

# Dr. Hector Zenil Awarded the Charles François Prize by the International Academy for Systems and Cybernetic Sciences

*For his work on Biosignatures & Understanding the Complexity of Living Systems*

LONDON, UNITED KINGDOM,  
November 18, 2024 /

EINPresswire.com/ -- Dr. Hector Zenil is awarded the Charles François Prize by the [International Academy for Systems and Cybernetic Sciences](#) at the World Conference on Complex Systems in Casablanca - Mohammedia (WCSS24) for his work on biosignatures and understanding the complexity of living systems.



At recent public events, two leaders in the field of Artificial Intelligence, Ilya Sutskever, founder of OpenAI, and Elon Musk, founder of Tesla and SpaceX, have drawn fundamental parallels

between data compression and AI in discussing the future of AI towards Artificial General Intelligence and Superintelligence.

“

I would like to congratulate Dr. Zenil on receiving the Charles François prize, a prestigious recognition for his continuous dedication to advancing the field of complex systems”

*Prof. Mohamed Nemiche*

This fundamental connection has been the research work of Dr. Hector Zenil, an Associate Professor at the School of Biomedical Engineering & Imaging Sciences, King's College London and founder of [Oxford Immune Algorithmics](#), a DeepTech University of Oxford startup, who pioneered and has spearheaded these connections for the last 15 years at the institutions he has been affiliated with—from the

Karolinska Institutet which selects the Nobel Prize in Medicine laureates in Sweden, to the Universities of Oxford and Cambridge in the UK.

Dr. Zenil's work has consisted of finding effective methods and applications of the theory of compression, formally called Algorithmic Information Theory, in connection to model-driven causal AI, to answer fundamental questions and real-world challenges ranging from understanding the complexity of living systems to comprehending the transition dynamics of health and disease. Dr. Zenil is also the Editor-in-Chief of Complex Systems, the first journal in the field founded 40 years ago by MacArthur Genius, and creator of Mathematica, Dr. Stephen Wolfram.

The Prize was announced by Prof. Pierre Bricage, Secretary General of International Academy for Systems and Cybernetic Sciences (IASCYS), Vice-President of the French Association for Systemics and Cybernetics AFSCET; former Head of the Department of Biological Engineering, University of Pau and Adour Countries, France.

The prize was awarded at the World Conference on Complex Systems (WCCS24) in Casablanca - Mohammedia, Morocco by Prof. Mohamed Nemiche, President of the Moroccan Society of Interdisciplinary Sciences, and AI Prof. Ali IDRI from UM6P - University Mohammed VI Polytechnic. Other keynote speakers included Dr. Stephen Wolfram, Prof. Gregory Chaitin; Prof. Jean-Paul Delahaye; Prof. Hervé Zwirn, and Prof. Hiroki Sayama.

The Charles François Prize aims to reward scientists for all aspects in their research activities in Cybernetics and System Sciences. Oxford Immune Algorithmics is a University of Oxford deep-tech start-up also associated with Cambridge University and King's College London that applies symbolic regression and program synthesis A(G)I as opposed to narrow statistical pattern-matching AI to deliver meaningful solutions in areas of greatest human interest such as healthcare and medicine to everyone today.

PR Team  
OxfordIA

**keynote speaker**

**Hector Zenil**



King's College, University of London, United Kingdom

**On the Complexity of Living Systems and their Biosignatures**

**Abstract:** In this talk I will cover the many efforts my research groups have made to try to characterise living systems from the perspective of methods of information theory and algorithmic complexity providing a framework to ask questions about causality in the context of algorithmic probability and reprogramming living systems. I will explain the field of Algorithmic Information Dynamics as a theory and method to explore model space to search for generative mechanistic models able to explain and control processes of living systems at the molecular and cellular level and beyond based on first principles of computability theory and complexity science. Finally, I will address how all these tools can be used in computational predictive medicine and precision healthcare.

**Biography:**

Dr. Hector Zenil is an Associate Professor at the School of Biomedical Engineering and Imaging Sciences at the Faculty of Life Sciences and Medicine, King's College London. In the last ten years, he has been associated with so-called Golden Triangle institutions in the UK, affiliated with the Universities of Oxford and Cambridge, as a faculty member and senior researcher. Before that, he was an Assistant Professor and Lab leader at the Algorithmic Dynamics Lab, Unit of Computational Medicine, Center for Molecular Medicine at the Karolinska Institute (the institution that awards the Nobel Prize in Physiology or Medicine).

He was a senior researcher and policy advisor at the Alan Turing Institute, the U.K. National Institute on Data Science and AI, financially supported by the Office of Naval Research (U.S. Department of Defense). He remains affiliated with the Turing in an official capacity as one of only nine independent AI scientific advisors funded by Innovate UK.

He introduced the field of Algorithmic Information Dynamics (AID), a new field devoted to the study of causality in dynamical systems (in particular living systems) in what we call software space (the space of all possible computable explainable models) using a fundamental form of Artificial General Intelligence (algorithmic probability).

He holds two PhDs, one from Lille 1 France in Computer Science (highest honours) and one from the Sorbonne Paris 1 in Logic and Epistemology (highest honours), a Master's in Logic and Philosophy from the ENS/Paris 1 (IHPST) and a first-year Master's (PGCert) degree in Nanotechnology from Oxford University.



**5<sup>th</sup> World Conference On COMPLEX SYSTEMS**  
November 11-14, 2024 Casablanca - Morocco



[email us here](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/761633061>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.