



The Project for the **Capacity Development of the Faculty of Engineering, Science and Technology, the National University of Timor-Lorosa'e (Phase II)**



# CADEFEST News

## Message from CADEFEST Project Manager .

**W**elcome to the second edition of our project newsletter! We were so happy to have many readers for first edition. The previous newsletters were read by hundreds of students and the Lecturers, seminar participants, staff from Ministries and NGOs. We believe that we could make this second edition much more informative, because of your feedback for the first edition.

In this second newsletter, we will share the many various activities in odd semester in 2018, which were mainly supported by the project for the Capacity Development of Faculty Engineering Science and Technology, the National University of Timor-Lorosa`e (CADEFEST Project Phase II).

Through this newsletter, if you find the events and activities which you want to know more details or make comments, please feel free to discuss with us. In addition, if you come up some ideas and events which the project should implement, you are most welcome to suggest us. As the project manager and Dean of the Faculty of Engineering Science and Technology, I hope this newsletter could be a good communication tool with you and our project.

Please enjoy our second edition!



Dr. Ruben Jeronimo Freitas  
Project Manager, CADEFEST Project Phase II  
Dean, Faculty of Engineering Science and Technology-FECT



### INTEREST POINT:

Message from CADEFEST Project Manager.....	1
Message from Chief Advisor .....	2
Message from Cooperation Unit 2 Event .....	3
Cooperation Activity.....	4
◆ Seminar .....	4
◆ Special Lecture.....	5
◆ Side Visit.....	6
Tracer Survey.....	7
Short Term Trainee .....	8
Field Survey.....	8-10
Long Term Progress .....	11
Research Activity .....	12
JICA Internship.....	12
Osaka Gas Scholarship.....	13

### UP COMING EVENTS:

- SC Meeting
- JCC Meeting
- New JICA Intern
- Seminars
- Short Term Trainee in Japan

# JICA CADEFEST News

## Message From Chief Advisor of JICA CADEFEST Project Phase II



Prof. Dr. Koichi Shimakawa  
Chief Advisor, CADEFEST Project (Phase II)

I am very glad to deliver 2<sup>nd</sup> issue of JICA CADEFEST PROJECT NEWS. In this issue, we report the exciting event of Ground Breaking Ceremony for new buildings in Hera campus, several activities related with Cooperation Unit (CU), special lectures given by Japanese professors, site visits, reviews of the short- and long-term training, and a ceremony of Osaka Gas Scholarship etc.

All these programs were performed successfully.

I would like to thank all members for supporting these important programs related to JICA CADEFEST. I hope all of you would join and enjoy with our programs in next term.

## Message From Chairman of Cooperation Unit (CU)

In this odd semester, so far, many activities has been conducted through this cooperation unit such as Civil Engineering Department seminar, Informatics Engineering seminar, special lecturers from Japanese professors and site visits under financial and administrative support from the CADEFEST project.

Other than that, we also cooperated by ourselves with private sectors such as Conoco Philips and Timor Gap to hold the seminar and have the opportunity of internship to finalist students.



Cancio Monteiro, Ph.D.  
Vice Dean of Cooperation Unit Affairs  
Chairman of Cooperation Unit, Faculty of Engineering Science and Technology, UNTL

In this newsletter, we will find that the employment rates from tracer survey is still around 60%. Therefore, I would like to encourage students to participate in our alumni seminars, special lectures more which are organized by CU so that students can find the useful information for their future careers to improve the employment rate.

At the moment, the cooperation unit is editing manuscripts from lecturers for the annual research publication. It will be published soon. Please looking forward to reading it!

*\* The Cooperation Unit (CU) is the unit for the Faculty of Engineering Science and Technology, National University of Timor Lorosa'e to plan and implement the cooperation activities with external institutions.*

# GROUND BREAKING CEREMONY

## (NEW BUILDING CONSTRUCTION IN HERA)

On 20<sup>th</sup> February 2018, a Ground Breaking ceremony for the project for the construction of new Buildings for the Faculty of Engineering Science and Technology of the National University of Timor Lorosa'e in Hera Campus. The ceremony was attended by Ambassador of Japan to Timor Leste, Prime Minister of Timor Leste, members of National Parliament, members of the Ministries, Diplomatic Corps, Ambassadors, senior representative of JICA, representatives of private sectors, religious authorities, local communities, UNTL structures, Lecturers and students.

