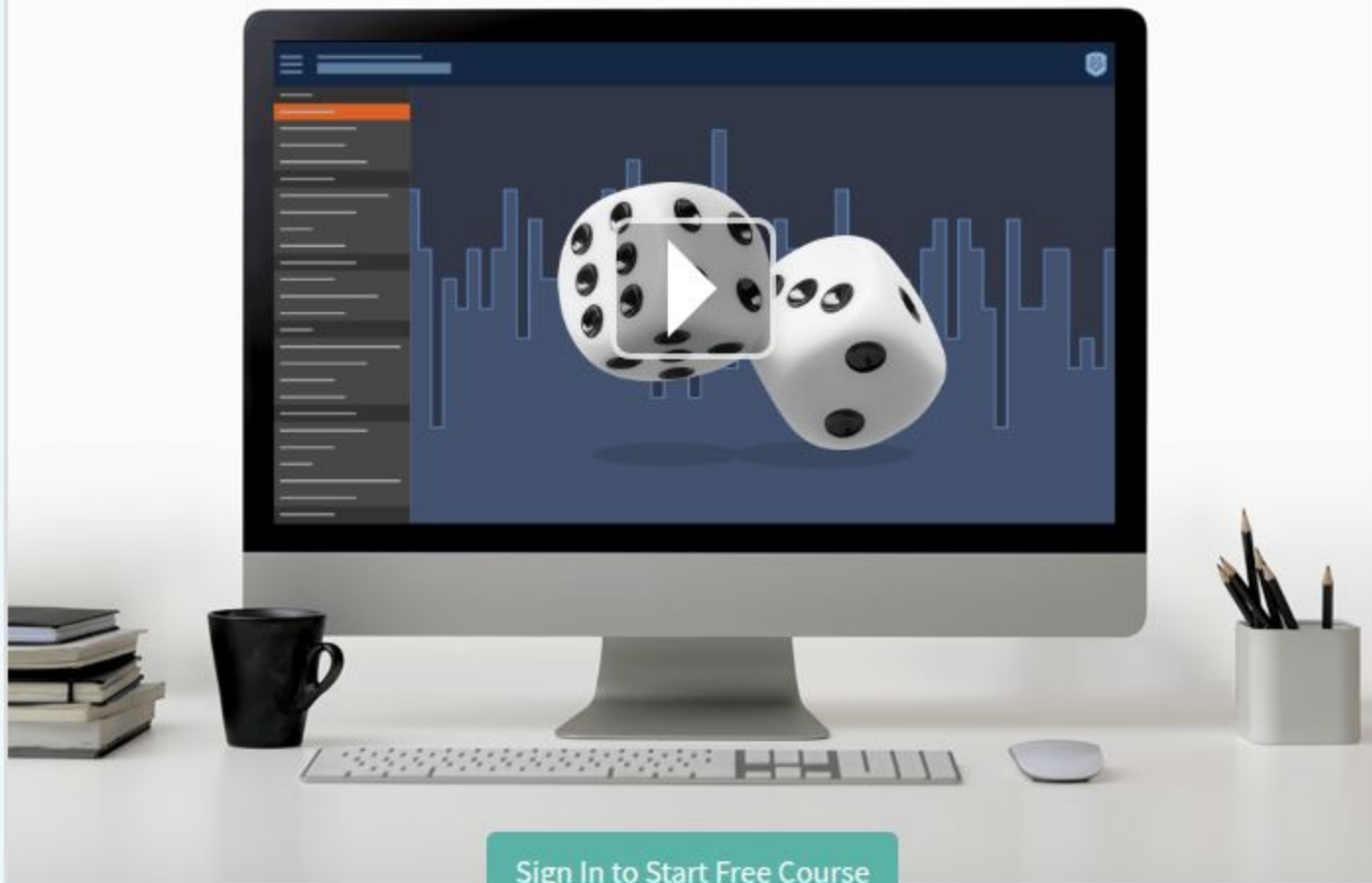
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Organiza: IIMAS, Fac de Psicología, IxM-CONACyT

Comité: Dr. Oliver López-Corona, Dra. Elvia Ramírez-Carrillo, Dr. Pablo Padilla

Sitio web: <https://www.lopezoliver.otrasenda.org/fismatecol/>







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



Cultura



COMPUTATIONAL COMPLEXITY



INFINITE PATHS



Artículo

Applied Antifragility in Natural Systems: Evolutionary Antifragility

CRISTIAN AXENIE¹, ROMAN BAUER², OLIVER LÓPEZ CORONA³, ELVIA RAMÍREZ-CARRILLO³, ARI BARNETT^{4,5}, AND JEFFREY WEST⁵

Department of Computer Science and Center for Artificial Intelligence, Nuremberg Institute of Technology Georg Simon Ohm, Nuremberg, Germany.

