



海外交流

Report on the Visit of Prof. Hossam Shalaby to Osaka University through JICA Fellowship Program

Hossam M. H. Shalaby *

ホッサム博士の大阪大学訪問記
～ JICA フェローシッププログラムを通じて～

Key Words : JICA Fellowship Program

E-JUST (Egypt Japan University of Science and Technology) は、日本・エジプトの二国間協定で設立された、エジプトで最も新しい国立大学である。この E-JUST に、大阪大学から電子通信計算機科学工学学類長アドバイザーとして赴任した河崎は、二年間の赴任期間中、その学類の運営に関わるとともに、電子通信工学専攻内に Remote Sensing Laboratory と Photonics Laboratory を立ち上げるべく腐心してきた。そして帰国に当たり、E-JUST で Photonics Laboratory を担当する Hossam 教授を日本に招き、大阪大学大学院工学研究科電気電子工学専攻通信工学分野の運営を見聞する機会を提供した。Hossam 教授は 2012 年 10 月中旬一週間の滞在中、連日のように通信工学分野の教授と個別面談を持ち、分野運営や研究室運営の在り方を具に体験することとなった。さらには同教授の博士課程学生で、当時工学研究科電気電子工学専攻北山研究室に長期滞在中であったホッサム君（偶然同じ名前）を交えた討論を、北山研究室スタッフと何度か行い、研究室運営に関しての情報収集に努めた。そもそも E-JUST 設立の理念として、「日本型の大学院教育」の題目を上げながら、エジプト人教員の多くは、「日本型の大学院教育」の在り方に関しての情報を十分には有しておらず、今回の機会は今後の E-JUST にとって有益な知見を与えることになるものと確信してい

る。以下が Hossam 教授の滞在報告である。（河崎善一郎）

Abstract

In this report we present the initial motivation to my visit to Osaka University through Faculty Affiliation JICA (Japan International Cooperation Agency) Fellowship program. In addition, we present the aim of the visit and the visit program. Next, we discuss the achievements of the visit and how we will follow up to gain the most benefits of the visit. Finally, we give a conclusion of this report.

Motivation

The motivation behind this visit is the need to establish collaboration with Japanese experts in the field of optical communications. In fact the Department of Electrical, Electronics and Information Engineering, Osaka University currently has two important laboratories in the field of optical communications, specifically Prof. Kitayama Laboratory (Photonic Networks Laboratory) and Prof. Inoue Laboratory (Advanced Optical Communications Laboratory). Another motivation is the need for ECE department to continue the collaboration and benefits of the experience of Prof. Kawasaki after his contract expiration at E-JUST.

Aims of the Visit

In addition to the aforementioned motivation, the aim of this visit is five-fold:

1. Enhancement and strengthen the collaboration with Prof. Kawasaki and his team.



*Hossam Shalaby, Chair

Department of Electronics and Communications Engineering School of Electronics, Communications, and Computer Engineering
Egypt-Japan University of Science and Technology (E-JUST)
New Borg EL-Arab City, Alexandria 21934, Egypt
Fax: (203) 459-9520
E-mail: hossam.shalaby@ejust.edu.eg

2. Establishing collaboration with Prof. Kitayama and his team in the field of Optical Communications.
3. Getting Experience that helps in the establishment of an Optical Communications Research Facility at E-JUST.
4. Finding out the possibility of collaboration with different laboratories at the Department of Electrical, Electronics and Information Engineering.
5. Following up the progress of our Ph.D. candidate student, Hossam Selmy.

Program of the Visit

The program of the visit can be summarized as follows.

Day 1, Monday, Oct. 15, 2012:

I have met with Prof. Kawasaki and had a discussion with him about general collaboration between the Department of Electrical, Electronics and Information Engineering, Osaka University and ECE, E-JUST. In addition, I have visited his lab, which focuses on remote sensing technology. It includes an artificial satellite based on electromagnetic wave science and conducts both global and local environmental monitoring and their numerical simulations

I have also met with Prof. Kitayama and have a discussion about possible collaboration with ECE, E-JUST, in the field of Optical Communications. We also discussed the possibility of inviting scholars from his lab to ECE, E-JUST with full support from JICA and the possibility of sending some ECE candidate Ph.D. students to stay for about 9 months at his lab with full support from MOHE, Egypt. We also discussed the activities at his lab, Photonic Networks Laboratory, and the possibility of building a similar lab at ECE, E-JUST. We also discussed the progress of our Ph.D. student Hossam Selmy at his lab.

