Many challenges facing us today go beyond what any country, let alone university can tackle. Climate change, population aging, health, energy, and agriculture require new approaches to research and education, and these approaches will require global cooperation. It is with this in mind that Washington University is collaborating with one of its partner institutions, Tsinghua University, to organize the 7th International Symposium of the McDonnell International Scholars Academy.

The McDonnell Academy was created in 2005 and organized its first International Symposium at Washington University in St. Louis in 2007. Since then it has organized meetings in Hong Kong (2008), St. Louis (2010), Mumbai (2012), St. Louis (2014), and Brisbane (2016). Starting with a focus on energy and environment, this Symposium has expanded to address public health, population aging, and food and water issues. 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 2018 Symposium.

The 7th 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 on global issues, but to recruit and mentor students from partner institutions as part of a network of future global leaders in academia, business, government, and the nonprofit sector. The 2018 Symposium co-hosted by Tsinghua University in Beijing promises to be another major step in pursuing this mission.
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4 SESSIONS AND EVENTS  
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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?).

AGRICULTURE, FOOD, AND WATER

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 lead 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 shortage 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. 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 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 October 2018 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.
PUBLIC HEALTH AND AGING

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. Innovations must be found in the global context of climate change, energy sustainability, and rapidly developing information technology. 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.
Thursday, October 11, 2018

Grand Hyatt Beijing at Oriental Plaza,
LG Level (unless otherwise noted)

8:00 AM
Early Check-In and Registration Opens
(visiting attendees only)
Grand Ballroom Foyer

4:00 PM
General Registration Opens
(all attendees)
Grand Ballroom Foyer

8:30 AM–12:30 PM
Beijing Cultural Tour
The Forbidden City: The Great Within
(all attendees)
(lunch available at the hotel following the tour in
The Residence II-III)

12:30–3:00 PM
McDonnell Scholars Alumni Networking Luncheon
and Meet & Greet with Dr. John Holdren
(by invitation only)
The Residence I

EXECUTIVE WORKSHOPS
(by invitation only)
Grand Salon
2:00–4:30 PM

2:00–3:00 PM
University for Life: Opportunities for the Academy
to Respond to Aging Demographics
Coordinator: Professor Nancy Morrow-Howell
Washington University in St. Louis
Moderator: Professor James V. Wertsch
Washington University in St. Louis

3:00 PM
Afternoon Tea
Grand Ballroom Foyer

3:30–4:30 PM
Campus Sustainability: Enhancing Energy
Efficiency and Reducing Carbon Footprint
Coordinator: Professor Pratim Biswas
Washington University in St. Louis
Moderator: Chancellor Mark S. Wrighton
Washington University in St. Louis

OPENING SESSION
Grand Ballroom

5:00 PM
Traditional Opening Ceremony
Welcome Remarks and Introductions
President QIU Yong
Tsinghua University
Chancellor Mark S. Wrighton
Washington University in St. Louis

5:15 PM
Opening Keynote Address
The Energy-Climate Challenge and Sustainable Well-Being:
Status, Prospects, and Opportunities
Dr. John P. Holdren
Science Advisor to U.S. President Obama
Teresa and John Heinz Professor of Environmental Policy and
Professor of Environmental Science and Policy,
Harvard University
Tsinghua Distinguished Visiting Professor

6:00 PM
Opening Reception
Grand Café

7:00 PM
President’s Reception and Dinner
(by invitation only)
Beijing Hong Kong
Jockey Club Clubhouse
Grand Ballroom I

TRANSPORTATION SCHEDULE

<table>
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<th>DATE</th>
<th>TIME</th>
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<td>Grand Hyatt North Driveway</td>
<td>Various Locations Tour</td>
<td>Beijing Cultural Event</td>
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<td>Presidents Dinner</td>
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• Program and transportation schedule are subject to change.
Friday, October 12, 2018

Tsinghua University, Main Administration Building, Auditorium and Foyer (unless otherwise noted)

GENERAL THEME SESSIONS

7:00 AM
Registration and Guest Services
(open to assist visiting attendees accommodated at the Grand Hyatt Beijing)

Grand Hyatt Hotel, Drawing Room III

8:00 AM
Registration & Guest Services
(open to assist all attendees)