Dr. Francisco Miguel Martins, the Magnificent Rector of UNTL, Mr. Hiroshi Minami, the Ambassador of Japan to Timor-Leste, Mr. Jose Vasconcelos the President of Civil House on behalf of the President of the Democratic Republic of Timor Leste and Dr. Mari Bim Amude Alkatiri, the Prime Minister of RDTL were made the opening speeches.

The Choir of Faculty of Engineering Science and Technology sang the National Anthem of

Timor-Leste, Friendship and Fraternity music (Kokoro No Tomo). The Priest of Hera Church made Blessing of the Project Ground. The first laying was symbolically done by H.E. Prime Minister, Dr. Mari Bim Amude Alkatiri for the project.

The event was participated by approximately 300 guests. The Construction work will be done by Japanese company, Rinkai Nissan Construction and supervised by Yamashita Sekkei. This new building construction project will be completed in July 2019.



*Blessing of the Project Ground*



*The Speech from Japanese Ambassador ,  
Mr. Hiroshi Minami*



*The Speech from Rector of UNTL,  
Mr. Francisco Miguel Martins*

# COOPERATION UNIT ACTIVITIES

## ◆ SEMINARS

### The 5th Joint Seminar on Civil Engineering and Appropriate Technology for Timor - Leste

**5<sup>th</sup>** Joint seminar of Civil Engineering was organized by Civil Engineering Department, Faculty of Engineering Science and Technology, on 16 February 2018 at JL Villa. The seminar aimed to share the findings of appropriate technology of civil engineering for the development of Timor-Leste. The event was attended by approximately 30 people from different organizations such as students and lecturers of FoEST, UNTL, officials and expert from Ministry of Development and Institutional Reform, official and JICA expert from Administração dos Portos de Timor Leste (APORTIL) officials from R4D and Yamashita Sekkei Inc. officials of National Directorate of Land and Property, JICA experts from Comoro Bridge Construction Project and Capacity development of Road Service, officials and JICA expert from Major Project Secretariat.

The agendas of the seminar were related to the road maintenance, structure, water supply, port development and land data.

This seminar was realized with support from the project of Capacity Development of Faculty of Engineering Science and Technology (CADEFEST Phase 2).



Civil Engineering Department Seminar in  
JL Villa Hotel.

### Seminar for ICT Development and Its Implementation in Timor-Leste

**O**n March 23<sup>rd</sup>, 2018 Informatics Engineering Department, National University of Timor-Lorosa`e (UNTL) held an Informatics Academic

seminar in Fundação Oriente. The seminar topic was "ICT Development and Its Implementation in Timor-Leste".

The participants were from NGOs, Private Universities, JICA experts, faculty structures, lectures and students. The seminar focused on researches which are related to social needs in Timor-Leste.

Mr. Frederico Soares Cabral, Lecturer of Informatics Engineering Department made a presentation about "**Road Anomaly Detection using Smartphones Sensor**". Currently, he is Master student in Gifu University in Japan. He temporarily returned to Timor-Leste for collecting the data of road condition in Timor-Leste. His research activity is also supported by JICA CADEFEST Phase II.



Informatics seminar in Fundasaun Oriente.

# SPECIAL LECTURES

## ◆ INFORMATICS DEPARTMENT

**O**n 28<sup>th</sup> March 2018, Professor Hidekazu FUKAI, Gifu University in Japan was dispatched to Informatics Engineering Department, National University of Timor-Leste (UNTL) as a JICA Expert.

The title for the special lecture was “Learning from Living Things: Mathematical Modeling of Ant Behavior and its Application”. It is a valuable opportunity for students to review their knowledge and ability in Mathematics and its application.

More than 30 students joined the special lecturer. Through this lecture students were very impressed the idea which applied in this research and opened their minds about mathematic interests so that students could get motivation to study math in the department of informatics.



