



CADEFEST News

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



Newsletter

Issue 5



Hera, January, 2020

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UP COMING EVENT:

- SC Meeting
- JCC Meeting
- Seminars
- JICA Intern Dispatch
- Short Term Training in Japan
- Japanese Expert Dispatch and Special Lectures



Message from CADEFEST Project Manager

First of all, on behalf of the project I would like to extend our warm greetings of new year 2020 to our readers and welcome to the fifth edition of our project newsletter!

As the time goes by, we are now already entering into the third year of the project with various of activities have been implementing. We are thankful for all the support and collaboration from our stakeholders and other parties for result we achieved and many more to come. With another two and half years to go, we are expecting further collaboration and support in order to accomplish our project goals. Therefore, we are continuing to keep you informed on the current project's activities with all necessary means. Particularly for this edition, it covers various events and activities, such as; Inauguration of the new building of our Faculty of Engineering, Science and Technology through the Japan grant aid, and also activities of the project, i.e. research activities result, activities of short-term expert's dispatch, and so on.

To conclude, let us together hand in hand to do our best for developing the Faculty of Engineering, Science and Technology to be the center of excellence of science and technology in Timor-Leste. Enjoy this edition!

Thank you.



Dr. Eng. Ruben Jerónimo Freitas

Project Manager, CADEFEST Project Phase II

Dean, Faculty of Engineering Science and Technology-UNTL

Message From Chief Advisor of CADEFEST Project Phase 2



Prof. Koichi Shimakawa
Chief Advisor, CADEFEST
Project Phase II

The activities of the five year project CADEFEST II have been very satisfactory so far in research and education. In research, this includes the regulation publication of the research articles in the Timorese Academic Journal of Science and Technology (TAJST) through the collaboration of the Cooperation Unit (CU) of the project, which is one of the very successful outputs of CADEFEST II. As a result of this publication the research works in collaboration with the external organizations, e.g., Traffic, Port and Water Departments have advanced very significantly. The research output can further be enhanced by establishing internal collaborations within our faculty among different departments, such as the Renewable Energy and Environmental Research (REER) group and Road Infrastructure Monitoring Research (RIMR) group.

In education also the progress has been very positive as some senior lecturers have prepared their own new lecture notes, which are going to be very helpful for our education programs and for the new students. These progress should be attribute to the excellent collaboration between UNTL and Japanese participating Universities trough JICA's short-term training and short-term dispatch. I expect to see further such excellent success result of CADEFEST II, particularly, in the field of science and technology in Timor -Leste in its remaining two years.

Message From Chief of Cooperation Unit



Cândia Monteiro, Ph.D.
Chief of Cooperation Unit,
Vice Dean Cooperation and
Research Affairs-FoEST

In this newsletter, CU wants to appreciate all effort have been done by all lecturers who have contributed their research papers in the volume 2 of TAJST annual publication. CU has recognized that the quality of researches conducted by the lecturers of FoEST has gradually improved, at same time the ability of writing scientific papers are also getting better than before. These indicators can be seen from the significant number of research result published in TAJST volume 2. CU will always encourage all lecturers to continuously conduct research and contribute to the next volume of TAJST. This year, the challenging effort is that CU is now open call for paper for public, where private universities and related research institutions are all invited to submit their research findings, while the priority of editorial board is to maintain and/or enhance the quality of TAJST. CU hopes that you all enjoy reading this newsletter and be motivated to be become authors for quality improvement of research and education in this faculty.

The 4th JCC Meeting



The 4th JCC Meeting and TAJST 2nd Volume Publication

On 12th September 2019, the 4th Joint Coordinating Committee (JCC) meeting for “Capacity Development of Faculty of Engineering Science and Technology Project Phase II (CADEFEST Project Phase II)” was held in meeting room at Hotel the Ramelau. The participants in the meeting were Dra. Maria Filomena Lay Guterres, Director General of higher Education, Science and Culture, Mr. Masafumi Nagaishi, Chief Representative JICA Timor-Leste, Prof. Dr. Koichi Shimakawa, Chief Advisor JICA CADEFEST Project Phase II, Prof. Dr. Eduardo Aniceto Serrão, Pro-Rector of Cooperation Affairs, National University Timor Lorosa’e-UNTL, Dr. Ruben Jerónimo Freitas, Dean Faculty of Engineering Science and technology-UNTL, Vice Deans, Directors and Vice Directors.

