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# **2<sup>ND</sup> NSF SUSTAINABLE SMART CITIES INTERNATIONAL WORKSHOP – EGYPT**

*“Sustainable Smart Cities in Arid Regions”*  
**CAIRO: June 9<sup>th</sup>- 13<sup>th</sup>, 2019**

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# 2ND NSF Sustainable Smart Cities International Workshop

*“Sustainable Smart Cities in Arid Regions”*  
June 9<sup>th</sup> – 13<sup>th</sup>, 2019

The **U.S. National Science Foundation, with the assistance of the U.S.-Egypt Joint Science and Technology Fund**, is pleased to co-sponsor the **2<sup>nd</sup> Sustainable Smart Cities International Workshop in Egypt**. We hope this gathering of scholars and practitioners from the U.S., Egypt, other countries in the Middle East and North Africa, as well as the rest of the globe, will lead to collaborations that address the many important science and engineering challenges related to developing sustainable and smart cities. From these collaborations, we hope to see new research that engages communities and leads to publications as well as implementable ideas. The challenge is global, as is the expertise!

The **2<sup>nd</sup> NSF Sustainable Smart Cities International Workshop** will examine the challenges of advancing sustainable smart cities in arid regions and the roles governments should play in these efforts. It will bring together researchers, practitioners, and government decision makers in a working group format to discuss issues and lessons learned, develop criteria for evaluating and promoting sustainability projects, and identifying potential international collaborations.

## Objective

The objective of the **2<sup>nd</sup> NSF Sustainable Smart Cities International Workshop** is to facilitate open discussions and exchange of knowledge related to the challenges of advancing sustainable smart cities and the roles of national and municipal governments in those efforts.

The workshop will be organized on the premise that the exchange of international experiences is beneficial for all parties. A discussion among government stakeholders, researchers, and implementing agencies will compare evidence-based measures, identify best practices, and facilitate capacity-building through the national and international exchange of information

The workshop will clarify the roles of national and local governments in the implementation of sustainable cities, and develop criteria and performance metrics that those governments can use to identify and prioritize projects.

## Specific Goals

The workshop will **promote discussions on how to engage government entities and develop integrated policies for promoting and implementing sustainable practices.** The workshop will have the following specific aims:

1. Explore how synergistic relationships between government, researchers, and practitioners can help promote sustainable urban development;
2. Bring together the decision making, research, and practitioner communities from the U.S. and Egypt to identify and prioritize short term sustainability programs that address regional needs;
3. Identify specific objectives, decision criteria, and performance metrics to help decision makers prioritize and evaluate sustainability projects;
4. Identify mutually beneficial research and training initiatives;
5. Identify lessons learned that can help the U.S. to apply similar practices at home and abroad.

## Location

The workshop will be held in **Cairo** to facilitate participation by government stakeholders and researchers. The workshop will take place in the **Cairo Marriott Hotel:**

<https://www.marriott.com/hotels/travel/caieg-cairo-marriott-hotel-and-omar-khayyam-casino/>



### Cairo Marriott Hotel & Omar Khayyam Casino

[Website](#) [Directions](#) [Save](#)

4.5 ★★★★★ 8,495 Google reviews

5-star hotel

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Address: 16 Saray El, Gezira St, Cairo Governorate 11211, Egypt

Phone: +20 2 27283000

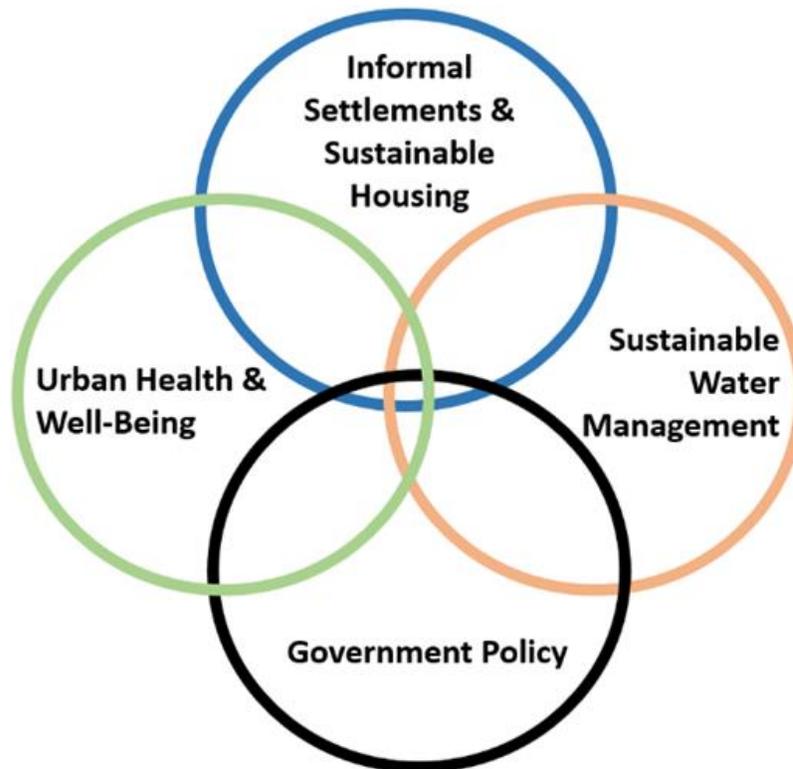
## Dates

The NSF Workshop will take place in the following dates:

- **June 9<sup>th</sup>** (Sunday) : Pre-workshop Day 1
  - **June 10<sup>th</sup>** (Monday): Pre-workshop Day 2
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- **June 11<sup>th</sup>** (Tuesday): **Workshop DAY 1**
  - **June 12<sup>th</sup>** (Wednesday): **Workshop DAY 2**
  - **June 13<sup>th</sup>** (Thursday): **Workshop DAY 3**

## Themes

The workshop will focus on the themes of **sustainable water management, informal settlements and sustainable housing, and urban health and well-being**. Of particular interest will be the nexus of these themes with building codes and policies, and the role of governments in encouraging the development and implementation of sustainable cities.



### **Sustainable Water Management**

Egypt and many arid regions face increasing water scarcity, exacerbated by population growth and demands by agriculture and industry. This theme will examine the integration of urban design with water management, water treatment, and water recycling. The working groups will explore the factors contributing to water scarcity in Egypt and the potential for sustainable infrastructure designs to ameliorate them. It will address the need for partnerships among government, researchers, and urban developers to reduce demands in the water system.

### **Informal Settlements and Sustainable Housing**

Informal settlements represent a significant challenge not only in Egypt, but worldwide. A response to a lack of affordable housing, they continue to grow in many areas despite government efforts to contain them. New approaches, however, hold promise to provide the housing needed by the urban poor and upgrade these areas. This theme will focus on current initiatives to upgrade informal settlements, what strategies have had the most success, and how principles of sustainability can be incorporated into those strategies. Of particular focus will be how the government can team with residents and researchers to provide sustainable solutions.

### **Urban Health and Well-being**

This theme addresses the elements of a livable city and their influence on population health, from personal and behavioral health to societal/environmental factors. It will examine how neighborhood living conditions related to infrastructure, green spaces, physical activities, and food access may impact population health, and it will attempt to understand the relationship between smart, sustainable and livable cities and population health and wellbeing. Finally, it will explore the roles and responsibilities of key stakeholders (government, urban population, health care providers, etc.) and articulate the need for future collaboration.

### **Workshop Format**

The workshop will include brief presentations on implementation experiences from the U.S. and Egypt, but the emphasis will be on interactive working sessions among the participants. We anticipate that at least two-thirds of the workshop time will be devoted to working sessions, interactive discussions, and the formulation of recommendations and workshop reports.

## Who Will Attend

Attendees will include **researchers, practitioners, and government decision makers** from Egypt, the Middle East, the United Kingdom, and the United States. Egyptian representatives will include government ministries, universities, and municipal officials who play key roles in the development of sustainable cities. International representatives will include researchers and practitioners who will provide global perspectives on past experiences and future areas of focus. The workshop will be co-sponsored by the **Egyptian National Housing and Building Research Center (HBRC) and Alexandria University.**

## Steering Committee

A Steering Committee led by the U.S. PI will be responsible for the planning and management of the workshop. The Steering Committee will consist of the following members:

### UNITED STATES

- **University of Alabama at Birmingham**  
Dr. Fouad H. Fouad (U.S. Principal Investigator), Mr. Andrew Sullivan, and Ms. Paula Alvarez Pino
- **National Science Foundation**  
Dr. Paul Filmer and Dr. Lara Campbell
- **Georgia Institute of Technology**  
Dr. Armistead “Ted” Russell
- **Columbia University**  
Dr. Patricia Culligan

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### EGYPT

- **Housing and Building National Research Center**  
Khaled ElZahaby, Chairman  
Khaled Yousri, Deputy Chairman

- **Alexandria University**  
Prof. Essam Elkordi, President
- **Arab Academy of Science and Technology**  
Prof. Ismail Abdel Ghafar, President



## Egyptian Participation

### Ministry of Higher Education and Scientific Research

- Khaled Abdel Ghafar, Minister
- Amr Adly, Deputy Minister

### Ain Shams University

- Aiman Ashour, Dean of Engineering

### Association of Arab Universities

- Amr Ezzat Salama, Secretary General

### Egyptian Ministry of Housing, Utilities, and Urban Communities

- Dr. Assem El Gazzar, Minister
- Ameen Addel Monem, Deputy Minister

### Egyptian Water Resources and Irrigation Ministry

- Mohamed Abdel Ati, Minister

### Egyptian Ministry of the Environment

### Egyptian Ministry of Health and Population

### Egyptian Ministry of Communication and Information Technology

### Egyptian Ministry of Electricity and Renewable Energy



## Sponsorship

The **UAB Sustainable Smart Cities Research Center** was awarded an **NSF** Grant to develop the 2<sup>nd</sup> Sustainable Smart Cities International Workshop in Egypt. This workshop will be **co-sponsored** by the **Egyptian National Housing and Building Research Center (HBRC)** and **Alexandria University**.



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