*Informatics Department Special Lecture in Hera Campus*

## ◆ GEOLOGY AND PETROLEUM

**O**n May 08<sup>th</sup> 2018, Geology and Petroleum Department, Faculty of Engineering Science and Technology, National University of Timor-Lorosa'e (UNTL) held a special lecture by Professor Shoichi Kiyokawa from Kyushu University in Japan. The topic of this lecture was “To Learn Earth History: Evidence of Timor Leste”.

The participants were approximately 100 students. In addition, Ms. Jovita Eliza Fatima da Costa, lecturer of Geology and Petroleum Department also presented her a research progress. She is currently a master student in Kyushu University, Japan under supervision of professor Shoichi Kiyokawa.



*Ms. Jovita presented her research progress to Geology students*



*Special Lecture by Professor Shoichi Kiyokawa for Geology and Petroleum Department*

# SITE VISITS

## ◆ DILI PORT

On Tuesday 08<sup>th</sup> May 2018, the students from Civil Engineering Department, Faculty of Engineering Science and Technology, National University of Timor Lorosa'e-UNTL conducted the site visit for an URGENT RELOCATION OF FERRY TERMINAL PROJECT IN in DILI PORT.

This project aims at promoting ferry passengers safety by eliminating the crossing of traffic lines. The ferry terminal upgrade can serve two ferries and will provide safe and efficient embarking and disembarking.

The project is constructing by a Japanese company, TOBISHIMA Corporation and Japan Port Consultants Ltd under supervision of JICA Timor-Leste. The site visit is an important part of student learning. Visiting a real time construction project allows the students to develop a greater understanding of how civil engineering theory is put into practice. The visit was also involving the presentations from the contractor, consultant and the project's owner APORTIL under the ministry of transportation and telecommunication of Timor-Leste. It gives the students personal experience of a construction site and exposure to the technical language used.

This visit also allows the students to learn about project management practice related to health and safety, environmental issues and logistics management.



*Students Group photo in Dili Port*

## ◆ TIDE GAUGE INSTALLATION

On Monday 14<sup>th</sup> May 2018, Tide Gauge Equipment which was provided by the Government of Japan was installed at Dili Port. This tide gauge can measure the tide level with ultrasonic. The accumulated tide level data can be utilized for sea level monitoring and various important fundamental researches for the country. Staff from APORTIL and two Lecturers from Department of Civil Engineering of FEST –UNTL joined this installation process and learned the function of tide gauge and its system.



*Tide Gauge Installation in Dili Port*

The effective collaboration for research and education between Faculty of Engineering, Science and Technology, UNTL and APORTIL are expected through this equipment and data.

## ENGLISH WORKSHOP

The Faculty of Engineering Science and Technology had academic English workshop which conducted by Mr. Collin Rundle from Soka University in Tokyo, Japan from 19<sup>th</sup>-22<sup>nd</sup> February 2018 in Hera-Campus.

Mr. Collin Rundle visited to Timor-Leste and voluntary conducted English workshop in UNTL and DIT.

The workshop was conducted for Engineering faculty lecturers. The main training contents of this workshop is how to teach academic English writing and also academic terminology for composing research paper.



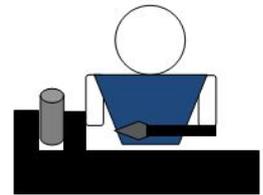
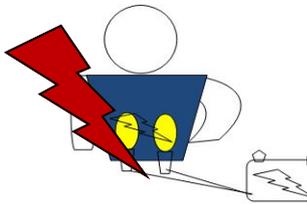
*English Workshop in meeting room ,*

*Hera Campus*

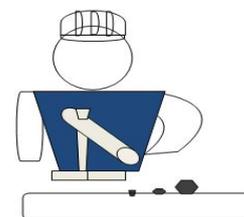
# GRADUATE TRACER SURVEY

On May 2018, the graduate tracer survey has been conducted and the result is shown as the table below.

Graduation Month/Year	Total	Responded (A)	No Response	Employed (B)	Unemployed	Employment Rate (B/A x 100)
November 2016	74	51	23	33	18	65%
May 2017	67	54	13	34	36	63%
November 2017	91	68	23	29	52	43%



The employment rates for those who graduated a year (May 2017) and one and half year (November 2016) ago could achieve 65% and 66%, respectively. The current students in Hera Campus are expected to prepare well to get job after the graduation to improve this situation. We here express our appreciation towards to the graduates who cooperated to this tracer survey.