Dra. Maria Filomena Lay Guterres, Mr. Masafumi Nagaishi, and Prof. Dr. Eduardo Aniceto Serrão made opening speeches. The progress of the project third year and the target activity indicators were presented by Dr. Cancio Monteiro, Vice Dean of Cooperation and Research Affairs, FoEST-UNTL. In second section, Prof. Dr. Koichi Shimakawa Chief Advisor, CADEFEST project 2 made presentation for working plan for the project fourth year. Participants have exchanged their views and discussed the issues to improve the faculty management and the expected outcomes. The target indicators and the worked plan are approved by participants. After the meeting, the launching ceremony for the Second volume of Timorese Academic Journal of Science and Technology (TAJST) was conducted. (Available in Faculty Website).

Japanese TV Visit



The RNBC, Japanese TV station Visit

On 14th January 2020, the Capacity Development of Faculty of Engineering Science and Technology (CADEFEST) Project Phase II received visitors from Radio Nishinippon Broadcasting Company, the Japanese TV station.

Prof. Dr. Koichi Shimakawa, Chief Advisor of the JICA CADEFEST Project Phase II presented the history of cooperation between Japanese government and Timor-Leste government, particularly the Faculty of Engineering, Science and Technology-UNTL and explained the Project’s achievements.

New Building Handover from Contractor



New Building Handover
from Contractor Rinkai
Nissan Construction to
UNTL

On 17th October 2019, the new building for Faculty of Engineering Science and Technology-UNTL was handed over from Japanese Companies, Rinkai Nissan Construction and Yamashita Sekkei to National University of Timor Lorosa'e.

The ceremony was attended by Mr. Masafumi Nagaishi, Chief Representative of JICA Timor-Leste, Mr. Shinji Yokohori, Representative of JICA Timor-Leste, Prof. Dr. Francisco Miguel Martins, Rector of UNTL, Pro-Rectors, Dean, Vice Deans, Mr. Hiroyuki Isogai, Representative of Rinkai Nissan, Ms. Yuka Kobayashi, consultant Yamashita Sekkei, lecturers of FoEST and all distinguished guests.

After signing document between Rinkai Nissan and UNTL, the keys was handed over to UNTL. The new building is expected to be useful for education and research purpose.

New Building Inauguration Ceremony

On 14th January 2020, the Inauguration Ceremony of New Building for the Faculty of Engineering, Science and Technology-UNTL was held in auditorium of the new building Hera campus.

The ceremony was attended by H.E. Mr. Norihiro Nakayama, Parliamentary Vice Minister for Foreign Affairs of Japan, Mr. Shingo Higashimoto, Interim Ambassador of Japan to Timor-Leste, Mr. Masafumi Nagaishi, Chief Representative of JICA Timor-Leste, Dr. Longuinhos dos Santos, Minister of Higher Education, Science and Culture, Mr. Nicolau Lino F. Belo, Vice Minister of Public Works, Dr. José M. Ramos Horta, former President of RDTL, Prof. Dr. Francisco Miguel Martins, Rector of UNTL, Pro-Rectors, Dean, Vice Deans, representative of Rinkai Nissan, representative of Yamashita Sekkei, lecturers of FoEST, and all distinguished guests.

The project was funded by Japanese government and done by Japanese Companies, Rinkai Nissan Construction and supervised by Yamashita Sekkei.



The New Building of FoEST
Inauguration Ceremony

The 10th SC Meeting



The 10th SC Meeting

The 10th Steering Committee Meeting was held on 19th November 2019 in Meeting Room Hera Campus. The participants were Dr. Ruben Jerónimo Freitas, Dean of Faculty of Engineering Science and Technology, UNTL, Prof. Dr. Koichi Shimakawa, Chief Advisor of JICA CADEFEST Project, Vice Deans and structures of Departments.

The aims of this meeting were to monitor, evaluate and review the project activities in last three months and to plan and confirm the project activities for next three month. Participants exchanged their views and discussed countermeasures to solve issues for implementing the Project.

Special Lectures

Mechanical Engineering

Mechanics of Material



Prof. Yamashita Minoru Special Lecture

On 5th September 2019, Prof. Yamashita Minoru from Gifu University conducted special lecture in Mechanical laboratory to Mechanical Engineering students. The title of his special lecture was “Mechanics of material” and he shared his knowledge about mechanics of material by explained example on white board.

The students were happy to have this special lecture and requested to have this kind of special lecture more in the future.

Civil Engineering

Theory of Slope Stability



Prof. Hidehiko Kazama Special Lecture

On 17th October 2019, Prof. Hidehiko Kazama as a JICA expert and retire lecture of Saitama University held special lecture on “*Actual Slope Failure and Theory of Slope Stability*” to Civil Engineering Department, lecturers from others universities such as DIT, UNITAL and representatives of Minister of Public Works.

