

McDONNELL INTERNATIONAL SCHOLARS ACADEMY



— 6th INTERNATIONAL SYMPOSIUM —
ADDRESSING GLOBAL CHALLENGES
THROUGH INTERNATIONAL COLLABORATION IN EDUCATION AND RESEARCH

SEPTEMBER 22-25, 2016 | BRISBANE, AUSTRALIA

 **Washington**
University in St. Louis



**THE UNIVERSITY
OF QUEENSLAND**
AUSTRALIA

WELCOME

Many challenges confronting us today go beyond what any one country, let alone one university can overcome. Climate change, population aging, food and water security and a plethora of other issues demand new models for research and education, and these models often require global cooperation. It is with this in mind that the McDonnell International Scholars Academy is collaborating with one of its partner institutions, The University of Queensland, to co-host its 6th International Symposium.

The McDonnell Academy was created in 2005 and organized its first International Symposium on the campus of Washington University in St. Louis in 2007. Since then it has organized meetings in Hong Kong (2008), St. Louis (2010), Mumbai (2012), and St. Louis (2014). Starting with a focus on energy and environment, this effort now has expanded to address public health, population aging, and food, water, and sustainability, and the list may continue to grow in the future. The symposia to date have spawned ongoing efforts such as the McDonnell Academy Global Energy and Environment Partnership (MAGEEP). Other such initiatives can be expected to emerge out of the 2016 Symposium.

The 6th International Symposium of the McDonnell Academy reflects a continuing experiment in creating collaboration among leading research universities around the world. Our mission is not only to foster joint investigations of pressing issues but to also recruit and mentor students from partner institutions as part of a network of future global leaders in academia, business, government, and the nonprofit sector.

TABLE OF CONTENTS

2	SYMPOSIUM THEMES
4	SESSIONS AND EVENTS
9	WORKSHOPS
10	ATTENDING PRESIDENTS AND PRESIDENTS' REPRESENTATIVES
12	SYMPOSIUM 3MT® CONTESTANTS
13	SYMPOSIUM POSTERS
15	MCDONNELL ACADEMY UNIVERSITY PARTNERS AND AMBASSADORS
16	MCDONNELL ACADEMY RESIDING SCHOLARS
18	PAST SYMPOSIA
20	MCDONNELL ACADEMY SPONSORS
21	IMPORTANT WEBSITES
22	MAP OF BRISBANE CONVENTION AND EXHIBITION CENTRE



THEMES

The symposium will feature discussions on research in particular themes and discussions of how research universities can foster the collaborative efforts required to address complex global challenges.

Each global challenge will be considered in its own right, but it will also be examined in tandem with others (e.g., How does providing affordable clean energy affect the supply of food and water for the world's growing, as well as aging population?).

POPULATION AGING AND GLOBAL PUBLIC HEALTH

Lower birth rates and increasing life expectancy are dramatically changing the population's age distribution across the globe. We are now beginning to live in "top-heavy" societies, with fewer young people and more old people. Related, the scale of change in global health is unprecedented in human history. Improvements in global population health reflect increased access to education and health care; stable food, water and energy supplies; and economic development. While interventions to prevent child mortality and infectious diseases are still needed, noncommunicable diseases (e.g., cardiovascular disease, cancer, diabetes) now contribute a greater burden of premature death and disability. This shift is not limited to the developed regions of the world; this is a challenge for all nations now and in the future.

New challenges are created by the fact that we live in social and physical environments that were shaped when human lives were half as long. These demographic shifts present serious challenges to families, communities, and nations; current policies and infrastructures are struggling to respond.

As we move forward in the 21st century, the aging of the population will require new approaches to economic security and health care, particularly as older adults live longer, often with mental or physical health challenges. This will require innovation in employment, housing, transportation, clinical interventions, and social services.

Solutions must be found in the global context of climate change, energy sustainability, and rapidly developing information technology. Cross-national research and educational initiatives promise more effective responses to the new realities of changing demographics. Given that all aspects of human society are affected by this demographic revolution, every discipline has a role to play — biomedicine, public health, psychology, social work, law, business, architecture, arts, engineering, and more. Universities across the globe must take the lead in transdisciplinary, cross-national research and development for innovations in response to population aging.

Population health is influenced by a complex set of socioeconomic, cultural, and environmental factors. As we move forward in the 21st century, we will require new, multidisciplinary approaches to maintain and increase the gains in global health achieved in the last several decades. Transnational research and educational initiatives promise effective responses to the new realities of global health. Solutions will not be simple or one-dimensional and future decision-makers will need better and affordable, tools, programs, and policies. Universities that combine the efforts of many disciplines will be best placed to respond with solutions and equip future leaders to tackle these issues.

Multi-university workshops will be planned to further our collaborations in this area.

FOOD, WATER, AND SUSTAINABILITY

Providing safe, nutritious, and abundant food is a goal for every nation. Meeting these goals rests on the global agricultural enterprise, an enterprise that will face increasing challenges in future decades. These challenges stem from demands for higher yields. They stem from the need for food with complete nutrition for the developing world. They stem from the need to reduce the environmental footprint of agriculture by reducing agrochemical use and soil loss. They stem from increased pest and pathogen pressures. And, in the face of a climate that is changing in ways that we don't always precisely understand, they stem from the need for water.

In the United States, agriculture uses 80 percent of total water consumption. Long-term droughts in the United States have led to the depletion of aquifers, water shortages both in urban and rural areas, and, in some cases, loss of crops and farmland with severe economic consequences. In many parts of the developing world, the situation is much more grim. Here, not only is there concern for adequate water supplies for agriculture and industry, there are shortages of clean, easily accessible water for human consumption. In particular, the diversion of human activities towards obtaining water has profound personal, economic, and societal consequences. UN Secretary-General Ban Ki-moon has related water shortages to poverty and social unrest. "They cause social hardship and impede development. They create tensions in conflict-prone regions. Too often, where we need water, we find guns."

How can universities address these challenges and concerns? Food and water are complex problems that no one academic discipline can solve. Yet, there is no better place to address these challenges than at a University where we have engineers, social scientists, business, law, medicine, and the fundamental academic disciplines all together in one unit. Universities also have the opportunity to address food and water issues on a global scale, far beyond the means of a single institution. Collaboration among universities and consortia such as the McDonnell Academy extend the reach and multiply the impact of our work.

Multi-university workshops will be planned to further our collaborations in this area.

www.un.org/waterforlifedecade/scarcity.shtml

ENERGY AND ENVIRONMENT

Modern energy services have been one of the critical enablers of prosperity in the developed world. Such energy services are essential for the production of food, clean water and clean air, the provision of health care, and in driving economic growth. However almost three billion of the world's inhabitants lack access to modern energy services such as clean cooking fuels and electricity. Many of these people remain in poverty, and the disparity in living standards is set to rise as a result of population growth.

Global primary energy use has grown by over 200 percent in the last 50 years and many forecasts project further increases in the order of 100 percent during the next 50 years. Despite the vast improvements in living standards, serious environmental impacts have often resulted. In recent decades rising greenhouse gas (especially carbon dioxide) emissions as a result of fossil fuel utilization and deforestation have become an urgent issue for the world due to the likely dangerous effects of climate change.

It is within this context that the provision of reliable, affordable, and sustainable energy services for the global population emerges as one of the greatest challenges facing our generation. In addition to meeting an inevitable growth in energy demand and the replacement of aging energy infrastructure, the world must transition to a low-carbon energy economy within a few decades. Investments in energy production and utilization typically involve long planning and development lead times and very long, multidecadal investment lives. Therefore, the decisions we make today have critical implications for decades to come. Meeting the challenge will require strong leadership and deep collaboration between governments, business, academia, and the community to mobilize the technology, policy, social acceptance, and investments necessary.

To continue the collaborative efforts at addressing this global challenge, we plan to meet in September 2016 to consider global trends and perspectives, discuss new and emerging energy systems, and determine the implications for policy, financing, and social change. We will also examine the connections between the energy-environment challenge, nutrition security, and global health.

Several multi-university workshops are also planned to further our collaborations in this area.