Furthermore, I have met with Prof. Takine, where he introduced the activities at his lab (Robust Networking Laboratory). In addition, we have a discussion about collaboration with ECE, E-JUST, in the fields of both Network Coding and Optical Burst Switching, and the possibility of sending some ECE Ph.D. candidate students to his lab with full support from MOHE, Egypt.

Day 2, Tuesday, Oct. 16, 2012:

I have visited the Photonic Networks Laboratory, which was found in 1996. The lab contains advanced optical equipment and many experiments are setup and engaged in research activities and education of ultra-high-speed optical communications. We had a long discussion with Prof. Yoshida about the lab equipment and the experiments. In addition, we had a discussion of the possibility of building a similar lab at ECE, E-JUST.

Day 3, Wednesday, Oct. 17, 2012:

In this day I had two meetings. In the first one, I have met with Assoc. Prof. Maruta and have a long discussion about collaboration with ECE, E-JUST, in the field of Optical Communications and possible visit to ECE to help in the enhancement of teaching and research at our department in this field. We also discussed his current research and experiments, conducted by his team.

Next, I have a Meeting with Prof. Sampei and have a discussion about his lab and current research, especially in the field of Flexible Wireless Access for Future Flexible Networking. In addition, we have discussed the possibility of sending some ECE Ph.D. candidate students to his lab with full support from MOHE, Egypt.

Day 4, Thursday, Oct. 18, 2012:

In this day our ECE Ph.D. Candidate Hossam Selmy has delivered a Presentation about his progress in the research during his stay at Osaka University. This presentation has been delivered in front of Prof.

Kitayama, Prof. Kawasaki, Prof. Shalaby, Assoc. Prof. Maruta, and Assist. Prof. Yoshida. During and after the talk, there has been many discussions on his findings, how to improve the results, and the possibility of verifying the results experimentally.

Day 5, Friday, Oct. 19, 2012:

In the last working day of my visit at Osaka University I have two meetings with Prof. Babaguchi and Prof. Inoue. In my meeting with Prof. Babaguchi, I have visited his lab (Media Integrated Communication Laboratory) and we had a discussion about possible collaboration with ECE, E-JUST, in the fields of Intelligent Multimedia Processing and Media Security using Information Hiding.

Next, I have a meeting with Prof. Inoue and visited his lab (Advanced Optical Communications Laboratory). Also we had a discussion about possible collaboration with ECE, E-JUST, in the fields of Quantum Encryption and All-optical Regenerators.

Finally, I had a closing visit meeting with Prof. Kawasaki and we have assessed the visit and the possible way to make full benefit of it for the sake of both countries.

Achievements of Visit

Most of the aims of the visit have been achieved and almost all chairs at Department of Electrical, Electronics and Information Engineering, Osaka University, have welcomed the collaboration with ECE, E-JUST. This collaboration includes research collaboration in research areas of common interest, sending some ECE candidate Ph.D. students to stay

for about 9 months at his lab with full support from MOHE, Egypt, and inviting scholars from Department of Electrical, Electronics and Information Engineering to ECE, E-JUST with full support from JICA. In addition, the progress of our Ph.D. student Hossam Selmy has been monitored.

Continuous Collaboration and Follow up

In order to make full use of the visit, ECE will continue the inertia of the visit. This includes continuous communications with the Department of Electrical, Electronics and Information Engineering faculty members. It also includes seeking joint supervisors/advisors, from Department of Electrical, Electronics and Information Engineering faculty members, to our M.S. and Ph.D. students. Further, more visits from ECE faculty members to the Department of Electrical, Electronics and Information Engineering are to be boosted.

Conclusion

During my stay, although it was just one week and short, I was able to investigate the preferable Department of Electrical, Electronics and Information Engineering, Osaka University. I had meetings with all departments' chairs and professors. I got extreme experience of the teaching and research system at this university. As the chairperson of ECE department I will be able to take the initiative and try to apply a similar system at our department and build an ideal constitution of ECE for E-JUST. I can tell without hesitation that the Faculty Affiliation JICA Fellowship program is indeed a powerful program that pushes other countries to make sufficient benefit of the Japanese successful model.