



Description

The 2024 Nobel Prizes celebrate foundational discoveries that have made a lasting impact on global society and progress.

This year, artificial intelligence (AI) has taken center stage at the Nobel Prize announcements, as both the Physics and Chemistry categories recognized pioneering AI research. This spotlight on AI reaffirms its transformative potential in advancing interdisciplinary research.

Meet the Noble Prize Winners of 2024!

Physics

Foundational discoveries that enable machine learning with artificial neural networks

Created the 'Hopfield Network Model' that mimics the human brain processing, laying the foundation for AI



John Hopefield



Geoffrey Hinton

Known as the 'Godfather of Deep Learning', whose algorithms power AI applications like image recognition and language translation

Chemistry

For computational protein design and protein structure prediction



David Baker

Developed computational methods to design custom proteins that can revolutionize biotechnology and medicine



Demis Hassabis

Creators of 'AlphaFold', an AI system that can predict how proteins fold into 3D structures, which can improve our understanding of diseases and help develop treatments



John Jumper

Physiology

For the discovery of mRNA & its role in post-transcriptional gene regulation

Discovered 'microRNAs' that regulate gene expression and have transformed the field of genetics and cancer biology



Victor Ambros



Gary Ruvkun

Unveiled the mechanism of mRNA mediated gene regulation and transformed gene therapy and molecular diagnostics

Literature

For her intense poetic prose that confronts historical traumas and exposes the fragility of human life

A celebrated novelist known for her internationally acclaimed titles like 'The Vegetarian' and 'Human Acts' that delves into themes of violence, trauma and the human condition around South Korea's history with her powerful story telling.



Han Kang

Peace

For its efforts to achieve a world free of nuclear weapons and for demonstrating through witness testimony that nuclear weapons must never be used again



Nihon Hidankyo

An organization of Hiroshima and Nagasaki atomic bombing survivors who have pushed the boundaries of peace building efforts as they advocated for nuclear disarmament for decades. They share testimonies of atomic bomb survivors and remind the world of the catastrophic impact of nuclear warfare.

Economics

Sveriges Riksbank Prize in Economic Sciences in memory of Alfred Nobel for studies of how institutions are formed and affect prosperity



Daron Acemoglu



Simon Johnson



James Robinson

Their work highlights how societal institutions significantly impact a country's prosperity. They showed that inclusive institutions foster long-term economic growth, whereas extractive institutions hinder it, explaining the wealth disparities between nations today.

IMAGE CREDIT: IIL Niklas Elmehed

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The 2024 Nobel laureates have shaped modern machine learning, protein research, gene regulation, and institutional economics. They have pushed the boundaries of knowledge while also addressing pressing challenges, from historical reckonings to the fight for a world without nuclear weapons.

Their inspiring achievements serve as a testament to the power of innovation, resilience, and dedication in shaping a better future for all.

Category

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Date Created

2024/10/17

Author

editor