Thursday, September 22, 2016

Brisbane Convention and Exhibition Centre,
Boulevard Level (unless otherwise noted)

8:00 AM–4:00 PM

Registration and Guest Services

(visiting attendees only)

Brisbane Marriott Hotel
Hotel Jen
Oaks Charlotte Hotel

10:30 AM–1:30 PM

Brisbane River Cruise and Luncheon Eagle Street Pier

3:00 PM–5:00 PM

Skills Development Workshops (students)

Rooms B1/ B2

Moderator: Dr. Jessica Gallagher, The University of Queensland

Registration open to students at 2:00 PM

CAPITALIZING ON YOUR BRAND

3:00 PM

Presenter: Dr. Edwin Trevor-Roberts, CEO, Trevor-Roberts

THE NEW PSYCHOLOGY OF LEADERSHIP: IDENTITY, INFLUENCE, AND POWER

4:00 PM

Presenter: Prof. Alex Haslam, Australian Laureate Fellow and
Professor of Social and Organizational Psychology
The University of Queensland

4:30 PM

Registration and Guest Services

(all attendees)

Foyer

5:30 PM

Opening Session

Boulevard Auditorium

**WELCOME TO COUNTRY BY THE TRADITIONAL OWNERS
OF THE LAND**

5:45 PM

Welcome Remarks and Introduction of Keynote Speaker

Prof. Peter Høj, President and Vice-Chancellor
The University of Queensland
Chancellor Mark S. Wrighton
Washington University in St. Louis

6:00 PM

Opening Keynote Address

Mr. Dennis A. Muilenburg, Chairman, President and CEO
The Boeing Company

7:00 PM

Welcome Reception

Foyer

8:00 PM

Presidents Dinner (by invitation only)

Customs House

Friday, September 23, 2016

Brisbane Convention and Exhibition Centre,
Boulevard Level (unless otherwise noted)

8:00 AM–5:30 PM

Registration and Guest Services

CONTINENTAL BREAKFAST AND POSTERS

Foyer

SESSION I

Boulevard Auditorium

9:15 AM

Welcome Remarks and Introduction of Keynote Speaker

Prof. Peter Høj, President and Vice-Chancellor
The University of Queensland
Chancellor Mark S. Wrighton
Washington University in St. Louis

9:30 AM

Keynote Address

Ms. Glenys Beauchamp, Secretary, Department of Industry,
Innovation and Science, Australian Government

10:30 AM

Morning Tea and Posters

Foyer

SESSION II: PARALLEL SESSIONS BY THEME

11:00 AM

Population Aging and Global Public Health

Room B1

Chair and Moderator: President Joseph J.Y. Sung
The Chinese University of Hong Kong

THEME OVERVIEW: GLOBAL CHALLENGES TO HEALTH AND SECURITY IN AGING

Prof. Len Gray, The University of Queensland

PRESENTATION: CHRONIC DISEASE PREVENTION AND MANAGEMENT

Prof. Graham Colditz, Washington University in St. Louis

PANEL:

Prof. Jürgen Götz, The University of Queensland
Prof. Nancy Pachana, The University of Queensland
Prof. Nancy Morrow-Howell, Washington University in St. Louis
Prof. Robyn Ward AM, The University of Queensland

11:00 AM

Energy and Environment

Room B2

Chair and Moderator: Prof. Devang Khakhar, Director, Indian
Institute of Technology Bombay

THE ENERGY MIX IN 2066

Prof. Chris Greig, The University of Queensland

PANEL

Prof. Linwei Ma, Tsinghua University
Prof. Rangan Banerjee, Indian Institute of Technology Bombay
Prof. Telma Franco, State University of Campinas
Prof. Yoed Tsur, Technion-Israel Institute of Technology

11:00 AM

Food, Water, and Sustainability

Room B3

Chair and Moderator: Prof. Saumitra Mulherjee, Acting Dean
School of Environmental Sciences,
Jawaharlal Nehru University

STUDENT 3MT® FINALS

Presentations from Graduate Students

PRESENTATION: NUTRITION SECURITY

Prof. Mike Gidley, The University of Queensland

12:30 PM

Luncheon & Presentations

Boulevard Room

RESEARCH UNIVERSITIES

Moderator: Chancellor Mark S. Wrighton
Washington University in St. Louis

INNOVATION IN CHINESE UNIVERSITIES: CHALLENGES AND OPPORTUNITIES

Chancellor Xu Chen, Tsinghua University

UNIVERSITIES AS ENGINES OF INNOVATION

Provost Holden Thorp, Washington University in St. Louis



SESSION III: PARALLEL SESSIONS BY THEME

2:00 PM

Population Aging and Global Public Health

Room B1

Chair and Moderator: Prof. Mary McKay, Dean, Brown School Washington University in St. Louis

PRESENTATION AND PANEL:

MENTAL HEALTH AND COGNITION

Overview Speaker: Prof. Harvey Whiteford, The University of Queensland

PANEL COMMENTS AND DISCUSSION

Prof. Jason Connor, The University of Queensland
Prof. Vivian Lou, University of Hong Kong
Prof. Gerard Byrne, The University of Queensland

DISCUSSION

2:00 PM

Population Aging and Global Public Health

Room B2

Chair and Moderator: Prof. Michael Sherraden, George Warren Brown Distinguished University Professor, Washington University in St. Louis

PRESENTATION AND PANEL: ASSET BUILDING FOR RETIREMENT SECURITY

PANEL: POLICY DESIGN AND IMPACTS

AUSTRALIA'S SUPERANNUATION POLICY

Mr. Ross Clare, Association of Superannuation Funds of Australia Ltd

Prof. Kevin Davis, The University of Melbourne

SINGAPORE'S CENTRAL PROVIDENT FUND

Prof. NG Kok Hoe, National University of Singapore
Prof. Michael Sherraden, Washington University in St. Louis

DISCUSSION

2:00 PM

Energy and Environment

Boulevard Auditorium

Chair and Moderator: President Shuguo Wang, Xi'an Jiaotong University

STUDENT 3MT® FINALS

Presentations from Graduate Students

EXPERT PRESENTATIONS: ENERGY TECHNOLOGIES — WHAT ARE OUR OPTIONS?

RENEWABLE ENERGY AND ENERGY STORAGE

Prof. Raşit Turan, Middle East Technical University

LOW EMISSIONS FOSSIL FUELS

Prof. Andrew Garnett, The University of Queensland
Dr. David Harris, Commonwealth Scientific and Industrial Research Organization (CSIRO)

NUCLEAR ENERGY

Prof. Dingli Shen, Fudan University

Q&A

2:00 PM

Food, Water, and Sustainability

Room B3

Chair: Prof. Margaret Sheil, Provost, The University of Melbourne
Moderator: Prof. Ian Godwin, The University of Queensland

KEYNOTE PRESENTATION

Prof. Andrew Campbell, CEO, Australian Centre for International Agricultural Research (ACIAR)

EXPERT PANEL: DELIVERING NUTRITION SECURITY

Ms. Ange Barry, CEO Stephanie Alexander Kitchen Garden Foundation

Her Excellency Naela Chohan, High Commissioner of Pakistan to Australia

Mr. Ben Milbourne, Celebrity Chef and UQ Alumnus

Mr. Ben Miles, Public Relations and Communications Manager (AUS, NZ, ASIA), Subway

Dr. Lisa Schubert, The University of Queensland

3:30 PM

Afternoon Tea and Posters

Foyer

SESSION IV: PARALLEL SESSIONS BY THEME**4:00 PM****Population Aging and Global Public Health****Room B1**

Chair: President Peter Mathieson,
University of Hong Kong

STUDENT 3MT® FINALS

Presentations from Graduate Students

FORUM: AGING AND PUBLIC HEALTH — NOW AND IN THE FUTURE

Moderator: Dr. Norman Swan, ABC Radio National

Participants:

Prof. William Powderly, Washington University in St. Louis
Prof. Terry Nolan, The University of Melbourne
Prof. Wayne Hall, The University of Queensland
Prof. Sharon Lewin, The University of Melbourne

PRESIDENT CLOSING REMARKS**4:00 PM****Energy and Environment****Room B2**

Chair: Prof. Philip Liu, Vice President for Research and
Technology
National University of Singapore

DEBATE: FOSSIL FUEL DIVESTMENT: A LEGITIMATE STRATEGY TO ADDRESS CLIMATE CHANGE OR A FEEL-GOOD GESTURE BY THE RICH 1%?

Moderator: Mr. Keith Orchison, CEO, Coolibah Pty Ltd

Participants:

Prof. Andrew Garnett, The University of Queensland
Prof. Linwei Ma, Tsinghua University
Prof. Rangan Banerjee, Indian Institute of Technology Bombay

PRESIDENT CLOSING REMARKS**NETWORKING****4:00 PM****Food, Water, and Sustainability****Room B3**

Chair: Prof. Jiro Kokuryo, Vice President for International
Collaboration, Keio University

PANEL DISCUSSION: THE ROLE OF UNIVERSITIES IN GLOBAL FOOD SECURITY

Moderator: Prof. Bill Bellotti, The University of Queensland

Participants:

Dr. Gyorgy Scrinis, The University of Melbourne
Prof. Joseph H. W. Lee, Hong Kong University of Science
and Technology
Dr. Peter Horne, General Manager, ACIAR
Prof. Kim Bryceson, The University of Queensland

PRESIDENT CLOSING REMARKS**NETWORKING****5:30 PM****Sessions Conclude**

Departure for The University of Queensland, St. Lucia Campus
Please proceed to shuttles for departure.

