



World Cultural Council

——
30th Award
Ceremony



PROGRAMME



INVITATION

The World Cultural Council and
Nanyang Technological University
are pleased to invite you to the
30th Award Ceremony for

The
“ALBERT EINSTEIN”
WORLD AWARD OF SCIENCE &
The
“LEONARDO DA VINCI”
WORLD AWARD OF ARTS

These awards will be conferred on eminent pioneers
in their respective fields for their tireless work to
further human culture and well-being.

Special recognitions will also be granted to
distinguished scientists and artists in Singapore.

Date Wednesday, 2 October 2013
Time 2pm
Venue Nanyang Technological University
Nanyang Auditorium
50 Nanyang Avenue
Singapore 639798

RSVP Register by 6 September 2013 at
www.wcca2013.org

We look forward to the pleasure
of your company.

WELCOME



Edmond H. Fischer
President,
World Cultural Council



Professor Bertil Andersson
President,
Nanyang Technological University

Dear friends,

It is a great pleasure for the World Cultural Council to celebrate its 30th Award Ceremony at Nanyang Technological University, one of the leading Asian seats of learning. The prize distribution will take place in the frame of the World Academic Summit to be held next October in Singapore. We are delighted to enhance our relations with such institutions through an event that underlies our joint efforts directed toward the benefit of mankind.

The world has constantly been in crisis. In every period of its history, it has been necessary to make great efforts to preserve and promote progress. In this vein, the Council seeks to promote the positive use of knowledge as well as a worldwide awareness of tolerance, peace and fraternity. It believes that scientific research, artistic creation, and appropriate education are paths to peace and will lead us all to a higher level of existence. To encourage such pursuits, every year, the Council recognizes outstanding achievements in science, arts and education that enhance the physical, cultural and moral wellbeing of mankind.

Universities as academic institutions have the privilege and responsibility of serving their students and the whole of humanity, and ensuring a sustainable future for our planet. It is our mission and duty to work together with responsibility, dedication, discipline and enthusiasm to make the world a better place to live. Our goal is to shape and inspire students and people of all nations. We believe in this world and everyone of its members.

Greetings from Singapore and Nanyang Technological University (NTU)!

NTU is privileged to invite you to the World Cultural Council and its 30th Award Ceremony in Singapore this October.

This Award recognises the world's most outstanding scholars whose work has left a deep and positive impact on humanity's cultural legacy. NTU is delighted that three such accomplished individuals will be honoured on our campus this year. Prof Paul Nurse, Prof Petteri Nisunen and his colleague Tommi Grönlund have made far-reaching contributions to the welfare of their fellow men and women, and they truly deserve the awards being conferred on them.

In addition, eight of the best scientists in Singapore will be honoured at the Award Ceremony for their contributions to research in various fields of science.

This year's Award Ceremony will be held with the 2013 Times Higher Education World Academic Summit. Bringing together global thought leaders from the industry and academia, the Summit will explore the role and benefits of partnerships between universities and industry in pushing the boundaries of our collective knowledge and fuelling the rapid pace of technological change and economic growth.

My colleagues and I are excited to welcome you to our community of active and engaged scientists, researchers and students at NTU. Like Singapore itself, NTU is a microcosm of global cultures and an epicentre for knowledge growth and innovation.

We look forward to welcoming you to Singapore, and hope you will gain new inspiration and friendships at this year's World Cultural Council gathering.

Thank you.

THE WORLD CULTURAL COUNCIL



The World Cultural Council (WCC) is a Mexico-based international organisation which seeks to foster culture, values and goodwill throughout the world. One of its central activities is to grant the Albert Einstein World Award of Science, the José Vasconcelos World Award of Education and the Leonardo da Vinci World Award of Arts to men and women whose work has substantially enhanced the cultural legacy of mankind.

It was in 1981, backed by distinguished personalities, scholars, university presidents and organisation executives from the world over, that the WCC was founded. Several Nobel laureates figure among the Council's members.

MISSION AND AIMS OF THE WORLD CULTURAL COUNCIL

The mission of the World Cultural Council is to increase the efficient and positive use of knowledge and promote fraternity among people, nations and governments, based on true understanding among all, regardless of ideology, opinion, religion, race or gender. The aim is to forge and further relationships with and among prestigious scientific, educational and cultural organisations worldwide, fostering a culture of wellbeing, peace and fraternity across the globe.

THE MOST IMPORTANT OBJECTIVES OF THE WORLD CULTURAL COUNCIL ARE

- To establish relations with the most important scientific, cultural, educational and social institutions throughout the world.
- To compile data and useful research aimed at improving the social, cultural, moral and spiritual advancement of humankind.
- To reward scientific research which brings progress to mankind.
- To bring together top-level scientists, educators and researchers in order to foster constant and enriching communication.
- To recognise educational contributions that have had a significant influence on the advancement of the scope of culture.
- To promote art in all its expressions and reward those artists whose work is most deserving of world recognition.