Foyer

9:00 AM
Video Opening and Welcome Remarks

Auditorium

Chancellor Mark S. Wrighton
Washington University in St. Louis

Chancellor Xu CHEN
Tsinghua University

9:15 AM
PLENARY SESSION
Introduction of Speaker

Professor Tao JU
McDonnell International Scholars Academy Ambassador to Tsinghua University
Washington University in St. Louis

Plenary Speaker

Higher Education and Innovation in Science and Technology in the 21st Century
Professor Qi’kun XUE
Vice President, Tsinghua University

Morning Tea

Foyer

10:30 AM
SESSION I:
HEALTH AND AGING
KEYNOTE ADDRESS, PANEL AND Q&A

Moderator: President Jaeho Yeom
Korea University

Keynote Address

Global Health Challenges and Sustainable Solutions
Dr. Gabriel M. Leung
Dean of Medicine
The University of Hong Kong

Panel Responses
Director Shalini Bharat
Tata Institute of Social Sciences
Professor Rana Pratap Singh
Jawaharlal Nehru University
Professor Jean WOO
The Chinese University of Hong Kong

Panel Discussion and Q&A

12:00 PM
Lunch

Tsinghua University | Sunshine Hall

Presidents Luncheon and McDonnell Scholars Luncheon
(by invitation only)

Schwarzman College

9:15 AM
SESSION II:
ENERGY AND ENVIRONMENT
KEYNOTE ADDRESS, PANEL AND Q&A

Moderator: President Wei SHYY
Hong Kong University of Science and Technology

Keynote Address

Technologies for a Better World
Dr. Gary Calabrese
Senior Vice President and Global Research Director
Corning Inc
Panel Responses

Professor Jiming HAO
Tsinghua University

Professor A.K. Suresh
Indian Institute of Technology Bombay

Professor Yoed Tsur
Technion–Israel Institute of Technology

Panel Discussion and Q&A

3:00 PM
Afternoon Tea

Foyer

3:30 PM
SESSION III: AGRICULTURE, FOOD AND WATER

KEYNOTE ADDRESS, PANEL AND Q&A

Moderator: Vice-Chancellor Peter Høj
The University of Queensland

Keynote Address

*Will, Waste, and Water: Sustainably Feeding Nine Billion People in 2050*
Mr. Carl Casale
Board of Directors, Syngenta

Panelist Responses

Professor Xing Wang DENG
Peking University

Professor Ashwani Pareek
Jawaharlal Nehru University

Professor Zhongjing WANG
Tsinghua University

4:25 PM
Panel Discussion and Q&A

5:30 - 7:30 PM
RECEPTION AND CULTURAL EVENT

Tsinghua Art Museum

Welcome Remarks

Professor Pengfei DU
Executive Associate Dean
Art Museum
Tsinghua University

*Exhibitions Open for Private Tours*

**TRANSPORTATION SCHEDULE - OCT 12**

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<td>AM - All Sessions</td>
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<td>Tsinghua Main Admin Building</td>
<td>Grand Hyatt North Driveway</td>
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<td>Tsinghua Main Admin Building</td>
<td>Tsinghua Schwarzman College</td>
<td>Presidents Lunch &amp; Scholar Networking Event (Private Events)</td>
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<td>Tsinghua Main Admin Building</td>
<td>Tsinghua Sunshine Hall</td>
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<td>Tsinghua Art Museum</td>
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<td>Tsinghua Art Museum</td>
<td>Cultural Event: (Bus for special accommodation only)</td>
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<td>Tsinghua Main Admin Building</td>
<td>Grand Hyatt North Driveway</td>
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<td>Tsinghua Art Museum</td>
<td>Grand Hyatt North Driveway</td>
<td>Tsinghua University-End of day return</td>
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• Program and transportation schedule are subject to change.
Saturday, October 13, 2018

Grand Hyatt Beijing at Oriental Plaza

INTERDISCIPLINARY SESSION AND 3MT COMPETITIONS

7:00 AM
Registration and Guest Services
Grand Ballroom Foyer

8:15 AM
Welcome Remarks and Introduction
Grand Ballroom
Professor James V. Wertsch
Director, McDonnell International Scholars Academy
Washington University in St. Louis

8:30 AM
SESSION I: CLIMATE CHANGE PRESENTATIONS AND Q&A
Moderator: President Bundhit Eua-arpon
Chulalongkorn University