6:00 PM**Symposium Dinner**

The University of Queensland, St. Lucia Campus, Great Court

WELCOME REMARKS

Prof. Peter Høj, President and Vice-Chancellor
The University of Queensland
Chancellor Mark S. Wrighton
Washington University in St. Louis

8:15 PM**Announcement of Winning 3MT®**

Presentations by 3MT® Winners



Saturday, September 24, 2016

Brisbane Convention and Exhibition Centre,
Boulevard Level (unless otherwise noted)

8:00 AM

Registration and Guest Services

(available on-site until 5:30 PM)

CONTINENTAL BREAKFAST AND POSTERS

Foyer

8:00 AM–9:00 AM

Presidents Breakfast (by invitation only)

Plaza Gallery

9:15 AM

Keynote Address

Boulevard Auditorium

WELCOME REMARKS AND INTRODUCTION OF KEYNOTE SPEAKER

Prof. James V. Wertsch, Vice Chancellor for International Affairs
and Director, McDonnell International Scholars Academy,
Washington University in St. Louis

9:30 AM

Keynote Address

Prof. Ernest Aryeetey, Secretary General, African Research
Universities Alliance; Vice Chancellor Emeritus, University of
Ghana

10:30 AM

Morning Tea and Posters

Foyer

JOINT SESSIONS

CHALLENGES AT THE INTERSECTIONS OF ENERGY, ENVIRONMENT, FOOD, WATER, AND GLOBAL PUBLIC HEALTH

11:00 AM

PANEL SESSION I: INDUSTRIALIZED NATIONS

Boulevard Auditorium

Moderator: Prof. Renjie Dong, China Agricultural University

PRESENTATIONS

Prof. Wei-Jane Chen, Dean, College of Public Health,
National Taiwan University

Prof. Benjamin Suarez, Faculty of School of Medicine, University
of Chile

Prof. Orhan Yenigün, Institute of Environmental Sciences,
Boğaziçi University

Prof. Barbara Schaal, Department of Biology, Dean of the Faculty
of Arts & Sciences, Washington University in St. Louis

PANEL DISCUSSION AND Q&A

12:30 PM

Luncheon

Boulevard Room

VIDEO PRESENTATION OF 3MT® PEOPLE'S CHOICE AWARDS

2:00 PM

PANEL SESSION II: VULNERABLE AND IN CRISIS

Boulevard Auditorium

Moderator: President Nak-In Sung, Seoul National University

PANELISTS

Prof. Xin Yang, Chair, Department of Environmental Science,
Fudan University

President Bundhit Eua-arporn, Chulalongkorn University

Prof. Lakshmi Lingam, Tata Institute of
Social Sciences

Prof. Tri Budi W. Rahardjo, Director, Center for Aging Studies,
University of Indonesia

PANEL DISCUSSION AND Q&A

3:30 PM

Afternoon Tea and Posters

Foyer

4:00 PM

Presidents Forum

Boulevard Auditorium

Chaired by Chancellor Mark S. Wrighton

In a world of increasing change and uncertainty, university presidents will consider the scenarios that may emerge as a result of global megatrends and look at how such megatrends might evolve — social, technological, economic, environmental, and political. With a focus on the long-term challenges for their region and considering the pressures on equity, infrastructure, aging, food, energy, and the climate are likely to be far greater than those experienced during the past 50 years, presidents will address five key questions*:

What are the most important trends that will influence my region and what challenges and opportunities do they bring?

How should the university position itself to remain most relevant beyond 2050 (How will we change)?

What are the critical research fields that are likely to emerge for the university?

What should the university be doing today, in terms of teaching and learning, so that graduates of tomorrow are equipped to provide leadership into the future?

Has this symposium changed your perspective and if so how?

5:00 PM

Networking Reception

Foyer

6:30 PM

**VIP Reception and Brisbane
Riverfire Festivities** (invited guests only)
Customs House

Sunday, September 25, 2016

The University of Queensland, St. Lucia Campus

8:00 AM–8:45 AM

Continental Breakfast and Networking
Advanced Engineering Building (49)

**WORKSHOP SESSIONS:
PARALLEL SESSIONS WITHIN THEMES**

9:00 AM

**Population Aging and
Global Public Health**
Hawken Engineering Building (50)

SOCIAL EXCLUSION: URGENT ISSUES FOR PUBLIC HEALTH

9:00 AM–11:00 AM

Coordinator: Prof. John Bowen, Washington University in St. Louis

TELEHEALTH / TELEREHABILITATION

9:00 AM–11:00 AM

Coordinators:

Prof. Trevor Russell, The University of Queensland
Prof. Deborah Theodoros, The University of Queensland

GENETICS AND DEMENTIA

9:00 AM–10:30 AM

Coordinator: Prof. Pankaj Sah, The University of Queensland

- Animal models — use and utility
- Imaging and Genetics
- Therapy
- Genetics

GROUP INNOVATION SESSION: CONNECTING ENGINEERING AND PUBLIC HEALTH TO SOLVE GLOBAL CHALLENGES

11:00 AM–12:00 PM

Coordinator: Prof. Guy Genin, Washington University in St. Louis

9:00 AM

Energy and Environment
Global Change Institute Building (20)

SOLAR ENERGY AND ENERGY STORAGE (SEES) INITIATIVE

9:00 AM–11:00 AM

Coordinators:

Prof. Paul Meredith, University of Queensland
Prof. Yoed Tsur, Technion-Israel Institute of Technology
Prof. Parag Banerjee, Washington University in St. Louis
Prof. Pratim Biswas, Washington University in St. Louis
Prof. Raşit Turan, Middle East Technical University
Prof. Sagar Mitra, Indian Institute of Technology Bombay

ENERGY AND ENVIRONMENT, POVERTY, WELL-BEING, AND RURAL HEALTH (ENPOWER H)

9:00 AM–11:00 AM

Coordinators:

Prof. Chris Greig, The University of Queensland
Prof. Renjie Dong, China Agricultural University
Prof. Lakshmi Lingam, Tata Institute of Social Sciences

FOSSIL FUELS IN A CARBON-CONSTRAINED WORLD

9:00 AM–11:00 AM

Coordinators:

Prof. Richard Axelbaum, Washington University in St. Louis
Prof. A.K. Suresh, Indian Institute of Technology Bombay
Prof. Andrew Garnett, The University of Queensland
Prof. David Harris, CSIRO

Workshop will be off-site. Delegates will be transported.

9:00 AM

Food, Water, and Sustainability
Advanced Engineering Building (49)

IMPACT OF WATER SCARCITY ON FOOD, FEED, AND FUEL PRODUCTION

9:00 AM–11:00 AM

Coordinators:

Prof. Barbara Schaal, Washington University in St. Louis
Prof. Himadri Pakrasi, Washington University in St. Louis
Prof. Joe Jez, Washington University in St. Louis

DEVELOPMENT OF A NEW INTERNATIONAL COMMUNICATION PLATFORM FOR SUSTAINABILITY

9:00 AM–11:00 AM

Coordinator: Mr. Ray Maher, The University of Queensland

EATING THE PLANET: TRANSDISCIPLINARY RESEARCH FOR A HEALTHIER, MORE SUSTAINABLE, AND ETHICAL FOOD SYSTEM

9:00 AM–10:40 AM

Coordinator: Prof. Bill Bellotti, The University of Queensland

11:15 AM–12:15 PM

**Joint Session: MAGEEP Education
Network**

Advanced Engineering Building (49)

Co-advised PhD students, Collaborative Course Work
Development

12:30 PM–1:00 PM

**Joint Session: Harnessing
interdisciplinary expertise to
communicate and collaborate on
global challenges**

Advanced Engineering Building (49)

1:00 PM–2:30 PM

Luncheon

**St. Lucy Caffè e Cucina,
The University of
Queensland**



PRESIDENTS AND PRESIDENTS' REPRESENTATIVES ATTENDING FROM UNIVERSITY PARTNERS

ACCRA

University of Ghana
Ernest Aryeetey
 Secretary General, African Research Universities Alliance; Vice Chancellor Emeritus

BANGKOK

Chulalongkorn University
Bundhit Eua-arporn
 President

BEIJING

China Agricultural University
Renjie Dong (R)
 Head, Bioenergy and Environment Science & Technology Laboratory (BEST)

Tsinghua University
Xu Chen
 Chancellor

BRISBANE

The University of Queensland
Peter Høj
 President and Vice-Chancellor

BUDAPEST

Budapest University of Technology and Economics
Zsolt Barta (R)
 Associate Professor, Department of Applied Biotechnology and Economics