"Genius is 1% talent and
99% hard work."
- Albert Einstein

"Simplicity is the ultimate
sophistication."
- Leonardo da Vinci

THE AWARDS 2013

The World Cultural Council acknowledges individuals or organisations that have made exceptional achievements in science, education and the arts; it does so by granting the Albert Einstein World Award of Science, the José Vasconcelos World Award of Education and the Leonardo da Vinci World Award of Arts to those whose work has had a significantly positive impact on the cultural legacy of mankind. The exceptional quality of the jury, comprised of world-renowned eminences in the above fields, enhances the kudos of the awards.

We hope that our work will bolster the foundations of a new civilisation in which humans and nature coexist in equilibrium, where misunderstanding and prejudice among groups and nations no longer exist, suffering is greatly reduced, and every person lives in freedom and peace in the pursuit of individual and collective fulfilment. The World Cultural Council will continue through this new century to strengthen and expand its work, annually rewarding excellence in those who strive to better the planet through their positive convictions and unflagging dedication.



Albert Einstein World Award of Science

The "Albert Einstein" World Award of Science was created as a means of recognition and encouragement for scientific and technological research and development. It takes into special consideration research which has brought true benefit and wellbeing to mankind.



Leonardo da Vinci World Award of Arts

The "Leonardo da Vinci" World Award of Arts has been established as a means of acknowledgment to those who offer a positive message to mankind through different expressions of art. It is conferred upon a renowned artist, sculptor, writer, poet, cinematographer, photographer, architect, musician or other performing artist, whose work constitutes a significant contribution to the artistic legacy of the world.

PROFESSOR SIR PAUL NURSE



The members of the Interdisciplinary Committee have chosen Professor Sir Paul Nurse, President Emeritus and head of the Laboratory of Yeast Genetics and Cell Biology at the Rockefeller University, U.S., as the winner of the 2013 ALBERT EINSTEIN World Award of Science for his outstanding and continuing career as a scientific leader, as well as his accomplishments as one of the world's leading biochemists and geneticists.

Paul Nurse's achievements meet the criteria for the Science Award of bringing "true benefit and wellbeing to mankind" for his long-term work as a scientific leader of several prestigious organizations, with significant influence on both health and education, marked by a strong commitment to excellence in learning, research and knowledge transfer.

The Award recognizes his contributions on how the eukaryotic cell cycle is controlled and how cell shape and cell dimensions are determined, along with his major work on cyclin-dependent protein kinases and how they regulate cell reproduction - research that has provided a wider understanding of biology and medicine in the field of cancer.

Professor Paul Nurse is one of the world's foremost biochemists and geneticists. In the 1980s, he made a scientific breakthrough

when he identified a number of key regulatory proteins that control the yeast cell cycle. His further studies have led to the currently widely accepted models that conclude strong similarities among proteins, their activities and their biochemical modes of regulation throughout all eukaryotic organisms. His research is especially important for the understanding of biology and medicine in respect to cancer and other serious diseases, bringing us closer to prevention and a cure.

Paul Nurse has received wide recognition for his scientific excellence. He received in 2001 Nobel Prize in Medicine (shared with Tim Holt and Lee Hartwell) and has been awarded a number of other prizes and recognitions, including the Albert Lasker Award and the Royal Society's Royal and Copley Medals. He was knighted in Great Britain in 1999 for his services in cancer research and cell biology and was awarded the French Légion d'Honneur in 2002. He was Professor of Microbiology at the University of Oxford, CEO of the Imperial Cancer Research Fund and Cancer Research UK, as well as President of the Rockefeller University in New York. He is at present Director and Chief Executive of the Francis Crick Institute and President of the Royal Society.



[PROFESSOR
SIR PAUL NURSE]

PROFESSOR PETTERI NISUNEN & TOMMI GRÖNLUND



The 2013 LEONARDO DA VINCI World Award of Arts will be granted to Professor Petteri Nisunen, Professor in Contemporary Art at the School of Arts, Design and Architecture, Aalto University, Finland, and to his colleague Tommi Grönlund.

This recognition is for their contributions to contemporary arts, their interdisciplinary approach, inspiring innovation, creativity and their particular view of synthesis.

Their interdisciplinary approach brings together art, design, architecture and science. Their large-scale spatial interventions and public as well as gallery installations involve a variety of materials and technologies, from the use of objects to light and sound. Nisunen and Grönlund deal with space, be it physical, ethereal or sonic. Works tend to change or reshape space and stimulate sensory perception through direct intervention, often with complex technical installations. The artists are not committed to one medium only, but are endlessly curious, capable of moving between disciplines and changing approaches.