²*Computer Science Research Centre, University of Surrey, Surrey, United Kingdom*
Investigadores por México (IpM) at Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas (IIMAS), Universidad Nacional Autónoma de México (UNAM), Ciudad Universitaria, CDMX, Mexico.

⁴*Department of Molecular Biosciences, University of South Florida, Tampa, FL, USA*
Department of Integrated Mathematical Oncology, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, USA

April 25, 2025

Abstract

This chapter introduces evolutionary antifragility as the time-scale interaction characteristics of a natural dynamic system. It describes the benefit derived from input distribution unevenness, based on the emergent system dynamics and its uncertain and volatile interactions with the operating environment described by unknown disturbances. We consider methods for the detection, analysis, and modeling of cancer, environmental, microbiota, and social systems antifragility.¹

FEATURED IN PHYSICS | EDITORS' SUGGESTION

Synergistic Signatures of Group Mechanisms in Higher-Order Systems

PDF

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[Thomas Robiglio](#) ^{1,2,*}, [Matteo Neri](#) ³, [Davide Coppes](#) ⁴, [Cosimo Agostinelli](#)⁴, [Federico Battiston](#)¹, [Maxime Lucas](#) ^{5,6,†}, and [Giovanni Petri](#) ^{7,6,‡}

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Phys. Rev. Lett. **134**, 137401 – Published 31 March, 2025

Export Citation

DOI: <https://doi.org/10.1103/PhysRevLett.134.137401>

Perspective | [Open access](#) | Published: 10 November 2022

Statistical inference links data and theory in network science

[Leto Peel](#) , [Tiago P. Peixoto](#)  & [Manlio De Domenico](#) 

[Nature Communications](#) **13**, Article number: 6794 (2022) | [Cite this article](#)

26k Accesses | **51** Citations | **114** Altmetric | [Metrics](#)

Abstract

The number of network science applications across many different fields has been rapidly increasing. Surprisingly, the development of theory and domain-specific applications often occur in isolation, risking an effective disconnect between theoretical and methodological advances and the way network science is employed in practice. Here we address this risk constructively, discussing good practices to guarantee more successful applications and reproducible results. We endorse designing statistically grounded methodologies to address challenges in network science. This approach allows one to explain observational data in terms of generative models, naturally deal with intrinsic uncertainties, and strengthen the link between theory and applications.

Quantifying Dynamical High-Order Interdependencies From the O-Information: An Application to Neural Spiking Dynamics



Sebastiano Stramaglia^{1,2*}



Tomas Scagliarini¹



Bryan C. Daniels³



Daniele Marinazzo⁴

¹ Dipartimento Interateneo di Fisica, Università degli Studi Aldo Moro, Bari and INFN, Bari, Italy

² Center of Innovative Technologies for Signal Detection and Processing (TIRES), Università degli Studi Aldo Moro, Bari, Italy

³ Arizona State University and Santa Fe Institute Center for Biosocial Complex Systems, Arizona State University, Tempe, AZ, United States

⁴ Department of Data Analysis, Ghent University, Ghent, Belgium

We address the problem of efficiently and informatively quantifying how multiplets of variables carry information about the future of the dynamical system they belong to. In particular we want to identify groups of variables carrying redundant or synergistic information, and track how the size and the composition of these multiplets changes