CAMPINAS

State University of Campinas
Telma Teixeira Franco (R)
 Professor, Interdisciplinary Center for Energy

HAIFA

Technion-Israel Institute of Technology
Yoed Tsur (R)
 Faculty of Chemical Engineering

HERZLIYA

Interdisciplinary Center Herzliya
Eric Zimmerman (R)
 Director of Research and Global Engagement

HONG KONG

Chinese University of Hong Kong
Joseph J.Y. Sung
 President

University of Hong Kong
Peter William Mathieson
 Vice-Chancellor

Hong Kong University of Science and Technology
Joseph H W Lee (R)
 Vice President for Research and Graduate Studies

JAKARTA

University of Indonesia
Arie Setiabudi Soesilo (R)
 Dean, Faculty of Social and Political Sciences

MELBOURNE

The University of Melbourne
Margaret Sheil (R)
 Provost



MUMBAI

Indian Institute of Technology Bombay
Devang Khakhar
 Director

Tata Institute of Social Sciences
Shalini Bharat (R)
 Deputy Director (Pro-Vice Chancellor)

NEW DELHI

Jawaharal Nehru University
Saumitra Mukherjee (R)
 Dean, School of Environmental Sciences

ST. LOUIS

Washington University in St. Louis
Mark S. Wrighton
 Chancellor

SANTIAGO

University of Chile
Benjamin Suarez-Isla (R)
 Director, Institute of Biomedical Sciences,
 Director, Transdisciplinary Network
 on Aging

SEOUL

Seoul National University
Nak-In Sung
 President

Yonsei University
Deok Young Park (R)
 Associate Professor of Law, Yonsei University
 School of Law

SHANGHAI

Fudan University
Xin Yang (R)
 Chair, Department of Environmental Science

SINGAPORE

National University of Singapore
Philip Liu (R)
 Vice President, Research and Technology

TAIPEI

National Taiwan University
Wei-Jane Chen (R)
 Dean, College of Public Health

TOKYO

Keio University
Jiro Kokuryo (R)
 Vice President International Collaboration

UTRECHT

Utrecht University
W.M. Margreet de Lange (R)
 Program Manager, International Affairs

XI'AN

Xi'an Jiaotong University
Shuguo Wang
 President



SYMPOSIUM 3MT[®] CONTESTANTS

ENERGY AND ENVIRONMENT

Tony Heynen

The University of Queensland

**BUSINESS AND ENERGY DRIVING POVERTY
ALLEVIATION IN INDIA**

Praveen Kumar

Washington University in St. Louis

COOKSTOVE IMPERIALISM DOES NOT WORK

Avigail Landman

Technion-Israel Institute of Technology

**PHOTOELECTRIC CHEMICAL WATER SPLITTING:
A RENEWABLE PATH**

Chong Zheng Rong

National University of Singapore

NATURAL GAS HYDRATES

Lin YangChieh

Tsinghua University

AIR POLLUTION IN CHINA

FOOD, WATER, AND SUSTAINABILITY

Nduka Ifeanyichukwu Chidiebele

The Chinese University of Hong Kong

AIR QUALITY MODEL ON THE PEARL RIVER DELTA

Jake Eaton

Washington University in St. Louis

HOW TO FEED THE WORLD

Quang Nguyen

The University of Queensland

COCONUT CLONING

Weng Chan Vong

National University of Singapore

RETHINKING SOYBEAN WASTE

Min Wang

Washington University in St. Louis

LITERATURE ON SUSTAINABILITY ACROSS THE GLOBE

POPULATION AGING AND GLOBAL PUBLIC HEALTH

Porpong (Paul) Boonmak

Washington University in St. Louis

HUMAN TRAFFICKING

Wang Chao (Eve Young)

National University of Singapore

TRIPLE NEGATIVE BREAST CANCER

Cal J. Halvorsen

Washington University in St. Louis

REDESIGN WORK FOR LONGER LIVES

Alisha Ramos

National University of Singapore

BREAST CANCER: PROTEIN IDENTIFICATION

Priya Rathi

Indian Institute of Technology Bombay (IITB)

TRACK YOUR WAY TO BETTER HEALTH

SYMPOSIUM POSTERS

POPULATION AGING AND GLOBAL PUBLIC HEALTH

Boaz M. Ben-David

AGING, BILINGUALISM, AND SPEECH PERCEPTION
Interdisciplinary Center Herzliya (IDC)

Porpong (Paul) Boonmak Boaz

**NEIGHBORHOOD CHARACTERISTICS AND SOCIAL, EDUCATIONAL,
AND VENUE RISKS ASSOCIATED WITH SEX TRAFFICKING: A
PRELIMINARY ASSESSMENT IN ST. LOUIS**
Washington University in St. Louis

Christine Brown-Wilson

**EXPLORING THE DECISION MAKING OF FAMILY CAREGIVERS OF
PEOPLE LIVING WITH DEMENTIA IN THE COMMUNITY**
The University of Queensland

Leeanne Carey

**ADVANCING THE SCIENCE OF NEUROREHABILITATION: A
COLLABORATIVE APPROACH TO INVESTIGATING THE TRAJECTORY
OF PARTICIPATION OUTCOMES AND STROKE RECOVERY**
La Trobe University

Leeanne Carey

**WORLD STROKE ORGANIZATION HEALTH SYSTEMS INDICATORS AND
PERFORMANCE IN AUSTRALIA, SINGAPORE, AND THE USA**
La Trobe University and Florey Institute of Neuroscience and
Mental Health

Jihyun Cha

**RAPID DETECTION AND USE OF NON-VERBAL CONFIDENCE CUES
DURING ADAPTIVE MEMORY BIASING**
Washington University in Saint Louis

Veronique Chachay

**THE DUODENAL-JEJUNAL BYPASS SLEEVE IN PATIENTS WITH
OBESITY AND TYPE II DIABETES: WEIGHT LOSS, METABOLIC AND
NUTRITIONAL OUTCOMES**
The University of Queensland

Yu-Chih Chen

**FACTORS OF JOB SATISFACTION AMONG HOME AND COMMUNITY-
BASED CARE WORKERS IN TAIWAN: A MULTILEVEL MODELING**
Washington University in St. Louis

Wan-Jung Cheng

**EXPLAINING JOB POLARIZATION: THE ROLE OF HETEROGENEITY IN
CAPITAL INTENSITY**
Washington University in St. Louis

Nicole Cockburn

**NUTRITIONAL STATUS AND ORAL HEALTH OF RESIDENTS OF AGED
CARE FACILITIES**
The University of Queensland

Elizabeth Eakin

**TRANSLATING RESEARCH INTO PRACTICE: THE HEALTHY LIVING
AFTER CANCER PARTNERSHIP PROJECT**
The University of Queensland

Hebe Gouda

**ACCOUNTING FOR NONGOVERNMENTAL ORGANISATIONS IN THE
SUSTAINABLE DEVELOPMENT GOALS: THE CASE OF DIABETES
PROGRAMMES IN INDONESIA**
The University of Queensland

Kelsey Haddad

**MATERIAL SYNTHESIS AND DEVICE DESIGN FOR SENSOR ARRAYS
AND THEIR APPLICATION IN THE ANALYSIS OF VOLATILE ORGANIC
COMPOUNDS**
Washington University in St. Louis

Stephanie Herbers

LISTENING TO ELDER VOICES ON COMMUNITY ISSUES
Washington University in St. Louis

Lili Indrawati

**CLINICAL STUDY ON ANTI-INFLAMMATORY ACTIVITY OF ANNONA
MURICATA L LEAVES EXTRACT FOR COLORECTAL CANCER PATIENTS
— A PILOT STUDY**
University of Indonesia

Danielle Kamato

**TOWARDS NEW TREATMENTS FOR ATHEROSCLEROSIS - A MAJOR
DISEASE OF AGING**
The University of Queensland

Saval Khanal

**USING AUSTRALIAN KNOWLEDGE IN MEDICINE USE TO ESTIMATE
THE QUANTITY AND COST OF TYPE 2 DIABETES MELLITUS
MEDICINES FOR NEPAL**
The University of Queensland

Hyunil Kim

**CHILD MALTREATMENT INVESTIGATION RISKS BY CHILD
POVERTY RISKS AMONG WHITES, BLACKS, AND HISPANICS
IN THE UNITED STATES**
Washington University in St. Louis

Seongmi Kim

**DEVELOPMENT OF AN IN VITRO BLADDER EPITHELIAL CELL
CULTURE SYSTEM**
Washington University in St. Louis

Yim Hung Lam (Steve)