Many questions were raised and the participants was satisfied and requested another special lecture in the future.

How to Write Research Paper



Prof. Koichi Shimakawa Special Lecture

On 26th September 2019, Professor Koichi Shimakawa, Chief Advisor JICA CADEFEST Project Phase II conducted special lecture on “How to write the research paper” for final students in Civil Engineering Department, Faculty of Engineering Science and Technology-UNTL.

On his presentation he explained the methodology to conduct research and write report. In the special lecture, he also encouraged students to have interest and motivation for research to social needs.

Informatics Engineering

How to Make Research Documents



Prof. Satoshi Tamura Special Lecture

He introduced how to write research proposal and research paper in English step by step. This intensive lecture was very useful to Informatics lecturers to developed their academic English written skill especially research proposal and paper.

On 30th September 2019, Prof. Satoshi Tamura from Gifu University held intensive lecture on “How to Make Research Documents” to Informatics lecturers in meeting room, Faculty of Engineering Science and Technology-UNTL Hera Campus.

Geology and Petroleum

Manganese Mineralization



Prof. Takashi Ito Special Lecture

On 19th September 2019, Prof. Takashi Ito from Ibaraki University held special lecture in Geology and Petroleum Department, Faculty of Engineering Science and Technology-UNTL.

He presented on “Marine Manganese Mineralization Deep-Sea versus Shallow Water”. The special lecture was very attractive and many questions were raised.

Enhance Oil Recovery Techniques



Prof. Yuichi Sugai Special Lecture

On 5th August 2019, Prof. Yuichi Sugai from Kyushu University conducted special lecture for Geology and Petroleum students, Faculty of Engineering Science and Technology-UNTL in Hera campus. He presented on “Enhance Oil Recovery Techniques” in Kyushu University to students of Geology and Petroleum.

The topic was important for our country natural resources management and students expecting gain this knowledge for country development.

Geology and Geohazards in Timor



Prof. Kawamura Kiichiro Special Lecture

On 19 June 2019, Prof. Kawamura Kiichiro from Yamaguchi University held special lecture on “Geology and Geohazards in Timor-Leste” in class room of Geology and Petroleum Department, Faculty of Engineering Science and Technology-UNTL.

His lecture cover the basic Geology and his field of study. He also explained formation of Timor island, earthquakes and so on.

JICA Experts Activities

Japanese Professor Dispatched

Mechanical Engineering



From August to September 2019, Prof. Ikuo Tanabe from Nagaoka University, Prof. Tomonao Kobayashi and Prof. Yamashita Minoru from Gifu University, came to support Mechanical Engineering Department, Faculty of Engineering Science and Technology-UNTL.

During their stay, they supported lecturer's research of Mechanical Engineering on "Influence of the environment for the cutting accuracy", "Study and Analysis the Production Process of Local Beverage" and "The Characterization of Wind Flow in Timor-Leste".

Then, they also discussed with Mechanical lecturers to review the teaching subjects content of each subject and follow up short term training participants research in Mechanical department.

Civil Engineering

From June to October 2019, Prof. Masahiko Sekine, Prof. Shinichiro Nakashima and Prof. Hiroyuki Sakakibara from Yamaguchi University, Prof. Hidehiko Kazama from Saitama University and another Professor from Fukushima College of Technology, Prof. Hisao Emoto, came to Hera campus. They were dispatched as JICA experts to support Civil Engineering Department, Faculty of Engineering, Science and Technology-UNTL.

They supported Civil Engineering lecturers research in different field such as road engineering, hydraulics, hydrology, sanitary engineering and others. Other than that, they supported to improve laboratory experience and discussed with Civil Engineering lectures for reviewing the teaching subjects content and syllabus.



Electronics and Electrical Engineering



From September to October 2019, Prof. Yasuhiro Takahashi, Prof. Mitsuo Yamaga and Prof. Hiroki Yoshida came to Timor-Leste as JICA experts from Gifu University Japan. The three Professors came to support Electronics and Electrical Engineering Department, Faculty of Engineering, Science and Technology-UNTL.

Professors supported lecturer's researches and provided laboratory equipment training for Electronics and Electrical Department staff to increase their knowledge for practical subjects.

Other than that, Professors also discussed with each lecturer about the syllabus of teaching subjects.

Informatics Engineering



From June to October 2019, two professors came to Informatics Engineering, Faculty of Engineering, Science and Technology-UNTL as follows, Prof. Hidekazu Fukai and Prof. Satoshi Tamura. They came as a JICA expert from Gifu University Japan to support Informatics Engineering Department.