Expert Presentations

Revealing the Short and Long term Health Benefits of Reducing Co2 Emissions and the Policy Implications in China
Professor Wenjia CAI
Tsinghua University

Agriculture, Climate Change, and Food Security
Dean Barbara Schaal
Washington University in St. Louis

Panel Discussion and Q&A
3MT Competition – Agriculture, Food and Water, and Climate Change
Introduction: President Akira Haseyama
Keio University

10:00 AM
Morning Tea and Poster Viewing
Grand Salon

10:30 AM
SESSION II: THREATS FROM INFECTION PRESENTATION PANEL AND Q&A
Moderator: Rector Mehmed Özkan
Boğaziçi University

Expert Presentations

Antimicrobial Resistant: Asia Perspective
Professor Anucha Apisarnthanarak
Thammasat University Hospital

Intersecting Epidemics - HIV and Tuberculosis
Professor William Powderly
Washington University in St. Louis

Tackling Emerging Viruses with Relevance to China
Professor Kwok-Yung YUEN
The University of Hong Kong

Panel Discussion and Q&A
3MT Competition – Health and Aging
Introduction: Director Shalini Bharat
Tata Institute of Social Sciences

12:00 PM
Lunch
The Residence

Lunch and Poster Viewing
Grand Salon

1:30 PM
SESSION III: GLOBAL AIR QUALITY ISSUES PRESENTATION PANEL AND Q&A
Moderator: Rector Marcelo Knobel
State University of Campinas

Expert Presentations

Achieving Blue Skies in China and Beyond
Professor Kebin HE
Tsinghua University

Urban and Rural Air Quality in Turkey
President Mustafa Versan Kök
Middle East Technical University

Understanding Air Quality Issues in India and How Technology Can Help
Director Ramgopal Rao
Indian Institute of Technology Delhi

Panel Discussion and Q&A
3MT Competition – Energy and Environment

Introduction: Acting President Chan Wook Park
Seoul National University

3:00 PM
Afternoon Tea and Poster Session
Grand Salon

3:30 PM - 5:00 PM
PRESIDENTS FORUM
Chaired by Chancellor Mark S. Wrighton
Washington University in St. Louis

6:00 PM
RECEPTION AND CLOSING GALA DINNER
Beijing Hotel
Golden Hall

Dinner seating will begin at 7 p.m.

7:15 PM
Dinner and Welcome
Professor Shenyang GUO
Assistant Vice Chancellor for International Affairs-Greater China
Washington University in St. Louis

Remarks
Chancellor Mark S. Wrighton
Washington University in St. Louis
Mr. Ruiling LIU
Yibo Group

Announcement of Winning 3MT Presentations
Vice-Chancellor Peter Haj
The University of Queensland

Closing Remarks
Kurt T. Dirks
Vice Chancellor for International Affairs
Washington University in St. Louis

ENERGY AND ENVIRONMENT

Environmental Nanotechnology
Shubo DENG
Tsinghua University
Daniel Giammar
Washington University in St. Louis
Irene LO
Hong Kong University of Science and Technology

Synthetic Biology
Fuzhong ZHANG
Washington University in St. Louis
Xin Hui XING
Tsinghua University

FULL-DAY SESSION
9:00 AM – 5:00 PM

MAGEEP Aerosol Network and Combustion Aerosols
Shuiqing LI
Jingkun JIANG
Tsinghua University
Rich Axelbaum
Pratim Biswas
Washington University in St. Louis

TRANSPORTATION SCHEDULE - OCT 13

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Program and transportation schedule are subject to change.
## Workshops (continued)

### Health and Aging

- **Building Global Health Partnerships: U.S.-China-Africa**
  - William Powderly
  - Washington University in St. Louis
  - Feng CHENG
  - Linqi ZHANG
  - Tsinghua University

- **Social Innovation and Public Health**
  - Li ZOU
  - Washington University in St. Louis
  - Sheying CHEN
  - Tsinghua University

- **Materials for Health and Wellbeing (cross-disciplinary with Energy and Environment)**
  - Guy Genin
  - Washington University in St. Louis
  - Yanan DU
  - Tsinghua University