Videos



Δx



Δp





Libros

Mathematica

x

A
SECRET WORLD
OF INTUITION
AND CURIOSITY

David Bessis

TRANSLATED BY
KEVIN FREY

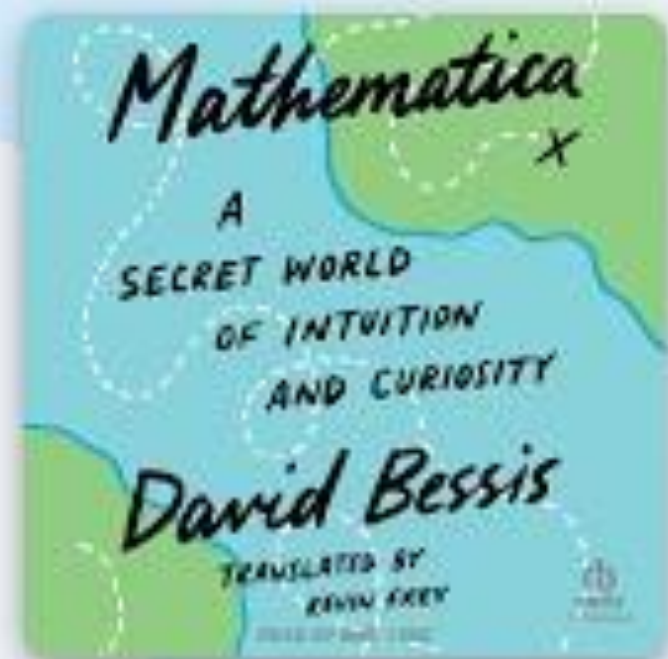
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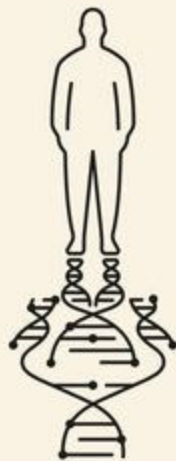
Mathematica: A Secret World of Intuition and...

David Bessis



Ancestors

Identity and DNA in the Levant



Pierre Zalloua

Introduction by Nassim Nicholas Taleb



Notas



“Periodic table of machine learning” could fuel AI discovery

Researchers have created a unifying framework that can help scientists combine existing ideas to improve AI models or create new ones.

Adam Zewe | MIT News

April 23, 2025

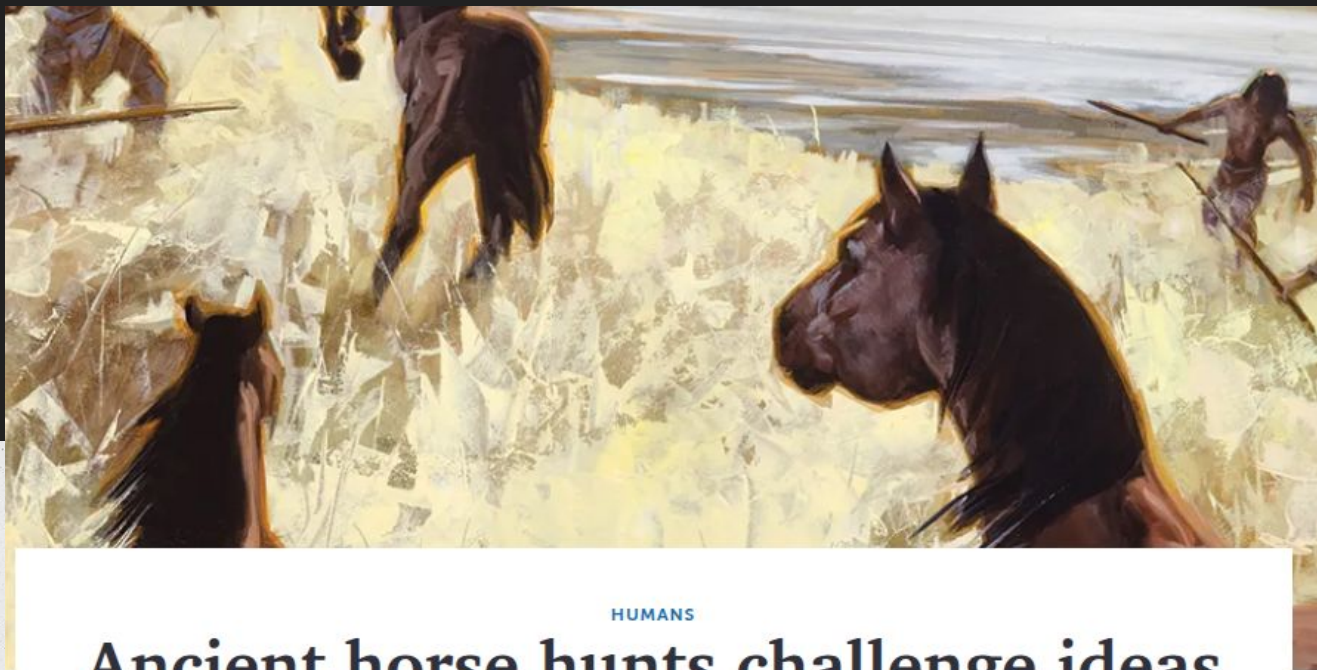
For plants, urban heat islands don't mimic global warming

Scientists have found that trees in cities respond to higher temperatures differently than those in forests, potentially masking climate impacts.

David L. Chandler | MIT News

March 31, 2025





HUMANS

Ancient horse hunts challenge ideas of 'modern' human behavior

Sophisticated social and mental capacities date back at least 300,000 years