**THE IMPACTS OF CHANGES IN LAND COVER ON REGIONAL CLIMATE,
AIR QUALITY, AND PUBLIC HEALTH**
The Chinese University of Hong Kong

Melody Yunzi Li

HOMESICKNESS — A SERIOUS GLOBAL ISSUE
Washington University in St. Louis

Yigang Li

URBAN MATRIX
Washington University in St. Louis

Roger Rowe

DISSECTING THE RESPONSES OF THE BODY ACROSS TIME
Washington University in St. Louis



Juan Pablo Saa**EVALUATION OF COGNITIVE FUNCTION POST-STROKE — A SCOPING REVIEW**

Florey Institute of Neuroscience and Mental Health

Juan Pablo Saa**MAPPING 20 YEARS OF STROKE IN ST. LOUIS: ANALYSIS OF BARNES JEWISH HOSPITAL'S STROKE REGISTRY (1996–2015)**

Washington University in St. Louis

Chieh-Hsiang Tan**THE USE OF MODEL ORGANISMS IN BIOMEDICAL RESEARCH**

Washington University in St. Louis

Eylul Tekin**DOES THE RANGE OF CONFIDENCE SCALE AFFECT CONFIDENCE-ACCURACY RELATIONSHIP?**

Washington University in St. Louis

Peter Thomson**AGING AND MOUTH CANCER - DEVELOPING CLINICALLY APPLICABLE TOOLS TO SCREEN THE 'HIGH-RISK' POPULATION**

The University of Queensland

Jill Wilson**AGEING, AGEISM AND DECISION MAKING AROUND ASSETS**

The University of Queensland

Liang Zhao**FRUCTOSE AND GLUCOSE COMBINED WITH FREE FATTY ACIDS INDUCE METABOLIC DISORDERS IN HEPG2 CELL: A NEW MODEL TO STUDY THE IMPACTS OF HIGH-FRUCTOSE/SUCROSE AND HIGH-FAT DIETS IN VITRO**

China Agricultural University

ENERGY AND ENVIRONMENT**Siyuan An****GRAPHENE-BASED MATERIAL FOR SUPERCAPACITOR**

Washington University in St. Louis

Zsolt Barta**PROCESS DESIGN AND ECONOMIC ASPECTS OF A BIOREFINERY PRODUCING ARABINOSE, XYLITOL FROM CORM FIBRE**

Budapest University of Technology and Economics

Eszter Barta-Rajnai**EFFECT OF TORREFACTION ON THE THERMAL BEHAVIOR OF STEM WOOD, BARK, AND STUMP OF NORWAY SPRUCE**

Budapest University of Technology and Economics

Eric Cawi**COMPUTATIONAL METHODS FOR CHOOSING URBAN PLANNING STRATEGIES**

Washington University in St. Louis

Hwang Cheng Chun (Patrick)**INTERSTITIAL CONDITIONS OF MUMBAI EXTREMITY: THE PARADOXICAL CONSEQUENCES OF UNIFORM F.S.I.**

The Chinese University of Hong Kong

Gabor Ersek**SYNTHESIS AND INVESTIGATION OF NOVEL POLYMER-METAL NANOHYBRIDS**

Budapest University of Technology and Economy

Daniel Giammar**GEOLOGIC CARBON SEQUESTRATION IN FRACTURED BASALTS: REACTIONS AND TRANSPORT PROCESSES**

Washington University in St. Louis

Nan Hu**ANIMALS IN THE DARK**

Washington University in St. Louis

Phillip Johnson**COMBUSTION PERFORMANCE OF TORREFIED BIOMASS WHEN CO-FIRED WITH PULVERIZED COAL**

Washington University in St. Louis

Li Junbao**INTEGRATED CHEMICAL AND MULTISCALE STRUCTURAL ANALYSES FOR THE PROCESSES OF ACID PRETREATMENT AND ENZYMATIC HYDROLYSIS OF CORN STOVER**

China Agricultural University

Praveen Kumar**DYNAMICS OF SUSTAINED USE AND ABANDONMENT OF CLEANER COOKING SYSTEMS IN RURAL INDIA**

Washington University in St. Louis

Yihang Li**PHOTOVOLTAICS — WHAT TO BE IMPROVED AND WHAT TO BE INVENTED**

Washington University in St. Louis

Yiqi Lin**AIRBORNE PARTICLE SENSING WITH MICRO-OPTICS**

Washington University in St. Louis

Quincy Marting, Sarah Altekin**RENEWABLE ENERGY ALTERNATIVES FOR A REMOTE TOWN IN QUEENSLAND, AUSTRALIA**

Washington University in St. Louis

Yi-Chun Lu**HIGH-ENERGY-DENSITY-FLOW BATTERIES: BRIDGING THE GAP BETWEEN INTERMITTENT RENEWABLE POWER SUPPLIES AND POWER DEMANDS IN GRID-STORAGE AND ELECTRIC-VEHICLES**

The Chinese University of Hong Kong

Yao Nie**CRUMPLED REDUCED GRAPHENE OXIDE-AMINE-TITANIUM DIOXIDE NANOCOMPOSITES FOR SIMULTANEOUS CARBON DIOXIDE ADSORPTION AND PHOTOREDUCTION**

Washington University in St. Louis

Saurabh Sharma**FLAMELESS COMBUSTION OF LIQUID FUELS**

Indian Institute of Technology Bombay

Kuan-Yu Shen**FLAME-ASSISTED SPRAY PYROLYSIS FOR SYNTHESIS OF NON-HOLLOW NANOSTRUCTURED ELECTROCHEMICAL MATERIALS**

Washington University in St. Louis

Yoav Y. Yair**THE MEDITERRANEAN BASIN IN AN ERA OF CLIMATE CHANGE**

Interdisciplinary Center Herzliya (IDC)

FOOD, WATER, AND SUSTAINABILITY**Ronan Broad****VITAMIN C ENRICHED RICE TO COMBAT HUMAN IRON DEFICIENCY**

The University of Melbourne

Jiayu Li**NANOPARTICLES PRESENT SUSTAINABLE WAY TO GROW FOOD CROPS**

Washington University in St. Louis

McDONNELL ACADEMY UNIVERSITY PARTNERS AND AMBASSADORS

ACCRA

University of Ghana
Ambassador Jean Allman

ANKARA

Middle East Technical University
Ambassador Hayrettin Yucesoy

BANGKOK

Chulalongkorn University
Ambassador Mary M. McKay

BEIJING

China Agricultural University
Ambassador Joseph Jez

Peking University
Ambassador Barbara Schaal

Tsinghua University
Ambassador Tao Ju

BRISBANE

The University of Queensland
Ambassador Graham A. Colditz

BUDAPEST

Budapest University of Technology and Economics
Ambassador Sándor J. Kovács Jr.

CAMPINAS

State University of Campinas
Ambassador William G. Powderly

HAIFA

Technion – Israel Institute of Technology
Ambassador Yoram Rudy

HERZLIYA

Interdisciplinary Center Herzliya
Ambassador Ohad Kadan

HONG KONG

Chinese University of Hong Kong
Ambassador Ping Wang

Hong Kong University of Science and Technology
Ambassador Daniel Giammar

University of Hong Kong
Ambassador Nancy Morrow-Howell

ISTANBUL

Boğaziçi University
Ambassador Hayrettin Yucesoy

JAKARTA

University of Indonesia
Ambassador John Bowen

MELBOURNE

The University of Melbourne
Ambassador Graham A. Colditz

MUMBAI

Indian Institute of Technology Bombay
Ambassador Pratim Biswas

Tata Institute of Social Sciences
Ambassador Jean-Francois Trani

NEW DELHI

Jawaharlal Nehru University
Ambassador Himadri Pakrasi

SANTIAGO

University of Chile
Ambassador Elzbieta Sklodowska

SEOUL

Korea University

Seoul National University
Ambassador Young-Shin Jun

Yonsei University
Ambassador Jin-Moo Lee

SHANGHAI

Fudan University
Ambassador Shenyang Guo

SINGAPORE

National University of Singapore
Ambassador Michael Sherraden

TAIPEI

National Taiwan University
Ambassador Tuan-Hua David Ho

TOKYO

Keio University
Ambassador Larry J. Shapiro

University of Tokyo
Ambassador Larry J. Shapiro

UTRECHT

Utrecht University
Ambassador Melissa Waters

XI'AN

Xi'an Jiaotong University
Ambassador Guy Genin

AMBASSADOR-AT-LARGE

Professor Dedric Carter

AMBASSADOR EMERITUS

Professor Emeritus James T. Little

MCDONNELL ACADEMY RESIDING SCHOLARS

2008

Mr. Yining Huang (PhD)
Chemistry/The Graduate School
Peking University

2010

Ms. Sherria Ayuandini (PhD)