- **Healthy Aging, Healthy Communities**
  - Gong CHEN
  - Peking University
  - Nancy Morrow-Howell
  - Washington University in St. Louis
  - Qiang LI
  - Tsinghua University

### Other

- **Taking the Heat: Using Journalism for Educational Engagement on Climate**
  - Rick Dunham
  - Hang MIN
  - Tsinghua University
  - Jon Sawyer
  - Pulitzer Center, Washington DC
  - Sean Gallagher
  - Freelance Photojournalist
  - Anthony Kuhn
  - National Public Radio

- **Trends in Graduate and Professional Education: What You Need to Know**
  - William Tate
  - Nancy Staudt
  - Washington University in St. Louis
  - Jie Zhou
  - Tsinghua University

### Transportation Schedule - Oct 14

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<td>Tsinghua University ALL Workshops</td>
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<td>Tsinghua Campus Buildings (Various)</td>
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<td>Tsinghua Main Admin Building</td>
<td>Beijing International Airport (PEK)</td>
<td>Tsinghua Workshops to Airport</td>
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<td>Tsinghua Campus-Aerosol Workshop</td>
<td>Grand Hyatt North Driveway</td>
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<td>Tsinghua Campus-Aerosol Workshop</td>
<td>Beijing International Airport (PEK)</td>
<td>Workshop to Airport</td>
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*Program and transportation schedule are subject to change.*
PRESIDENTS ATTENDING FROM UNIVERSITY PARTNERS

ANKARA
Middle East Technical University
Mustafa Versan Kök
President

HONG KONG
The Chinese University of Hong Kong
Rocky S. TUAN
Vice Chancellor

Washington University in St. Louis
Mark S. Wrighton
Chancellor

BANGKOK
Chulalongkorn University
Bundhit Eua-arpor
President

Hong Kong University of Science and Technology
Wei SHYY
President

SEOUL
Korea University
Jaeho Yeom
President

BEIJING
Tsinghua University
Xu CHEN
Chancellor

Seoul National University
Chan Wook Park
President (Acting)

Yong QIU
President

ISTANBUL
Bogazici University
Mehmed Ozkan
Rector

SHANGHAI
Fudan University
Ning-sheng XU
President

MUMBAI
Tata Institute of Social Sciences
Shalini Bharat
Director

TOKYO
Keio University
Akira Haseyama
President

NEW DELHI
Indian Institute of Technology Delhi
V. Ramgopal Rao
Director

BRISBANE
The University of Queensland
Peter Høj
Vice Chancellor

CAMPINAS
State University of Campinas
Marcelo Knobel
Rector
SYMPOSIUM 3MT® CONTESTANTS

AGRICULTURE, FOOD & WATER, AND CLIMATE CHANGE

Gabriela Filipini Ferreira
State University of Campinas
HOW CAN WE REDUCE CO2 RELEASE INTO THE ATMOSPHERE?

Candice Jones
The University of Queensland
A TALKING PLANT?!

Philip Minderhoud
Utrecht University
FORGET ABOUT SEA LEVEL RISE: THE SINKING OF LANDS IS THE REAL PROBLEM

Min WANG
Washington University in St. Louis
FACTS AND MELODRAMA: LITERATURE’S PARTICIPATION IN TOPICS CONCERNING AGRICULTURE AND FOOD

Yang XIA
Tsinghua University
CLIMATE PROJECTION WITH ENSEMBLE METHOD

PUBLIC HEALTH AND AGING

Mohua Das
National University of Singapore
LIGHT UP FATSO

Abhilasha Kumar
Washington University in St. Louis
THAT WORD AT THE TIP OF YOUR TONGUE

Chris McMillan
The University of Queensland
CLAMPING DOWN ON THE FLAVORS OF FLU

Jasmeen Kaur Sethi
The University of Hong
THE OVARIAN CANCER GAMES: CATCHING HNF-1B TARGETS

Dalith Tal Shir
Interdisciplinary Center Herzliya (IDC)
LIVING LONG, LIVING WELL: THE ROLE OF PUPILLOMETRY

ENERGY AND ENVIRONMENT

Po-Cheng LIN
Washington University in St. Louis
TURNING BACTERIAL IN FACTORIES: MICROBIAL PRODUCTION OF FUELS FROM CARBON DIOXIDE

Pannawee Mekwichai
Chulalongkorn University
CLEANUP OF CADMIUM CONTAMINATED SOIL THROUGH PLANTING CORN IN SOIL ENHANCED WITH A BIOSURFACTANT

Jin MENG
Tsinghua University
GREAT BUT MONEY-SAVING EARTH OBSERVATION METHOD

Anshuman Sharma
The University of Queensland
FUTURE MIXED TRAFFIC: CONGESTED OR SMOOTH?

