



ERDT

Engineering Research and Development for Technology

2014 – 2015 Annual Report



The logo conveys the role of the consortium in the development of Engineering in the Philippines. The color composition resembles that of the Philippine national flag to promote the local engineering research and innovation. The hands along with the other symbols imply the strengthening partnership among the consortium members, affiliated agencies and different stakeholders in improving the quality of engineering research and education in the Philippines.

Engineering Research and Development for Technology 2014 – 2015 Annual Report

Table of Contents

Message from the Program Leader.....	1
About ERDT, Objectives and History.....	2
2014 – 2015 Annual Report.....	3
Human Resource Development.....	4
Local Graduate Scholarship.....	4
Sandwich Program.....	9
Faculty Development Programs.....	13
Foreign PhD Scholarships.....	13
Post-Doctoral Grant.....	14
Faculty Research Dissemination Grant.....	15
Faculty Research Grant.....	16
Visiting Professors and Researchers Program.....	17
Research and Development.....	19
Infrastructure Development.....	19
Annual Events and Activities.....	20
Congress and Conference.....	20
Benchmarking.....	32
Road Shows.....	44
Consortium Activities.....	44
Engineering Forum Series.....	46
Other Activities.....	49
Other Initiatives Implemented.....	50
Appendices.....	52
List of 2014 and 2015 ERDT Graduates with Titles of their Theses and Dissertations.....	53
List of 2014 and 2015 ERDT FRDG Recipients.....	90
DOST-funded R&D Projects of Faculty Members of the ERDT Consortium from 2008 to 2015.....	99
List of 2014 and 2015 Road Shows.....	104
ERDT Program Advisory Council.....	108
ERDT Program Steering Committee.....	108
ERDT R&D Track Heads.....	110

Message from the Program Leader

The Engineering Research and Development for Technology (ERDT), a multi-billion project implemented in 2008, is a significant undertaking of the Philippine government. It sought to address the country's need to boost its research and development to meet the challenges imposed by globalization through ERDT's three components – human resource development, Research & Development, and Infrastructure Development. These components are deemed crucial for the country's economic growth, which the ERDT hopes to continuously contribute to in the long-term.



Now, on its eighth year, the ERDT strives to achieve the targets set during its inception. As of November 2015, the ERDT provided graduate scholarships to 1,639 MS students and 278 PhD scholars. From these figures, ERDT has already produced 589 MS and 53 PhD graduates, who may be our country's researchers, scientists, and engineers (RSEs) with advanced degrees who are capable of creating or innovating technology, establishing start-up companies, or delivering quality research. It is our hope that they will be the frontrunners in intensifying the country's R&D, which is supported by ERDT-funded state-of-the-art research laboratories and equipment. In fact, the number of funded research works and papers accepted in refereed journals and conferences continues to increase.

As you read through this ERDT 2014-2015 Annual Report, may its gains inspire us, members of the ERDT consortium, to carry on with our tasks with the hopes of making the ERDT a catalyst for our country's growth. May the challenges we continue to face allow us to be more determined to fulfill our responsibilities and forge more collaborations with our partners from the government, industry, and the academe.


Aura C. Matias, Ph.D.

Dean, UP College of Engineering
Program Leader, ERDT

The ERDT

The ERDT is a consortium of eight-member universities in the Philippines that offers mature Master's and doctoral degrees in various engineering fields. Ateneo de Manila University (ADMU), Central Luzon State University (CLSU), De La Salle University (DLSU), Mapua Institute of Technology (MIT), Mindanao State University – Iligan Institute of Technology (MSU-IIT), University of the Philippines (UP) Diliman, UP Los Baños and University of San Carlos (USC) constitute the consortium.

Objectives

The ERDT is created to deliver high impact researches aligned with the country's National Science and Technology Plan (NSTP) and the Medium-Term Development Plan (MTDP), to attain a critical mass of MS and PhD graduates, to upgrade the qualifications of practicing engineers, and to develop a culture of Research and Development (R&D).

Brief History

In April 2007, Dean Dr. Rowena Cristina L. Guevara of the UP Diliman College of Engineering (COE) together with other 6 deans of engineering schools came up with a proposed human resource development (HRD) program to the Department of Science and Technology (DOST). The proposed program generally aims to increase the number of researchers, scientists and engineers (RSEs) in the country.

The ERDT Consortium was then conceptualized, endorsed by former DOST Secretary Estrella F. Alabastro, and approved by former President Gloria Macapagal-Arroyo with a P3.5 Billion funding for three years.

It is continued up to now by President Benigno Simeon C. Aquino III and is currently being supervised by DOST Secretary Mario G. Montejo through the Science Education Institute (SEI) and Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD). The ERDT has an annual budget of around P300 Million.

As a program funded by the DOST, the ERDT hopes to build a culture of R&D in the Philippines by increasing our numbers of highly trained RSEs and providing a suitable research environment.

2014 – 2015

ERDT Annual Report

Since the program's inception in 2007, the Engineering Research and Development for Technology (ERDT) has successfully laid down the footprint and model for a successful engineering research program in the country. Despite some challenges in the implementation of the program, numbers would show that indeed more and more students have become interested in pursuing graduate studies with the support of the program. Also, research activities in the ERDT consortium have increased significantly. The level and quality of research have also improved leading to a number of funded research works and papers accepted in refereed journals and conferences. Collaboration among different disciplines and among various institutions has been prioritized and practiced.