The Professors supported Informatics lecturers on their research and discussed with some lecturer about their future research plan. Professors also discussed with IT technician about the management of IT Infrastructure of FoEST in new building. Then, Professors also discussed with each lecturer about the syllabus of teaching subjects.

Geology and Petroleum



From June to October 2019, Prof. Kiichiro Kawamura, Prof. Yuichi Sugai, Prof. Shoichi Kiyokawa, Prof. Atsuko Yamazaki and Prof. Takashi Ito from three different Universities in Japan such as Yamaguchi University, Kyushu University and Ibaraki University. They came to Timor-Leste as a JICA experts to support Geology and Petroleum Department, Faculty of Engineering, Science and Technology-UNTL.

The Professors supported Geology and Petroleum lecturers' research and discussed with lecturers about next short-term training activity. The Professors also discussed with each lecturer about the syllabus review.

Cooperation Unit Activities

IT Seminar



IT Seminar on “Way for Implementation of Internet of Things in Timor Lorosa’e”

On 13th September 2019, Informatics Engineering, Faculty of Engineering, Science and Technology-UNTL held Seminar on “Way for Implementation of Internet of Things in Timor Lorosa’e” in hall of Ministry of Social Solidarity.

The Participants in seminar were Dra. Teresa A. Madeira Soares, Pro-Reitoria Assuntus Provedoria e Akonsellamentu, Dr. Ruben Jerónimo Freitas, Dean of FoEST, Dr. Junior Raimundo da Cruz, Vice Dean of Academics Affairs, Lecturers of Informatics Engineering, Students, Alumni, participants from other university such as IOB, UNTAL, IPDC and Senior High Schools.

Mr. Mario Guterres, IT manager in National Authority of Oil and Minerals presented on “Best Practice Implementation Infrastructure of Data Center”. Mr. Vosco Pereira, Informatics Engineering lecture presented on “Toward the Implementation of IoT and Research Development in Department”. Finally, Mr. Florindo Guterres da Costa presented on “The Structure, Challenge and the Chance of Development in IDS (Intrusion Detection System)”. In last section all the participants visited poster as a result of final thesis of the alumni Informatics Engineering Department.

Long-Term Training Presentation



On 11th June 2019, the JICA long-term training participants made presentation in Informatics room, Faculty of Engineering Science and Technology-UNTL, Hera campus. They finished their masters degree in GIFU University Japan.

Mr. Frederico Soares Cabral, Informatics lecturer presented on “A Machine Learning Based System for Road Condition Monitoring Using Smartphone Sensor”. The second presentation, presented by Mr. Vosco Pereira, Informatics lecturer on “Road Condition Inspection by Classification and Segmentation of Road Surface Using Deep Learning”. Finally, Mr. Bonifacio da Costa, Electronics and Electrical lecturer presented on “Design of Trans-Impedance Amplifier Using Floating Active Inductor”.

Mr. Hideaki Matsumoto, Senior Representative of JICA Timor-Leste, Prof. Koichi Shimakawa, Chief Advisor of CADEFEST Project Phase II and Dr. Ruben Jerónimo Freitas, Dean of FoEST asked some question and appreciate their achievements.

The RIMR Group Presentation

On 8th August 2019, the Road Infrastructure Monitoring Research (RIMR) group made presentation of their research in meeting room, Hera campus.

The participant in the presentation were Mr. Nicolau Lino Belo Freitas, Vice Minister of Public Works with his Director General and staff, Dr. Ruben Jerónimo Freitas, Dean of Faculty of Engineering Science and Technology-UNTL and his staff.

Mr. Mariano Renato M. da Cruz, Civil Engineering lecturer, Mr. Frederico S. Cabral and Mr. Vosco Pereira, Informatics Engineering lecturers, presented on “Road Inspection Using Smartphone”.

Mr. Nicolau Lino Belo Freitas, Vice Minister of Public Work appreciated of this presentation and showed his expectation to utilize this low cost smartphone sensor for road inspection in the future.



Short-Term Training

Short-Term Training Activities (1st Group)



The Short Term Training Participants in Japanese Universities

From June to September 2019, Mr. Marfim Guimaraes, Mr. Mario Marques Cabral, Mr. Mariano Renato Monteiro da Cruz, Mr. Marcelo Marques, Mr. Reinaldo Guterres da Cruz, Mr. Adias Pires, Ms. Zulmira Ximenes da Costa and Ms. Kristiyani Ambarwati, lecturers from Faculty of Engineering, Science and Technology-UNTL had short term training in Japanese Universities. The purpose of the training was to improve the capacity of education and research.