Necip Uner
Washington University in St. Louis
FROM DUST TO LIGHT HARVESTING MATERIALS PLASMAS FOR MATERIALS SYNTHESIS
SYMPOSIUM POSTERS

AGRICULTURE, FOOD & WATER, AND CLIMATE CHANGE

Joonmo Kang
“LET’S TALK ABOUT THE REAL ISSUE”: LOCALIZED PERCEPTIONS OF ENVIRONMENT AND IMPLICATIONS FOR ECOSOCIAL WORK PRACTICE
Washington University in St. Louis

Tongtong Liu
RHIZOSPHERE REGULATORY MECHANISM OF ROOT EXUDATES - MEDIATED REPLANT DISEASE
China Agriculture University

Weiyi Pan
GENERATION AND STABILITY OF PBO2-CONTAINING SCALES IN LEAD PIPES
Washington University in St. Louis

Neha Sharma
IMPACTS OF SURFACE COATING AGING ON THE FATE, TRANSPORT, AND EFFICACY OF NANOFERTILIZERS DURING FOLIAR APPLICATION
Washington University in St. Louis

Yang Xia
THE ENSEMBLE PREDICTION OF CLIMATE CHANGE
Tsinghua University

PUBLIC HEALTH AND AGING

Abhyudaya Adulkar
FIELD-DRIVEN ELECTROCHEMICAL ODOUR MITIGATION: ABSTRACT AND RESULTS
Indian Institute of Technology Bombay

Enoch Azasu
FACTORS CONTRIBUTING TO HIGHER STUDENT SUCCESS IN LOW-INCOME SCHOOLS
Washington University in St. Louis

Lei Chen
IDENTIFICATION OF STRUCTURAL VARIANTS ASSOCIATED WITH QUANTITATIVE CARDIOMETABOLIC TRAITS IN THE FINNISH POPULATION
Washington University in St. Louis

Yujia Chen
SINGLE-SHOT EDGE ILLUMINATION X-RAY PHASE-CONTRAST TOMOGRAPHY ENABLED BY JOINT IMAGE RECONSTRUCTION
Washington University in Saint Louis

Mohua Das
MULTI-PROTEIN DYNAMIC COMBINATORIAL CHEMISTRY: A NOVEL STRATEGY THAT LEADS TO SIMULTANEOUS DISCOVERY OF SUBFAMILY-SELECTIVE INHIBITORS AGAINST FAT MASS AND OBESITY-ASSOCIATED PROTEIN (FTO) AND PROSTATE CANCER ANTIGEN 1 (ALKBH3)
National University of Singapore

Eleni Gaveras
SELF-STIGMA INTERVENTIONS FOR PERSONS LIVING WITH SERIOUS MENTAL ILLNESS: A GLOBAL SYSTEMATIC REVIEW
Washington University in St. Louis

Eunyoung Kang
LONELINESS AS A SOCIAL SUPPORT OUTCOME: THE PREVALENCE OF POST-STROKE LONELINESS AND ITS IMPACTS ON WELL-BEING IN COMMUNITY-DWELLING STROKE SURVIVORS
Washington University in St. Louis

Seongmi Kim
PRIMARY CELL CULTURE AND POLARIZED UROTHELIUM ENABLE AN INVESTIGATION OF BLADDER EPITHELIAL REMODELING UPON CHRONIC INFECTION
Washington University in St. Louis

Petra Molnar
FIGHT AGAINST MALARIA: NEW APPROACHES
Budapest University of Technology and Economics

Eylul Tekin
EXPLORE THE INFLUENCE OF MONITORING ON LEARNING
Washington University in St. Louis

Oyku Uner
DO TRUE/FALSE QUIZZES ENHANCE LEARNING?
Washington University in St. Louis
ENERGY AND ENVIRONMENT

Julia Barabas
THE IMPACT OF NANO-ZNO ON MICROBIAL COMMUNITY IN SIMULATED LANDFILL REACTORS
Budapest University of Technology and Economics

