ADIA ⋮ Lab

Nobel Prize winner Prof. Steven Chu joins ADIA Lab Advisory Board

Abu Dhabi, 30 January 2023

ADIA Lab, the Abu-Dhabi-based institute dedicated to basic and applied research in data and computational sciences, has announced that Nobel Prize winner and former US Secretary of Energy Professor Steven Chu has joined its Advisory Board.

Professor Chu is an internationally renowned scientist who was named co-winner of the 1997 Nobel Prize in Physics alongside Claude Cohen-Tannoudji and William D. Phillips "for development of methods to cool and trap atoms with laser light". He is William R. Kenan Jr. Professor, Professor of Molecular and Cellular Physiology and of Energy Science and Engineering at Stanford University. Over recent years he has focused on the search for new solutions to energy and climate challenges, both as US Secretary of Energy from 2009 to 2013 and, before that, as Director of the Lawrence Berkeley National Lab, where he explored alternative and renewable energy technologies.

ADIA Lab focuses on Data Science, Artificial Intelligence, Machine Learning, and High-Performance and Quantum Computing, across all major fields of study. This includes exploring applications in areas such as climate change and energy transition, blockchain technology, financial inclusion and investing, decision making, automation, cybersecurity, health sciences, education, telecommunications, and space.

“Professor Chu is one of the world’s most distinguished and highly-respected scientists, and we are delighted to welcome him to the ADIA Lab Advisory Board,” said Dr Horst Simon, Director of ADIA Lab. “Our research agenda focuses on tackling societally-important issues at a global level, and the calibre of our Advisory Board reflects this ambitious mission. Professor Chu’s vast experience and the scope of his scientific achievements will be incredibly valuable as we shape ADIA Lab’s research programme.”

ADIA Lab’s Advisory Board includes global thought-leaders from various data and computationally-intensive disciplines, and oversees the development and implementation of the Lab’s research agenda and programmes.

During his time as US Secretary of Energy, Professor Chu promoted renewable energy and energy efficiency, and emphasised the importance of increased investment in clean energy technology. Under his leadership, the Advanced Research Projects Agency–Energy (ARPA-E) was created to promote and fund research into high-potential, high-impact energy technologies considered too early for private-sector investment.

Professor Chu has made important contributions in atomic physics, quantum electronics, polymer and biophysics including tests of fundamental theories in physics, the development of methods to laser cool and trap atoms, atom interferometry, the study of polymers and biological systems at the single molecule level, molecular biology, medical ultrasound imaging, nanoparticle synthesis, batteries and other applications in electrochemistry.

The holder of 20 patents, Professor Chu has published more than 300 scientific and technical papers. He is a member of numerous scientific societies including the National Academy of Sciences, the American Philosophical Society, the Royal Society, the Royal Academy of Engineering, the Academia Sinica, the Korean Academy of Sciences and Technology, and is an honorary member of the Institute of Physics, the Chinese Academy of Sciences, and a Lifetime Member of the Optical Society of America and the Pontifical Academy of Sciences. He received an A.B. degree in mathematics, a B.S. degree in physics from the University of Rochester, and a Ph.D. in physics from the University of California, Berkeley, as well as 34 honorary degrees.

As a member of ADIA Lab's Advisory Board, Professor Chu will serve alongside:

- **Professor Alex 'Sandy' Pentland,** Toshiba Professor of Media, Arts, and Sciences at MIT, co-creator of the MIT Media Lab and founder of the MIT Connection Science and Human Dynamics Labs.
- **Professor Miguel Hernan,** winner of the 2022 Rousseeuw Prize for Statistics, Kolokotrones Professor of Biostatistics and Epidemiology at the Harvard Chan School of Public Health, and Director of CAUSALab.
- **Professor Jack Dongarra,** recipient of the 2021 ACM A.M. Turing Award, Member of the US National Academy of Engineering, Foreign Member of the Royal Society, Emeritus Professor in the Electrical Engineering and Computer Science Department at the University of Tennessee, Distinguished Research Participant at the Department of Energy's Oak Ridge National Laboratory, Turing Fellow at the University of Manchester's School of Mathematics, and Adjunct Professor at Rice University's Computer Science Department.
- **Dr. Edward Jung**, co-founder and Chief Technology Officer of Intellectual Ventures, and a co-founder of Microsoft Research. Dr. Jung is the holder of more than 1,200 patents worldwide, spanning discoveries in biomedicine, computing, networking, energy, and material sciences.
- **Professor Marcos López de Prado,** Global Head – Quantitative Research & Development at ADIA, Professor of Practice at Cornell University's School of Engineering, and Professor of Practice at Khalifa University's Department of Mathematics. Quant of the Year 2019 by The Journal of Portfolio Management, and Buy-Side Quant of the Year 2021 by Risk.net
- **Professor Alex Lipton,** Global Head – Quantitative Research & Development at ADIA, Visiting Professor and Dean's Fellow at HUJI's School of Business Administration, Professor of Practice at Khalifa University's Department of Mathematics, and Connection Science Fellow at MIT's Media Lab. Quant of the Year 2000, and Buy-Side Quant of the Year 2021 by Risk.net.
- **Dr Horst Simon**, twice winner of the Gordon Bell Prize (1988, 2009), Director of ADIA Lab, former Deputy Director and Chief Research Officer at Lawrence Berkeley National Laboratory, and former Director of the National Energy Research Scientific Computing Center.

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ABOUT ADIA LAB

ADIA Lab is an independent institution engaged in basic and applied research in Data Science, Artificial Intelligence, Machine Learning, and High-Performance and Quantum Computing, across all major fields of study.

This includes exploring applications in areas such as climate change and energy transition, blockchain technology, financial inclusion and investing, decision making, automation, cybersecurity, health sciences, education, telecommunications, and space.

Based in Abu Dhabi, ADIA Lab is an independent, standalone entity supported by the Abu Dhabi Investment Authority (ADIA), a globally-diversified investment institution that invests funds on behalf of the Government of Abu Dhabi.

ADIA Lab has its own governance and operational structure, and is guided by an Advisory Board of global thought leaders in data and computationally-intensive disciplines, to pursue its research independently.

For more information, please visit www.adialab.ae or contact us at info@adialab.ae