# SHORT TERM TRAINING IN JAPAN

## LECTURER SHORT RESEARCH VISIT IN GIFU UNIVERSITY, JAPAN

From 6th-18th January 2018, Ms. Zulmira Ximenes da Costa, Director Of Informatics Department, Faculty of Engineering Science and Technology, UNTL visited Gifu University, Japan.

Her visit was realized by responding the invitation from Prof. Shoichi Nonomura, Dean of Faculty of Engineering, Gifu University.

The objective of this visit was to discuss and exchange the view of the water quality management issues with Professors in Gifu University and how to apply informatics method into water quality management in Timor-Leste. Furthermore, she conducted some field trip related to waste water and solid waste treatment in Gifu Prefecture and Networking Management Problem discussion.



*Meeting with Prof. Tamura and Prof. Fukai regarding of Topics of the Research.*



*System and monitoring solid waste recycle.*

From 6<sup>th</sup> January 2018—27<sup>th</sup> March 2018, short term training for lecturers in Informatics Engineering Department was realized .

Mr. Angelo da Costa and Mr. Fernao Antonino Nobre Mouzinho participated in this training in Gifu University, Japan. Mr. Angelo da Costa was belonging to Professor Tamura's Laboratory and Mr. Fernao was in Professor Fukai's Laboratory.

They have received the training for algorithm of machine learning and practical science with programming. Mr. Fernao jointly conducted his research with Mr. Frederico Soares Cabral about Road System, while Mr. Angelo focused on Big Data.

They said "It was a prestigious experience that they gained during three months. We are willing to share what we have learned to other lecturers and students in other to promote education and researches in our Department".



# PROGRESS OF LONG TERM TRAINING

## MECHANICAL ENGINEERING

### RESEARCH SURVEY



*Recorded the CO<sub>2</sub> emission level.*

**M**r. Paulo da Silva is currently a doctoral student in Nagaoka University of Technology (NUT), Japan under JICA long term training program. On January 2018, he temporarily came back to Timor-Leste to collect the research data in Dili. He collected the data and did interview both energy experts and academics in related to his research on Electricity Industry Development and its environmental risk management.



*Collected data for research in Dili.*

### INTERNATIONAL CONFERENCE



*Presented  
his research in Poland*

**M**r. Paulo da Silva attended an International Conference in Karpacz, Poland from 11<sup>th</sup> to 15<sup>th</sup> March 2018. The conference was for Manufacture Properties Development for High Performances. He presented his research concerning about “**Machine Tool Distortion Estimation due to Environmental Thermal Fluctuation - A focus on Heat Transfer Coefficient**”.



*Research presentation in International Conference.*

## CIVIL ENGINEERING

**O**n March 2018, Mr. Benjamim Hopffer Martins, a Doctoral student in Graduate School of Sciences and Technology for Innovation, Faculty of Engineering, Department of Civil and Environmental Engineering, Yamaguchi University, Japan came back to Timor-Leste for his research work. His research theme is "Landslide and Ground Subsidence (soil creep) in Bobonaro Region, Timor-Leste".

The objective of his activities is to collect the data and information related to Landslide and Ground subsidence (soil creep) in Bobonaro Region. Six villages was chosen for this purpose, namely Ai-assa, Bobonaro, Lourba, Malilait, Oe-leu and Tapo. During two weeks, he conducted activities such as Measuring the geographical position, Surveying the locations, Recording the images and shooting videos of objects and landscape data downloading and maintenance. Furthermore, he gathered the information from local authorities and local people. His research activity is under supervision of Professor Motoyuki SUZUKI, Yamaguchi University, Japan.



Collecting data in Bobonaro Area



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## ELECTRICAL AND ELECTRONIC ENGINEERING

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*Photo group with staff of  
Teikoku International Corporation*

**M**r. Bonifacio da Costa is a lecturer of Electronic and Electrical Engineering, Faculty of Engineering Science and Technology at UNTL. He has started his Master Degree at Gifu University in Japan since March 2017 as JICA long term trainee.