In addition to his artistic work, Nisunen teaches in the Art Department of Aalto University. He invites fellow artists from around the world to share their experience and knowledge in lectures and workshops. Nisunen has a background in architecture and combines artists' hands-on experience with art history and theory. Nisunen and Grönlund have also curated exhibitions, for example at the Nordic Pavilion in the 2001 Venice Biennial. They often work in conjunction with other artists, musicians and different professionals, such as scientists or engineers. They have a long list of public commissions and have exhibited in several major venues around the world.

The works, often with a poetic quality, leave open space for the audience's experience. They are not so much a matter of objects, but rather about grasping something invisible in the world that surrounds us.

[PROFESSOR
PETTERI NISUNEN]

[PROFESSOR
TOMMI GRÖNLUND]

OUR JOURNEY

The World Cultural Council has been holding its Award Ceremonies since 1984. Each ceremony takes place in a different country, with a renowned university or institute acting as host. The award ceremonies have the dual function of encapsulating an international community of outstanding scientists, educators and artists while acknowledging the ethical dignity of the awardees.



1992
CANADA, The National Research Council
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Raymond U. Lemieux, Canada
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Elliot Eisner, USA

2008
USA, Princeton University, New Jersey
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Ada Yonath, Israel
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor William G. Bowen, USA

1989
USA, Massachusetts Institute of Technology
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Dr. Martin Kamen, USA
LEONARDO DA VINCI WORLD AWARD OF ARTS
Acropolis Preservation Group, Greece

2010
MÉXICO, Universidad Autónoma del Estado de México
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Dr. Julio Montaner, Canada/Argentina
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Christian Azar, Sweden

2007
MEXICO, Universidad Autónoma de Nuevo León
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Fraser Stoddart, USA
LEONARDO DA VINCI WORLD AWARD OF ARTS
Professor Anne Moeglin-Delcroix, France

2006
MEXICO, National Polytechnic Institute
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Ahmed Zewail, USA
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Marlene Scardamalia, Canada

2005
MEXICO, Universidad Autónoma de Nuevo León
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor John J. Hopfield, USA
LEONARDO DA VINCI WORLD AWARD OF ARTS
Architect Enrique Norton, Mexico

2001
NETHERLANDS, Utrecht University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Niels Birbaumer, Germany
LEONARDO DA VINCI WORLD AWARD OF ARTS
Painter Edna Hibel, USA

1996
UNITED KINGDOM, University of Oxford
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Alec Jeffreys, United Kingdom
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Roger Gaudry, Canada

2002
IRELAND, Trinity College
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Daniel Janzen, USA
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Jeannie Oakes, USA

1999
NORWAY, Norwegian University of Science and Technology
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Dr. Robert Weinberg, USA
LEONARDO DA VINCI WORLD AWARD OF ARTS
Artist and Sculptor Magdalena Abakanowicz, Poland

1985
SWEDEN, Royal Institute of Technology
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Werner Stumm, Switzerland
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Dr. Dolores Hernandez, Philippines

2003
FINLAND, University of Helsinki
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Martin Rees, United Kingdom
LEONARDO DA VINCI WORLD AWARD OF ARTS
Sculptor and Sky Artist Otto Piene, Germany

2011
ESTONIA, University of Tartu
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Geoffrey Alan Ozin, Canada
LEONARDO DA VINCI WORLD AWARD OF ARTS
Visual artist, writer, inventor and polymath Todd Siler, USA

2009
BELGIUM, University of Liège
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Sir John Houghton, United Kingdom
LEONARDO DA VINCI WORLD AWARD OF ARTS
Artist Marcell Jankovics, Hungary

2004
BELGIUM, University of Liège
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Ralph J. Cicerone, USA
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Sir David Attenborough, United Kingdom

1987
GERMANY, University of Heidelberg
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Hugh E. Huxley, United Kingdom

2012
DENMARK, Aarhus University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Hans Ulrich Gumbrecht, USA
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Michael Grätzel, Switzerland

1990
SWITZERLAND, Eidgenössische Technische Hochschule
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Gustav Nossal, Australia
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Lev Shevrin, Russia

1997
THAILAND, Chulalongkorn University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Jean-Marie Ghuysen, Belgium

2000
SOUTH AFRICA, Witwatersrand University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Frank Fenner, Australia
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Zafra Lerman, USA

1991
AUSTRALIA, Australian National University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Albert Fleckenstein, Germany

2013
SINGAPORE, Nanyang Technological University
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Sir Paul Nurse, United Kingdom
LEONARDO DA VINCI WORLD AWARD OF ARTS
Professor Petteri Nisunen and Tommi Grönlund, Finland

1998
NEW ZEALAND, Victoria University of Wellington
ALBERT EINSTEIN WORLD AWARD OF SCIENCE
Professor Charles R. Goldman, USA
JOSÉ VASCONCELOS WORLD AWARD OF EDUCATION
Professor Robert Yager, USA



SPECIAL RECOGNITIONS

As part of the annual award ceremony, the World Cultural Council grants special recognitions to a select number of talented researchers who early in their careers have had international impact through their research. A commemorative diploma provided by the World Cultural Council will be presented during the ceremony along with a research grant of SGD 5,000 provided by Nanyang Technological University (NTU).