Training Report



On 9th September 2019, Mr. Reinaldo G. da Cruz and Mr. Adias Pires Electronic and Electrical lecturers held presentation in Electronics main room.

Then, on 30th September 2019, Ms. Zulmira X. da Costa and Ms. Kristiyani Ambarwati, Informatics lecturers also held presentation in Java room, Hera campus. They presented the result of their training in Gifu University, Japan to other lecturers of FoEST-UNTL and shared the knowledge that they gain through the training.

Briefing for 2nd Group



On 13th September 2019, the lecturers of Faculty of Engineering, Science and Technology-UNTL as candidates of short-term training of 2nd group had meeting with Mr. Shinji Yokohori, Representative of JICA in Timor-Leste to have some briefing before departure.

The candidates for short term training this time were Mr. Jose M. Xavier, Dr. Gabriel de Sa, Mr. Tomas S. Xavier, Mr. Alfredo Ferreira, Mr. Abreu A. Boavida, Mr. Gabriel Gaspar A. de Oliveira, Mr. Nene Soares V. Cristovao, Mr. Osvaldo da Cruz and Ms. Benchao N. G. M. Monteiro.

Other Activities

Civil Engineering Exposition



Civil Engineering student explained their design

On 24th October 2019, Civil Engineering Department, Faculty of Engineering, Science and Technology-UNTL held exposition in Hera campus. The expo was conducted for two days. The topic was : “Together expanded Knowledge in Civil Engineering Field”. The participants in the exposition were Mr. Leonel da Silva Gregorio Madeira, Pro-Rector of Planning and Institutional Development, Dr. Ruben Jerónimo Freitas, Dean of FoEST, students and lecturers of FoEST, Representatives from Minister of Public Works, National Development Agency (AND), DIT, UNDIL, UNITAL, IPDC, IOB and Senior High Schools. The students of Civil Engineering model designed and developed and explained to the visitors.

Lecture Note Handover



On 11th December 2019, Mr. Vital de Jesus Ximenes, lecturer of Electronics and Electrical Engineering Department, FoEST-UNTL, handed over the lecture note to Mr. Abelito Filipe Belo, Director of department and Dr. Junior Raimundo da Cruz, Vice Dean of Academic Affairs.

He developed his lecture note of Statistic and Probability under supervision Prof. Koichi Shimakawa, Chief Advisor JICA CADEFEST Project II.

Equipment Handover

The JICA CADEFEST Project Phase II handed over the equipment to Mechanical Engineering Department, Civil Engineering Department, Electronics and Electrical Engineering Department and Geology and Petroleum Department.

The equipment was expected to be utilized for research and education.



Graduate Tracer Survey

On November 2019, 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	101	40	61	32	8	80%
May 2017	67	46	21	33	13	72%
November 2017	95	70	24	45	26	64%
May 2018	87	67	20	40	27	60%
November 2018	80	68	12	23	45	34%
June 2019	92	78	14	16	62	21%
December 2019	87	87	0	10	77	11%



The employment rates for those who graduated few months ago (December 2019), half year ago (June 2019), a year ago (November 2018), one and half year (May 2018), two years ago (November 2017), two and half years ago (May 2017) and three years ago could achieve 80%, 72%, 64%, 60%, 34%, 21% and 11% 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 responded this tracer survey.

JICA INTERNS

On 14th August 2019, Mr. Keiyu Ikeda from Saitama University came to Timor-Leste as JICA Intern. He stayed one month to support basic math teaching students in the Faculty of Engineering Science and Technology-UNTL. He taught basic math to semester 4 and 6 students of Mechanical Engineering and he supported some final students theses. Other than that, he also shared his knowledge related to mechanical engineering to those who need his help.



On 14th August 2019, Mr. Ken Suzuki from Waseda University came to Timor-Leste as JICA Intern. He also stayed for one month to support basic math study of students in the Faculty of Engineering Science and Technology, UNTL. He taught basic math to semester 4 and 6 students of Electronics and Electrical Engineering. Other than that, he also conducted extra class for students of FoEST in their free time to who wants to further study



We are Happy to be Here.

“The UNTL students are very friendly”





JICA CADEFEST PROJECT PHASE II

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**Dean of Faculty
contributed one
chapter in this Book**

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Dr. Ruben J. Freitas and Prof. Koichi Shimakawa

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Editor are happy to receive suggestion and comments to improve this news.