# FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

## Visit to Lehigh University: April, 2018

This report summarizes the visit of Mr. Ronald T. Eguchi  from ImageCat Inc. that took place at Lehigh University on April 2018

## ITINERARY OR AGENDA

| TIME: | ACTIVITY: |
|---|---|
| 9:00 AM – 9:30 AM | Student Chapter meets & welcomes Visiting Professional to campus |
| 9:30 AM – 10:30 AM | Meeting with Dr. Pakzard's Research Group |
| 10:30AM – 11:30AM | Meets with Dr. Bocchini's Research Group |
| 11:30 AM – 12:30 PM | Lunch with Professors and Students at University Center |
| 13:00 PM – 14:20 PM | Seminar given by Mr. Eguchi at ATLSS |
| 14:30 PM – 15:30 PM | Lab Tour of ATLSS Lab |
| 15:30 PM – 16:00 PM | Lab Tour of Fritz Lab |
| 16:10 PM – 17:50 PM | Visitor have a short rest at hotel |
| 18:00 PM – 20:00 PM | Dinner with student chapter and/or faculty at local restaurant |

## STUDENT CHAPTER VISIT PLANNING COMMITTEE

**LEAD ORGANIZER(S):** Liyang Ma, President, lim215@lehigh.edu

- Safwan Al-Subaihawi, Vice President, swa313@lehigh.edu
- Alia Amer, Public Relation Chair, ama616@lehigh.edu
- Christopher Irwin, Treasurer, chi217@lehigh.edu
- Fahim Rustamy, Secretary, abr415@lehigh.edu
- James Ricles, Faculty Advisor, jmr5@lehigh.edu
- Paolo Bocchini, Faculty, paolo.bocchini@lehigh.edu
- Peter Bryan. IT manager, pb02@lehigh.edu

## VISITING PROFESSIONAL LECTURE OVERVIEW

### Lecture Abstract

Remote sensing has been used extensively to explain the extent of impacts caused by disasters. Through high-resolution optical imagery and active sensors, remote sensing technologies have demonstrated significant efficacies in quantifying post-disaster damage, monitoring recovery and reconstruction progress after significant disasters, and more recently, in developing important exposure information on our urban infrastructure.

Remote sensing technologies are also playing a major role in helping to understand the vulnerability and resilience of many emerging economies around the world. NASA has sponsored focused research on how to use earth observation (EO) imagery to delineate areas of urban development as well as the locations of critical infrastructure. This information has allowed analysts to quantify the expected damage or loss to communities

from a wide range of natural hazards. These risk profiles are now allowing in-country policy makers to consider in a consistent and systematic way how best to address these risks for both urban and rural exposures. This presentation will show through examples how remote sensing technologies have changed the way in which we measure, monitor and evaluate community resilience to natural hazards worldwide. We will also discuss that even with this demonstrable progress, remote sensing technologies still have the potential to be even more valuable in enhancing resilience.

## Professional Bio

Mr. Eguchi is President and CEO of ImageCat, Inc., an international risk management company that supports the global risk and catastrophe management needs of the insurance industry, governments and NGOs. Mr. Eguchi has over 30 years of experience in risk analysis and risk reduction studies. He currently serves or has served on several editorial boards including EERI's Journal SPECTRA. He was recognized by EERI as the 2008 Distinguished Lecturer. He currently chairs the Technical Committee on Advances in Information Technologies for the SEI Division of ASCE. He has authored over 300 publications. He was awarded the 2017 Civil & Environmental Engineering Department Distinguished Alumnus Award from UCLA.

# SUPPLEMENTAL ACTIVITES

## Welcoming the speaker

The faculty advisor (Dr. James Ricles) and student officers of Lehigh EERI student chapter meet the speaker at conference room. They talked about the hybrid simulation research and graduate program at Lehigh.

## Meeting with Dr. Pakzard's Research Group

Mr. Eguchi meets three PhD students from Dr. Pakzard's Research Group. During the meeting, three students present their research work and discuss with Mr. Eguchi.

## Meeting with Dr. Bocchini's Research Group

Mr. Eguchi meets with students and post doc in Dr. Bocchini's Research Group. Each of the research group member presents their work and discuss with Mr. Eguchi.

## Lunch

The EERI officers, Dr. Ricles and Dr. Bocchini join the lunch in the restaurant on campus.

## Lab tour

Mr. Eguchi visits the ATLSS lab and Fritz lab accompanied by EERI officers and Peter Bryan (IT manager of civil and environmental engineering department). Officers and Peter explain the current research experiment in the lab.

## Dinner

EERI officers and Dr. Bocchini join the dinner at a local restaurant off-campus.

## RESULTS, FEEDBACK AND LESSONS LEARNED

The seminar with Mr Eguchi is very rewarding for the students. After the seminar, there are many questions and discussions regarding the remote sensing technology introduced by Mr. Eguchi. We all gained some valuable knowledge and made a professional connection with Mr. Eguchi. A future goal of the chapter is to increase the undergraduate students involvement by more advertisements targeting undergraduate students.

## ACKNOWLEDGEMENTS

The Lehigh University EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Mr. Eguchi through their Friedman Family Visiting Professional Program endowment. The Lehigh University EERI Student Chapter is also gratefully thankful for the help of Dr. Ricles and Dr. Bocchini for participating in the event. Special thanks to the Civil and Environmental Engineering department for funding support.

## LIST OF ATTACHMENTS

Included at the end of this report are various attachments to supplement the information included above.  A list of the attachments is included below:

- Flyer and Picture

## RONALD T. EGUCHI
## President & CEO, ImageCat

Friday, April 6 at 1:00 p.m.
117 ATLSS Dr., Bethlehem, PA, Room B101
ATLSS Engineering Research Center

# Measuring, Monitoring and Evaluating Community Resilience using Remote Sensing Technologies

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- Remote sensing technologies are also playing a major role in helping to understand the vulnerability and resilience of many emerging economies around the world. NASA has sponsored focused research on how to use earth observation (EO) imagery to delineate areas of urban development as well as the locations of critical infrastructure. This information has allowed analysts to quantify the expected damage or loss to communities from a wide range of natural hazards. These risk profiles are now allowing in-country policy makers to consider in a consistent and systematic way how best to address these risks for both urban and rural exposures.
- This presentation will show through examples how remote sensing technologies have changed the way in which we measure, monitor and evaluate community resilience to natural hazards worldwide. We will also discuss that even with this demonstrable progress, remote sensing technologies still have the potential to be even more valuable in enhancing resilience.

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Refreshment will be served!