The following five researchers from NTU will be granted a special recognition on 2 October 2013:



Dr. Juliana Chan (Science)

Dr. Chan is a Nanyang Assistant Professor at the Lee Kong Chian School of Medicine at NTU. She researches the engineering of targeted hybrid polymeric-lipid nanoparticles that cling to artery walls and slowly release medicine. In her latest work, she has grown 3D capillary beds in micro-fluidic devices towards applications in tissue engineering and drug testing. In 2013 she was awarded the Elite Nanyang Assistant Professorship from NTU. In 2011, she founded Asian Scientist Magazine, which has to date produced 2,500 stories.



Dr. David Lou Xiong Wen (Science)

Dr. Lou is an Assistant Professor at School of Chemical and Biomedical Engineering at NTU. He has developed several electrode materials with potential for commercial use in high-performance supercapacitors and lithium-ion batteries. His research achievements have been published in top journals. He holds several patents and, among other accolades, in 2012 he received the Young Scientist Award from the Singapore National Academy of Science for his research on nanostructured materials for energy and environmental applications.



Dr. Jasmine Sim Boon Yee (Education)

Dr. Sim is an Associate Professor at the Curriculum, Teaching and Learning Academic Group, National Institute of Education at NTU. She is an internationally recognized scholar of citizenship education. Her research into multicultural citizenship and pedagogic practice has influenced teacher education in Singapore and overseas. She also contributed to re-conceptualizing the revised Social Studies curriculum in a global landscape and this has now been implemented in all primary and secondary schools in Singapore. Her articles have been published in top-tier journals around the world.



Dr. Wang Qijie (Science)

Dr. Wang is a Nanyang Assistant Professor at School of Electrical and Electronic Engineering and School of Physical and Mathematical Sciences at NTU. He has a PhD in electrical and electronic engineering from NTU, specializing in optics and photonics. He co-developed integrated plasmonic and metamaterial structures to engineer the beam characteristics of light sources. Recently he invented a broadband, ultrahigh, photoresponse, graphene-based photodetector which could lead to flexible, low-cost image sensors for various applications. His work has received worldwide attention in the mass media.



Dr. Zhang Hua (Science)

Dr. Zhang is an Associate Professor in the School of Materials Science and Engineering at NTU. He has made huge impact in three research areas: the synthesis of novel nanomaterials, applications of graphene-based materials, and surface patterning from micro to nanometer scale. He has had many "firsts", including the synthesis of novel hexagonal close-packed gold nanostructures, considered one of the most important breakthroughs in materials science and chemistry. His achievements have been widely published in journals, such as Nature Communications, among others.

NANYANG TECHNOLOGICAL UNIVERSITY

A young and research-intensive public university, Nanyang Technological University (NTU) is ranked 2nd amongst the world's young universities and is placed within Asia's Top 10. It has 33,500 undergraduate and postgraduate students in the colleges of Engineering, Business, Science, and Humanities, Arts, & Social Sciences. It has a new medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London.

NTU is also home to world-class autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre on Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI), Energy Research Institute @ NTU (ERI@N) and the Institute on Asian Consumer Insight (ACI).

A fast-growing university with an international outlook, NTU is putting its global stamp on Five Peaks of Excellence: Sustainable Earth, Future Healthcare, New Media, New Silk Road, and Innovation Asia.

With a 3850-strong international faculty and researchers hailing from more than 70 countries, NTU is ranked 1st for faculty diversity in the 2013 QS Asia University Rankings.

Besides the main Yunnan Garden campus, NTU also has a satellite campus in Singapore's science and tech hub, one-north, and a third campus in Novena, Singapore's medical district.

For more information,
visit www.ntu.edu.sg

Top 15
Most beautiful campus



**US\$1.6 billion
(S\$2 billion)**
Lion's share of research
funding in Singapore -
competitive research
funding 2005 to 2012



2nd
QS World's 50 Top Young
Universities 2013



15
Globally for industry income





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Nanyang Auditorium
50 Nanyang Avenue
Singapore 639798

2 October 2013

For more information, please visit www.wcca2013.org



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