During his first year study, he has participated in internship program at Teikoku International Corporation Company. The theme of internship is to study the technologies and applications related to the Spatial Information. He visited to Gifu station,

Yai industrial park and Nishiakisawa photovoltaic power plant, visited on going projects (national route 256 bypass construction) and future project (Ishida river).



*Run Drone for collected the data*

## Field Survey



*Field survey maps area in Laleia and Maubara.*



*Mr. Frederico collected the data using smartphone.*

**M**r. Frederico Soares Cabral, Informatics Department, National University of Timor-Leste-UNTL held a survey of Road Condition in Manatuto and Maubara (Liquiça) on 21<sup>st</sup> and 26<sup>th</sup> March 2018. The purpose of this survey is to collect the road data with smartphones

including software which developed by Mr. Frederico Soares Cabral. The data will be use for the research and his Master thesis.

## GEOLOGY AND PETROLEUM

## Field Survey



*Field survey maps area in Aileu, Liquisa, Maubisse, Same, Lacleo and Manatuto .*



*Prof. Kiyokawa and students collecting rock samples.*

**F**rom April 29, 2018 to May 5, 2018 Ms. Jovita Fatima da Costa, Lecturer of Geology and Petroleum Department with students and Japanese Professor Shoichi Kiyokawa from Kyushu University, Japan had a Research survey for the Distribution of the Source Rock and Sediment in Aileu, Liquisa, Maubisse, Same, Manatuto and Lacleo.

# RESEARCH ACTIVITY

**O**n March 23<sup>rd</sup>, Professor SEKINE from Yamaguchi University conducted a survey of students project in Cristo Rei, Comoro Bridge, Bidau and Campo-Alor, water filtering which supervised by Mr. Alfredo Ferreira, Lecturer of Civil Engineering described as “Filtration of River water into Drinking water”. In the laboratory, filtration was the process to separate and removing some particles in river water. Besides that, Professor Sekine attended the presentation by final-ist student’s research about the city project.



## JICA INTERNSHIP

HELLO!!!  
MY NAME IS TAIHEI SONE,  
I'M 24 YEARS OLD.  
NOW I'M STUDYING MASTER  
COURSE IN UNIVERSITY OF  
TOKYO .



**T**aihei Sone, a master student of Engineering Faculty in University of Tokyo in Japan assigned the project as a JICA intern. The purpose of the internship is to support students to improve their mathematical skills and knowledge such as Basic Mathematics, Math Analysis, Algebra Linear, Discrete Mathematics and statistics. In addition, he also provided extra class for Informatics students to support to study programming.

On 23<sup>rd</sup> March 2018, he presented his research on “Pathways towards instability in financial networks” at Informatics Academic Seminar in Fundacao Oriente, Dili.

Through his class, the students had opportunities to re-view basic mathematics and they were very excited to attend the classes. JICA and Faculty evaluated this program is useful and helpful for students. Therefore, the project decided to continue to receive interns from Japan. The next intern is expected to come in August, 2018.



Mr. Sone presenting his research for IT Students

## OSAKA GAS SCHOLARSHIP



### JICA CADEFEST PROJECT PHASE II

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The presentation of the Osaka Gas Foundation of International Cultural Exchange (OGFICE) scholarship was held in Auditorium UNTL, on 26 April 2018.

The OGFICE offered scholarship for 30 engineering students this year and has allocated \$15.000 for this program.

"It is a great honor and privilege to be consider for an academic award. Thank you to the Osaka Gas Scholarship for financial support. It will be helpful for our school life. Hopefully, this program will be continued for students". Said Maria da Costa, in her speech as a representative from the scholarship students.

The OGFICE scholarship students are selected based on academic performance. Next is your tern, Please study hard to get this valuable award!



*Group photo of OSAKA GAS scholarship students  
in Auditorium, Liceu, UNTL.*

### *Up Coming Events...!*



- ◆ Veritas Publication
- ◆ Joint Coordinating Committee Meeting
- ◆ Project Steering Committee Meeting
- ◆ Seminars
- ◆ JICA Intern Dispatch
- ◆ Short Term Training in Japan
- ◆ Japanese experts dispatch
- ◆ Special lectures

*Editors are happy to receive support, criticism and suggestions to provide more quality and useful information.*