Anthropology/The Graduate School
University of Indonesia

Mr. Hyung Joo Lee (PhD)

Division of Biology and Biomedical Sciences/
Molecular Genetics and Genomics
Seoul National University

2011

Mr. Leandro Medina de Oliveira (PhD)

Physics/The Graduate School
State University of Campinas

Ms. Richa Joshi (PhD)

Brown School
Tata Institute of Social Sciences

Ms. Yunzi Li (PhD)

Comparative Literature/The Graduate School
University of Hong Kong

2012

Mr. Oguz Alyanak (PhD)

Anthropology/The Graduate School
Boğaziçi University

Ms. Andrea Balassy (PhD)

Mallinckrodt Corporate Fellow
Energy, Environment, and Chemical
Engineering/School of Engineering &
Applied Science
Budapest University of Technology
& Economics

Ms. Sarita Barton (PhD)

Brown School
US Scholar

Ms. Jihyun Cha (PhD)

Psychology/The Graduate School
Yonsei University

Ms. Wan-Jung Cheng (PhD)

Taiwan Ministry of Education Fellow
Economics/
The Graduate School
National Taiwan University

Mr. Praveen Kumar (PhD)

Brown School
Tata Institute of Social Sciences

Mr. Sameer Patel (PhD)

Arch Coal Inc, Corporate Fellow
Energy, Environment, and Chemical
Engineering/School of Engineering
& Applied Science
Indian Institute of Technology Bombay

Mr. Roger Rowe (PhD)

Mechanical Engineering/School of
Engineering & Applied Science
US Scholar

Mr. Kuan-Yu (Mike) Shen (PhD)

Taiwan Ministry of Education Fellow
Energy, Environment, and Chemical
Engineering/School of Engineering
& Applied Science
National Taiwan University

Mr. Chieh-Hsiang Tan (PhD)

Taiwan Ministry of Education Fellow
Division of Biology and Biomedical Sciences/
Developmental, Regenerative, and Stem Cell
Biology
National Taiwan University

2013

Mr. Siyuan An (PhD)

Risun Coal Chemicals Group Ltd

Corporate Fellow

Energy, Environment, and Chemical
Engineering/School of Engineering
& Applied Science
Tsinghua University

Mr. Yu-Chih Chen (PhD)

Taiwan Ministry of Education Fellow
Brown School
National Taiwan University

Mr. Ting Yuen (Terry) Cheung (PhD)

Economics/The Graduate School
Chinese University of Hong Kong

Ms. Kelsey Haddad (PhD)

Boeing Corporate Fellow
Energy, Environment, and Chemical
Engineering/School of Engineering
& Applied Science
US Scholar

Mr. Hsun-Chia Hsu (PhD)

Taiwan Ministry of Education Fellow
Biomedical Engineering/School of
Engineering & Applied Science
National Taiwan University

Mr. Hyunil Kim (PhD)

Fila Korea Corporate Fellow
Brown School
Seoul National University

Ms. Po-Cheng Lin (PhD)

Taiwan Ministry of Education Fellow
Division of Biology and Biomedical Sciences/
Plant and Microbial Biosciences
National Taiwan University

Ms. Yao Nie (PhD)

Cabot Corporation Corporate Fellow
Energy, Environment, and Chemical Engineering/
School of Engineering & Applied Science
Tsinghua University

Ms. Adwoa Kwakyewaa Opong (PhD)

History/The Graduate School
University of Ghana

Ms. Divya Ravindranath (PhD)

Brown School
Tata Institute of Social Sciences

Ms. Conghui Yao (PhD)

Nestle Purina PetCare Company

Corporate Fellow

Chemistry/The Graduate School
Peking University

2014

Ms. Ivy Blackmore (PhD)

Brown School
US Scholar

Ms. Yujia Chen (PhD)

Biomedical Engineering/School of Engineering
& Applied Science
Tsinghua University

Ms. Xinyi Du (M-Arch)

Sam Fox School of Design & Visual Arts
Tsinghua University

Ms. Nan Hu (PhD)

Chinese and Comparative Literature/The
Graduate School
Fudan University

Ms. Seongmi Kim (PhD)

Division of Biology and Biomedical Sciences/
Molecular Microbiology and Microbial
Pathogenesis
Seoul National University

Ms. Jiayu Li (PhD)

Energy, Environment, and Chemical Engineering/
School of Engineering & Applied Science
Tsinghua University

Mr. Zhichao Li (PhD)

Energy, Environment, and Chemical Engineering/
School of Engineering & Applied Science
Peking University

Ms. Yi-Ling Lin (PhD)

Taiwan Ministry of Education Fellow
Anthropology/The Graduate School
National Taiwan University

Mr. Masahiro Yoshida (PhD)

Economics/The Graduate School
University of Tokyo

2015

Mr. Porpong (Paul) Boonmak (PhD)

Master of Public Health Sciences/School of Medicine
Chulalongkorn University

Mr. Eric Cawi (PhD)

Electrical and Systems Engineering/School of Engineering & Applied Sciences
US Scholar

Ms. Lei Chen (PhD)

Division of Biology and Biomedical Sciences/
Human and Statistical Genetics
Peking University

Ms. Lu (Stephanie) Chen (MBA)

Olin Business School
Fudan University

Mr. Che-Yuan Cheng (PhD)

Taiwan Ministry of Education Fellow
Economics/The Graduate School
National Taiwan University

Mr. Jacob Eaton (PhD)

Public Health Services/Brown School
US Scholar

Mr. Jen-Chun (Jim) Hsiang (PhD)

Division of Biology and Biomedical Sciences/
Neuroscience
National Taiwan University

Mr. Wei-Yi Lee (PhD)

Taiwan Ministry of Education Fellow
Chinese Language and Literature/
The Graduate School
National Taiwan University

Mr. Yigang (Tommy) Li (M-Arch)

Shinichiro Watari Fellow
Sam Fox School of Design & Visual Arts
Chinese University of Hong Kong

Mr. Yihang (Tommy) Li (PhD)

Electrical and Systems Engineering/School of Engineering & Applied Sciences
Tsinghua University

Mr. Yiqi (Marshall) Lin (PhD)

Electrical and Systems Engineering/School of Engineering & Applied Sciences
Tsinghua University

Mr. Rodrigo Moser (PhD)

Finance/Olin Business School
University of Chile

Mr. Girish Sharma (PhD)

Corning Incorporated Corporate Fellow
Energy, Environment, and Chemical Engineering/School of Engineering & Applied Science
Indian Institute of Technology Bombay

Mr. Keh-Kuan Su (PhD)

Mirae Asset Corporate Fellow
Economics/The Graduate School
Yonsei University

Ms. Eylu Tekin (PhD)

Psychology/The Graduate School
Boğaziçi University

Ms. Oyku Uner (PhD)

Psychology/The Graduate School
Boğaziçi University

Ms. Min (Margaret) Wang (PhD)

Chinese and Comparative Literature/
The Graduate School
Peking University

Ms. Gulcan Yayla (MBA)

Olin Business School
Middle East Technical University

2016

Ms. Edinam Adzon Bello (MSW)

Brown School
University of Ghana

Mr. Sukrant Dhawan (PhD)

Monsanto Company/Dr. Norman Borlaug Fellow
Energy, Environment, and Chemical Engineering/School of Engineering & Applied Science
Indian Institute of Technology Bombay

Mr. Eleni Gaveras (PhD)

Brown School
US Scholar

Ms. Wenlan Geng (JD)

School of Law
Fudan University

Mr. Tsung-Yu Ho (PhD)

Taiwan Ministry of Education Fellow
Economics/The Graduate School
National Taiwan University

Ms. Kit Yee (Clarice) Hong (PhD)

Lee Foundation Fellow
Molecular Genetics and Geonomics/Division of Biology and Biomedical Sciences
National University of Singapore

Ms. Connie Yuan Huan (PhD)

Economics/The Graduate School
The Hong Kong University of Science & Technology

Mr. Joonmo Kang (PhD)

Brown School
Seoul National University

Ms. Huizhong Li (MSW)

Brown School
The Hong Kong University of Science & Technology

Ms. Jingyi Luan (PhD)

Mechanical Engineering and Material Science/
School of Engineering & Applied Science
Xi'an Jiaotong University

Ms. Lauris McQuoid-Greason (PhD)

Hispanic Languages and Literature/
The Graduate School
US Scholar

Mr. Wei Miao (PhD)

Electrical and Systems Engineering/School of Engineering & Applied Sciences
Tsinghua University

Ms. Eliarani Kanak Rajah (MSW)

Brown School
National University of Singapore

Mr. Jose Patricio Sullivan (PhD)

Hispanic Languages and Literature/
The Graduate School
University of Chile

Ms. Zhen Tian (PhD)

Earth and Planetary Sciences/The Graduate School
Peking University

Mr. Changqing Wang (PhD)

Electrical and Systems Engineering/School of Engineering & Applied Sciences
Tsinghua University

Mr. Liang-Bo Wang (PhD)

Computational and Systems Biology/Division of Biology and Biomedical Sciences
National Taiwan University

Mr. Lingyue Wang (M-Arch)

Sam Fox School of Design & Visual Arts
Xi'an Jiaotong University

Ms. Ting (Jamie) Yue (MBA)

Olin Business School
Chinese University of Hong Kong

PAST SYMPOSIA

MAY
2007

1ST INTERNATIONAL SYMPOSIUM ON ENERGY & ENVIRONMENT

WASHINGTON UNIVERSITY
IN ST. LOUIS



FOUNDED
McDonnell Academy Global
Energy & Environment Partnership
(MAGEEP)

MAGEEP supports the development of innovative ideas in collaborative education and a wide range of research activities in energy and environment areas.



