



---

## INTERVIEW WITH AMIN SHOUKRY, THE EGYPT JAPAN UNIVERSITY OF SCIENCE & TECHNOLOGY

---



**Full Name**

Amin Shoukry

**Position and organisation**

Professor at the  
Egypt Japan University of  
Science and Technology

EGYPT

---

*“BEEP demonstrates how public building owners can simulate building performance, provide possible and financially feasible intervention scenarios of building retrofiting, and finally proposing a legal and financial framework for the funding and implementation of such scenarios to achieve an overall sustainable solution”.*

*Amin Shoukry*

---

**What is the main role of your organisation in the BEEP project?**

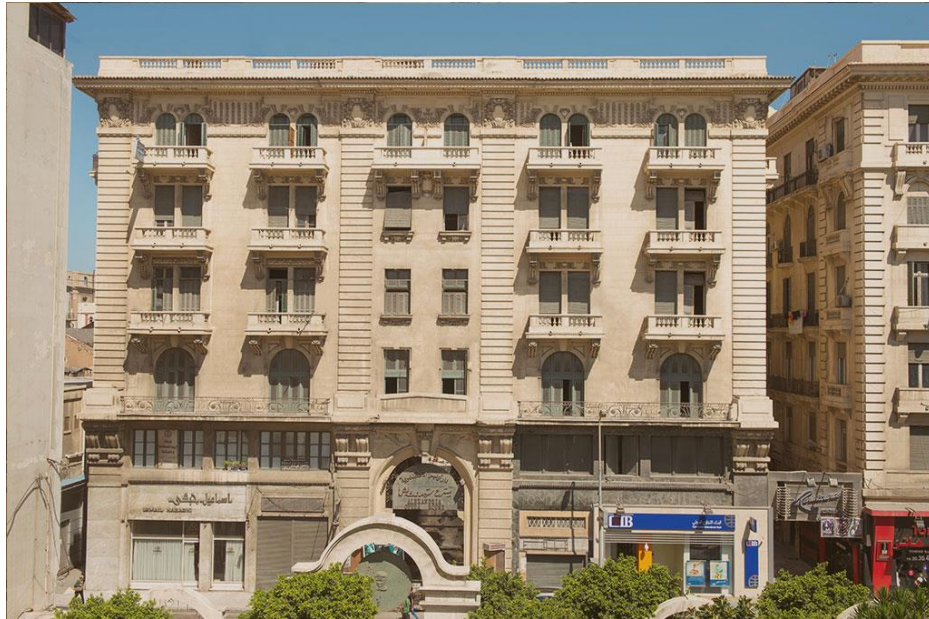
EJUST is actively involved in all tasks of the BEEP project. In particular, we have focused on analysing the two Egyptian pilot buildings and developing the two BIM models, planning different scenarios for the energy refurbishment, promoting BIM use as trusty tool for the financial evaluation of the refurbishment project, and disseminating the best practices experimented during BEEP project pilot actions.



Which pilot building has been chosen as a case study in Egypt and why?

Two buildings have been adopted as case studies, both are located in Alexandria: the “Cordahi Building” and the “Horreya Center for Creativity”.

Both case studies were built more than 100 years ago, and they are very symbolic of the cosmopolitan architectural heritage of Alexandria city center. They are of different heights and activities to provide results that can be easily repeated in most of the city’s rich heritage.



*The Egyptian Case Study “Cordahi Building” in Alexandria*



*The Egyptian Case Study “Horreya Center for Creativity” in Alexandria*



### What retrofitting scenarios are envisaged for the case study?

Several intervention scenarios were selected and experimented on three separate phases: short term interventions; medium term interventions; and long-term interventions:

- Simple finishing options of additional insulation, internal shading devices and light electromechanical upgrades were tried in the first phase.
- More articulated interventions such as glazing upgrade and change as well as similar interventions were tested for the medium-term scenarios.
- Finally, more drastic electromechanical scenarios and façade retrofitting were addressed in the final long-term scenarios.

One of the most challenging scenarios was selecting the exact amount needed of the roof area for both Photovoltaic panels versus solar heaters. In the first case of “Cordahi building”, which is planned to be reused as a boutique hotel, hot water savings reached an overall 60k Euros annually for this item alone.