Fernando Castanheira
ENHANCING ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT IN THE MINING INDUSTRY: A COMPARATIVE LEGAL STUDY BETWEEN THE UNITED STATES AND BRAZIL
Washington University in St. Louis

Apoorv Jyoti
CALCITE DISSOLUTION STUDIED USING A MULTICOMPONENT REACTIVE TRANSPORT MODEL AT THE PORE SCALE
University of Melbourne

Zhichao LI
INVESTIGATIONS OF CHARGE FRACTION AND ELECTROSTATIC PRECIPITATION OF FLY ASH FROM COMBUSTION OF INDIA, US AND CHINA COALS
Washington University in St. Louis

Yihang LI
TO SEE A GRAIN OF SAND IN A HAZY WORLD.
Washington University in St. Louis

Áron Németh
INVESTIGATIONS FOR RHODOCOCCUS OPACUS APPLICATION ON LIGNIN BASED LIPID PRODUCTION
Budapest University of Technology and Economics

Turgut Onay
EVALUATION OF BIOPLASTICS BIODEGRADATION UNDER SIMULATED LANDFILL CONDITIONS
Bogazici University

Arjav Shah
MODELING OF HEAT EXTRACTION FROM DEPLETED OIL AND GAS WELLS
Indian Institute of Technology Bombay

Changqing WANG
CNON-HERMITIAN OPTICS: BENEFIT FROM LOSS
Washington University in St. Louis
PAST SYMPOSIA

1ST INTERNATIONAL SYMPOSIUM ON ENERGY & ENVIRONMENT
MAY 2007
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.

2ND INTERNATIONAL SYMPOSIUM ON ENERGY & ENVIRONMENT
DECEMBER 2008
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.

FOUNDED
14 MAGEEP-funded collaborative projects

3RD INTERNATIONAL SYMPOSIUM ON GLOBAL ENERGY FUTURE
OCTOBER 2010
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
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

DECEMBER 2012

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
Dennis Muilenburg, Chairman, President and CEO, The Boeing Company
Glenys Beauchamp, Secretary, Department of Industry, Innovation and Science, Australian Government
Ernest Aryeetey, Secretary General, African Research Universities Alliance, Vice Chancellor Emeritus, University of Ghana
UNIVERSITY CAMPUS
SUSTAINABILITY DECLARATION

At the 7th International Symposium of the McDonnell International Scholars Academy, the Presidents of the partner universities will be discussing issues related to campus sustainability. This is a great opportunity for the partner universities to collectively develop and sign a declaration.

RESOLUTION AT
7TH INTERNATIONAL SYMPOSIUM
MCDONNELL INTERNATIONAL SCHOLARS ACADEMY
OCTOBER 13, 2018

University Campus Sustainability Declaration

We, the partner universities of the McDonnell International Scholars Academy, hereby agree to work collaboratively to:

1) Identify approaches and metrics, and implement them to make our University campuses more sustainable;

2) Implement energy efficiency and other measures that result in cost savings and help reduce our carbon footprint;

3) Exchange ideas and best practices to learn from each other to promote energy conservation, use of energy from sources with a minimal environmental footprint, and enhance overall environmental quality on our campuses;

4) Promote research and educational programs amongst our universities in energy, environment and sustainability through the use of the campus as a “living laboratory.”

The university representatives will periodically meet to discuss and monitor progress on the accomplishments.

Signed on this date, October 13, 2018 in Beijing, China:

UNIVERSITY PRESIDENTS
OF THE MCDONNELL ACADEMY
SYMPOSIUM SPONSORS

Washington University in St. Louis

MCDONNELL INTERNATIONAL SCHOLARS ACADEMY

Ruiling LIU
Yibo Group

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George LUI
Silky Elite

WU China Alumni Network
IMPORTANT WEBSITES

McDonnell International Scholars Academy
mcdonnell.wustl.edu

Washington University in St. Louis
wustl.edu

Tsinghua University
tsinghua.edu.cn

Global | Washington University in St. Louis
global.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 Environment, Energy and Sustainability (InCEES)
incees.wustl.edu

Energy and Environmental Education
eed.wustl.edu

Department of Energy, Environmental, and Chemical Engineering
eece.wustl.edu