FOUNDED
International Center for
Advanced Renewable Energy and
Sustainability (I-CARES)

This center conducts research on biofuels from plant and microbial systems and explores sustainable alternative energy and environmental systems and practices.

DECEMBER
2008

2ND INTERNATIONAL SYMPOSIUM ON ENERGY & ENVIRONMENT

HONG KONG



FOUNDED
Consortium
for Clean Coal
Utilization (CCCU)

Conducts research in advanced coal and carbon capture technologies. The goal of the consortium is to foster the utilization of coal as a safe and affordable source of energy, and as a chemical feedstock, with minimal impact on the environment.



FUNDED
14 MAGEEP-funded
collaborative projects

OCTOBER
2010

3RD INTERNATIONAL SYMPOSIUM ON GLOBAL ENERGY FUTURE

WASHINGTON UNIVERSITY
IN ST. LOUIS



DEDICATION
Dedication of
Stephen F. and
Camilla T. Brauer
Hall — Danforth
Campus



RELEASED
Global Energy Future
Study Report



FUNDED
11 MAGEEP-funded
collaborative projects



FUNDED
8 CCCU-funded
collaborative projects

DECEMBER
2012

4TH INTERNATIONAL SYMPOSIUM ON ENERGY & ENVIRONMENT:

Abundant Clean Cost-Effective Energy Systems for Sustainability (ACCESS)

MUMBAI, INDIA



LAUNCHED

Solar Energy Research Institute for India and the United States (SERIUS)



FUNDED

14 MAGEEP-funded collaborative projects



FUNDED

5 CCCU-funded collaborative projects



INTRODUCTION

Fires, Fuel, and the Fate of 3 Billion: The State of the Energy Impoverished by Gautam Yadama

OCTOBER
2014

5TH INTERNATIONAL SYMPOSIUM:

The Role of Research Universities in Addressing Global Challenges

WASHINGTON UNIVERSITY IN ST. LOUIS



POPULATION AGING

- **Increased:** Cross national collaborative connections
- **Funded:** 10 Friedman Center for Aging collaborations



FOOD, WATER AND CLIMATE CHANGE

Re-established: Interdisciplinary Environmental Studies Program



ENERGY AND ENVIRONMENT

- MAGEEP Education Network
- Solar Energy Research Institute for India and U.S. (SERIUS) — Linking to a MAGEEP Visiting Scholar Program
- **Launched:** Solar Energy and Energy Storage (SEES) Initiative and World Access To The Sun (WATTS) Program
- **Launched:** CCCU Phase II and U.S.-China Clean Energy Center
- **Established:** Center for Aerosol Science and Engineering (CASE)



PUBLIC HEALTH

Established: New collaborations with faculty from University of Melbourne addressing life course epidemiology and cancer risks in men and women.

SEPTEMBER
2016

6TH INTERNATIONAL SYMPOSIUM:

Addressing Global Challenges through International Collaboration in Education and Research

BRISBANE, AUSTRALIA



POPULATION AGING AND GLOBAL PUBLIC HEALTH



FOOD, WATER, AND SUSTAINABILITY



ENERGY AND ENVIRONMENT



STUDENT INITIATIVES

3MT® Competition

KEYNOTE SPEAKERS

Mr. Dennis A. Muilenburg, Chairman, President and CEO, The Boeing Company

Ms. Glenys Beauchamp, Secretary, Department of Industry, Innovation and Science, Australian Government

Prof. Ernest Aryeetey, Secretary General, African Research Universities Alliance, Vice Chancellor Emeritus, University of Ghana

MCDONNELL ACADEMY SPONSORS

FOUNDING BENEFACTOR

JOHN F. MCDONNELL

CORPORATE SPONSORS

AMEREN St. Louis, Missouri

ARCH COAL St. Louis, Missouri

BOEING St. Louis, Missouri

CALERES COMPANY St. Louis, Missouri

CHAROEN POKPHAND INDONESIA Jakarta, Indonesia

CORNING INCORPORATED Corning, New York

EMERSON St. Louis, Missouri

FILA KOREA Seoul, South Korea

IL&FS Mumbai, India

MALLINCKRODT St. Louis, Missouri

MIRAE ASSET Seoul, South Korea

MONSANTO COMPANY St. Louis, Missouri

NESTLÉ PURINA PETCARE COMPANY St. Louis, Missouri

PEABODY ENERGY St. Louis, Missouri

RISUN COAL CHEMICALS GROUP LIMITED Beijing, China

SIGMA-ALDRICH St. Louis, Missouri

SUNEDISON St. Peters, Missouri

FOUNDATION AND INDIVIDUAL SPONSORS

LEE FOUNDATION Singapore

LO FELLOWSHIP Hong Kong

CHO-YEE AND PATRICIA TO Ann Arbor, Michigan

SHINICHIRO WATARI FELLOWSHIP Hong Kong

TAIWAN MINISTRY OF EDUCATION Taipei, Taiwan

CABOT CORPORATION FOUNDATION Boston, Massachusetts (Cabot-Zhang Endowed Lecture Series)

IMPORTANT WEBSITES

McDonnell International Scholars Academy

mcdonnell.wustl.edu

Washington University in St. Louis

wustl.edu

Washington University School of Medicine in St. Louis

medicine.wustl.edu

McDonnell Academy Global Energy
and Environmental Partnership (MAGEEP)

mageep.wustl.edu

Institute for Public Health

publichealth.wustl.edu

Harvey A. Friedman Center for Aging

publichealth.wustl.edu/aging

International Center for Advanced Renewable
Energy and Sustainability (I-CARES)

icares.wustl.edu

Energy and Environmental Education

eed.wustl.edu

Department of Energy, Environmental
and Chemical Engineering

eece.wustl.edu

The University of Queensland

uq.edu.au

Global Change Institute (GCI)

gci.uq.edu.au

Queensland Brain Institute (QBI)

qbi.uq.edu.au

Sustainable Minerals Institute (SMI)