### What opportunities does the BEEP project offer to your region?

Many buildings available in the old city center of Cairo and Alexandria were constructed in the late 19th century, and a big percentage of this valuable building stock is owned and occupied by public entities. One of the major challenges for such buildings is to cope with global climate change as well as microclimate change due to urban heat islands that cause them to be incapable of providing comfortable indoor environments without the use of extensive Heating, Ventilation & Air Conditioning (HVAC) systems that are mostly installed in ways that immensely damage the building facades and construction, as well as consume great amounts of energy that add to global warming effects.

BEEP provides the perfect solution for such conundrums. It simply demonstrates how building owners of the public sector can simulate building performance, provide possible and financially feasible intervention scenarios of building retrofitting resulting in acceptable energy savings, and finally proposing a legal and financial framework for the funding and implementation of such scenarios to achieve an overall sustainable solution.

### What results of the BEEP project would you highlight?

The simple workflow of BIM modelling then migrating to Energy performance simulation is demonstrated and optimized providing step by step implementation in two case studies that can be easily replicated in other projects. This has always been a common practice problem using current commercial software. Another expected outcome, which is currently under development, is the actual presence of ESCO’s (Energy Service Companies) and a financial model and legal framework that can be directly implemented in similar case studies.

### How will your organisation exploit the results of BEEP after the end of the project?

The results shall be disseminated in several workshops to introduce the idea to all interested parties and stakeholders. Currently the case studies are used as the main part of an ongoing PhD thesis in EJUST related to energy retrofitting of buildings. Furthermore, it will be used as an area of further research to serve the surrounding community of Alexandria with its rich architectural heritage.



## THE TEAM

### Egypt-Japan University of Science and Technology: BEEP partner

Egypt-Japan University of Science and Technology ([E-JUST](#)) is a research-oriented university with an ambition to cultivate an academic environment and become a benchmark for the Egyptian and African countries in education. It was first established as a bilateral agreement project between the Egyptian and Japanese governments in May 2009 and later in 2010 it became ready to accept its first batch of students and make the dream a reality.

There is a strong relationship between both governments where they both divide the cooperation cohesively to ensure positive results. E-JUST consists of the Faculty of Engineering and the Faculty of International Business and Humanities.



*Egypt-Japan University of Science and Technology (E-JUST) main campus*

E-JUST is one of the partners in the BEEP project and manages the project both financially and administratively. The Egyptian research team belongs to the Computer Science and Engineering department at E-JUST but it also includes two faculty members from the Architecture department, Faculty of Engineering, Alexandria University. The research assistant team includes a PhD student at the Environment Engineering Dept, E-JUST.



### **Amin A F Shoukry**

Professor  
 Computer Sc & Engineering  
 E-JUST  
 Role in BEEP: principal  
 investigator & WP1 / WP6 leader  
[amin.shoukry@ejust.edu.eg](mailto:amin.shoukry@ejust.edu.eg)



### **Dina S Taha**

Professor  
 Architectural Engineering  
 Alexandria University  
 Role in BEEP:  
 WP3 leader  
[ditaha@alexu.edu.eg](mailto:ditaha@alexu.edu.eg)



### **Zeyad T El Sayad**

Associate Professor  
 Architectural Engineering  
 Alexandria University  
 Role in BEEP:  
 WP4 – WP5 leader  
[Zelsayad1@alexu.edu.eg](mailto:Zelsayad1@alexu.edu.eg)



## COLOPHON

### About the BEEP project:

BEEP project aims at strengthening the use of Building Information Modelling (BIM) to enhance energy efficiency in buildings. The testing of this emerging technology on built heritage will be performed to demonstrate its scalability to the entire building stock. The project will provide public administrations with a powerful method for the energy rehabilitation of public buildings to be supported with private funds through the Energy Performance Contracting (EPC). The project main outcome will be an innovative methodology based on the integration of emerging technologies tested on 9 heritage public buildings located in Italy, Spain, Cyprus, Jordan, Palestine, Lebanon, and Egypt.

The BEEP project, which started in September 2019, has a duration of three years, and counts with a total budget of € 1,934,184.51 of which 90% is funded by the EU under the ENI CBC Med Programme.

Follow BEEP project: [Web](#), [Facebook](#), [Twitter](#)