smi.uq.edu.au

Energy Initiative

energy.uq.edu.au

Queensland Alliance for Agriculture
and Food Innovation

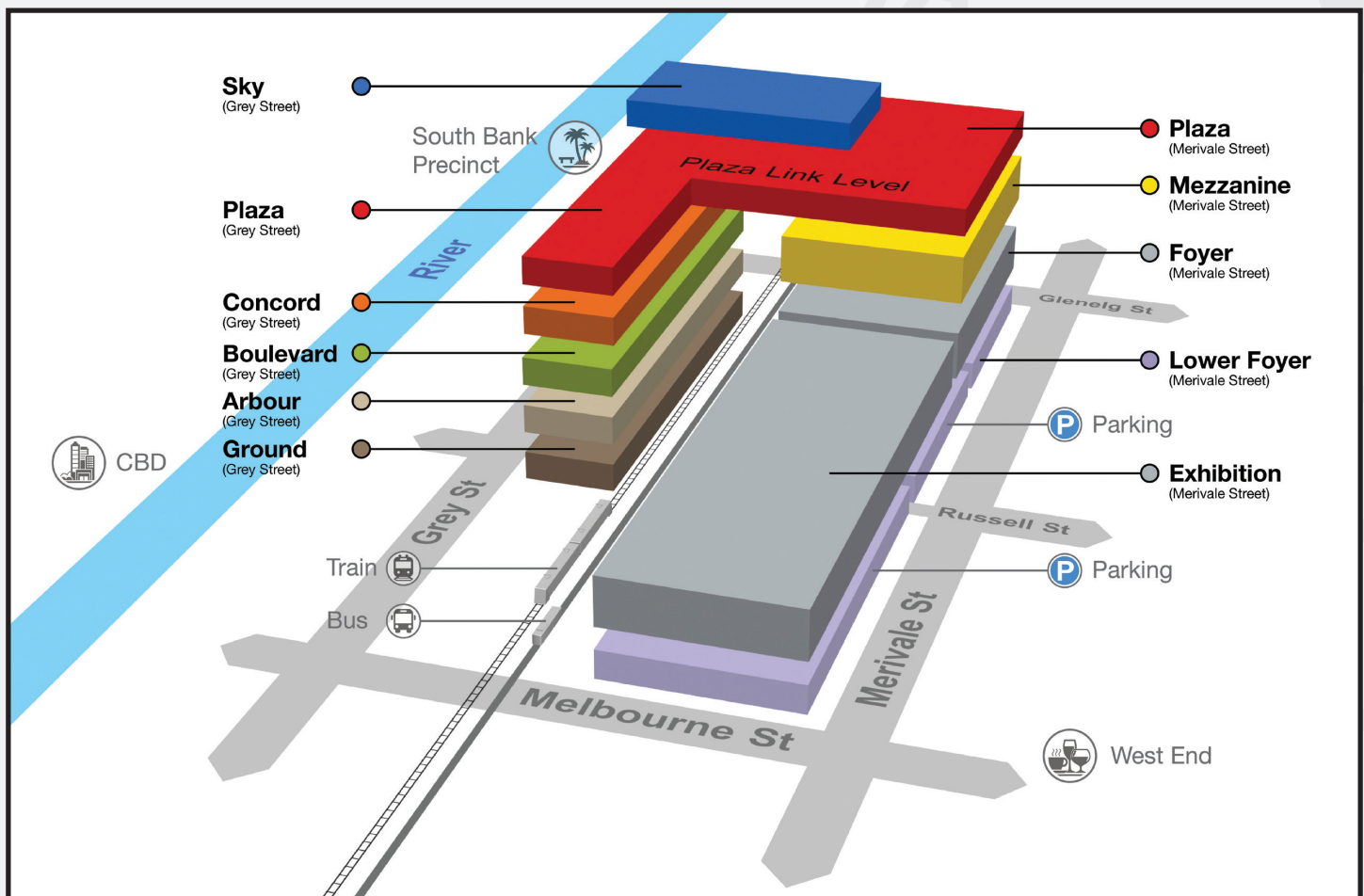
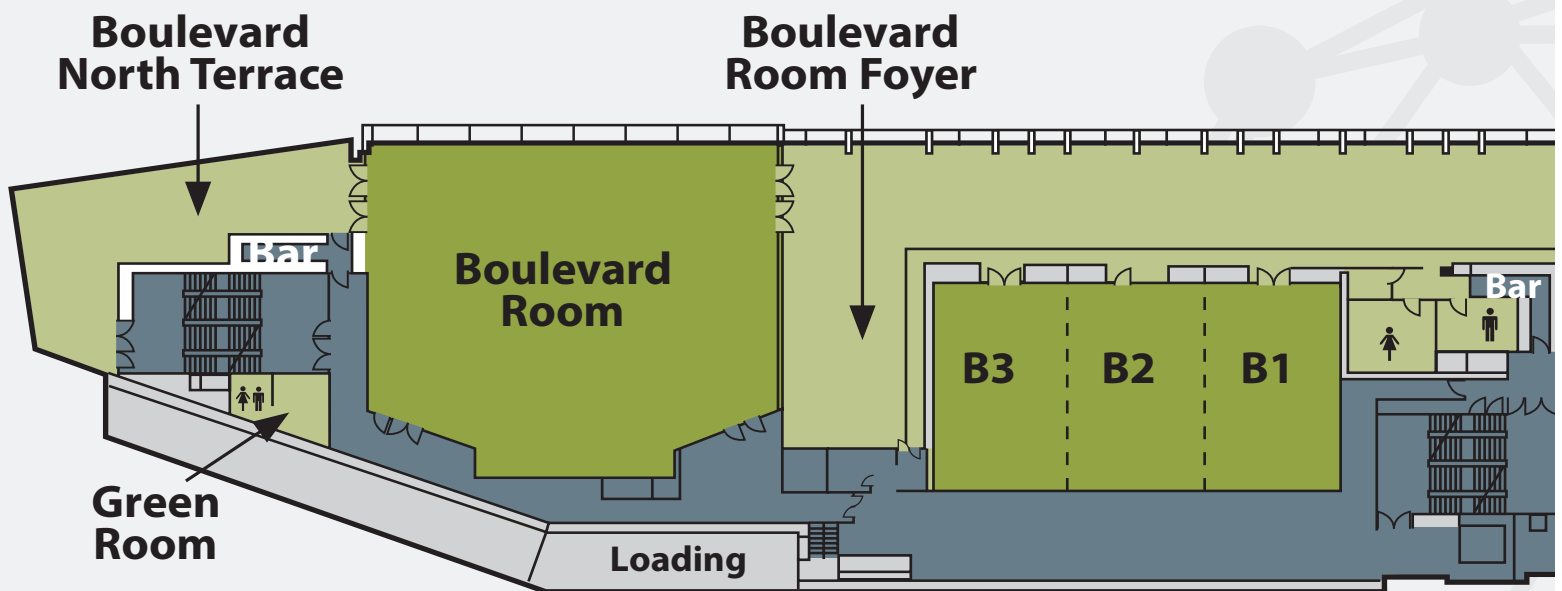
qaafi.uq.edu.au

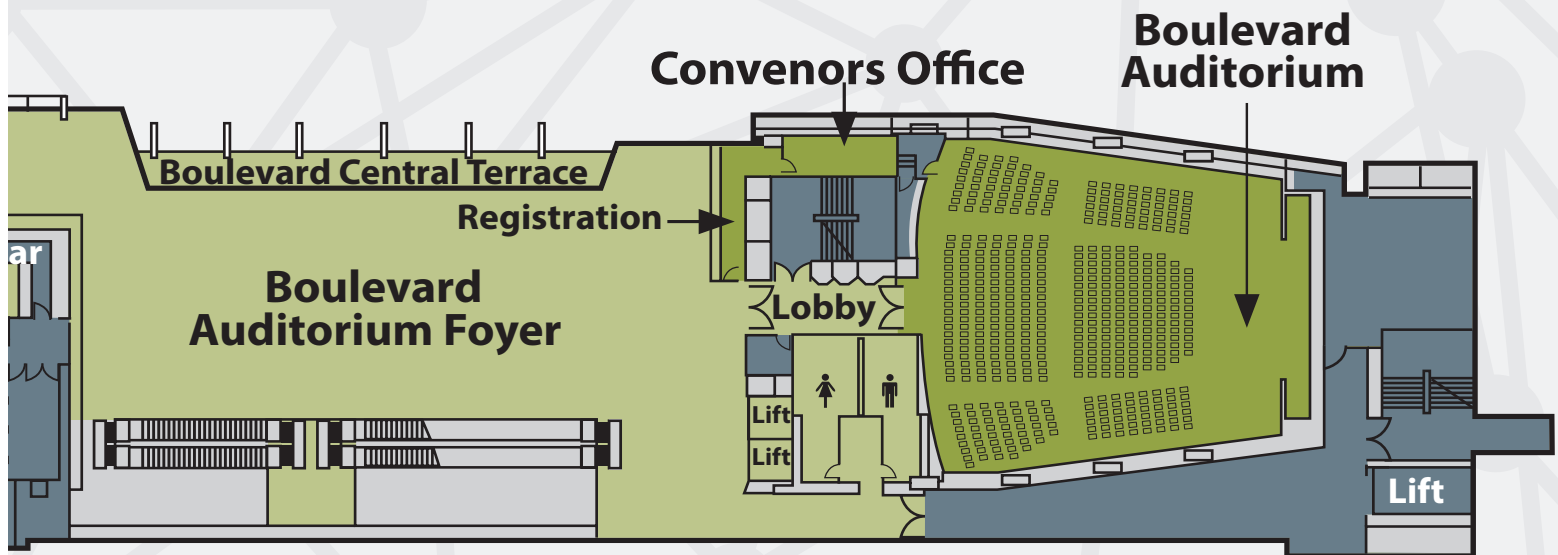
Faculty of Health and Behavioural Sciences
(HABS)

habs.uq.edu.au

School of Public Health

public-health.uq.edu.au





NOTES

Share your thoughts and connect with
colleagues on Twitter using
#GlobalSolutions



mcdonnellsymposium.wustl.edu

McDONNELL INTERNATIONAL SCHOLARS ACADEMY NETWORK OF PARTNER UNIVERSITIES



 Washington University in St. Louis

mcdonnellsymposium.wustl.edu | #GlobalSolutions