In the years 2014 and 2015, the ERDT continued to fulfill its goals by embarking on different activities and setting up mechanisms for effective and efficient delivery of its services to all of its stakeholders.

Intensive promotional activities and the development of website were put at place to ensure that potential scholars and partners could have a grasp of what the program is all about. Development of scholars' database was also initiated to create a more efficient records and financial management system. More than that, the ERDT started to craft its Scholarship Handbook which sought to aid program implementers, scholars and faculty to better understand the nature and implementation aspects of various ERDT Human Resource Development (HRD) support services.

Partnering with different academic institutions, professional bodies, and other international organizations became a trend to ERDT in organizing and conducting annual events and other activities that aim to provide unique and concrete platforms for exchange of ideas.

This 2014-2015 ERDT Annual Report contains the accomplishments of the ERDT program in its three main components namely HRD, R&D, and Infrastructure Development. Enshrined also in this report are the annual events such as the Congresses, Conferences, and other activities organized by the ERDT consortium.

I. HUMAN RESOURCE DEVELOPMENT

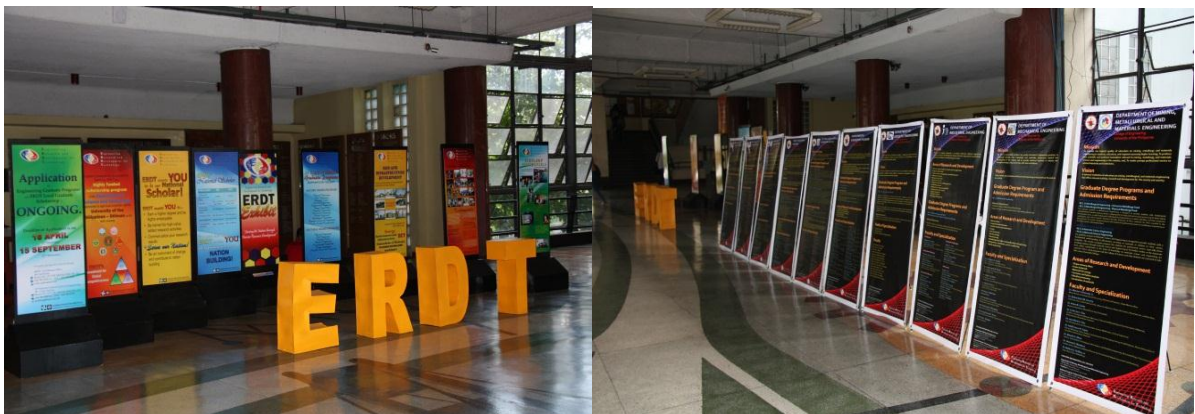
The ERDT Human Resource Development (HRD) component aims to address the need to produce well-trained engineering researchers through graduate studies and further trainings.

The Local Graduate Scholarship Program is the flagship component of the ERDT HRD. Aside from this scholarship, the ERDT HRD also administers MS and PhD Sandwich Program, Faculty Research Dissemination Grants, Faculty Research Grants, Faculty PhD Scholarships, Post- Doctoral Studies, Visiting Professors Program, and Visiting Researchers Program.

A. Local Graduate Scholarship

To achieve the critical mass of RSEs to about 1000 PhD degree holders and even more for Master's degree in the next seven years (2020), ERDT MS and PhD Local Graduate Scholarship is awarded to deserving Filipino engineering graduates and practitioners. This Scholarship further aims to improve the quantity and quality of engineering profession in the country. The exponential rise in the number of engineers with advanced degrees is believed to produce compounding effect on the value chain in the industry for economic growth as well as improving the quality of education in engineering departments of both private and public higher academic institutions.

Table 1 shows the target numbers vis-à-vis the actual intake of scholars from 2007 – 2015 of the ERDT Local Graduate Scholarship. As of December 2015, there are a total of 1653 MS and 281 PhD scholars admitted to the ERDT program. Since the program's inception in 2007, the ERDT continues to improve its annual intake rates. More and more students are applying for MS degrees with the support of the ERDT who later become applicants and scholars for various PhD degree programs. As of December 2015, the ERDT records a total hit rate of 91% for MS and 73% for PhD from 2007 to 2015.



ERDT Weeklong Exhibit at UP College of Engineering 2nd Floor Lobby.

These figures are attributed to the different efforts exerted by the consortium such as intensive road shows, exhibits, meetings with academic institutions, and other promotional activities. The scholars and their faculty advisers are also seen as vehicles for instant promotion of the program. Annual DOST and ERDT big events like Congresses, Conferences, and the National Science and Technology Week also market the ERDT scholarship program.

	2007		2008		2009		2010		2011		2012		2013		2014		2015		Total Intake	
	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD
UPD	55	18	34	15	88	15	85	13	66	6	88	17	89	8	56	11	72	14	633	117
ADMU			16	0	16	0	20	2	16	1	11	1	14	2	18	3	8	3	119	12
CLSU			15	2	9	3	13	1	8	4	29	1	27	2	24	6	6	5	131	24
DLSU			11	2	22	1	34	2	32	5	38	8	18	6	29	4	38	4	222	32
MIT			8	1	32	2	14	1	16	7	27	4	46	14	37	5	43	5	223	39
MSU-IIT			10	2	8	2	15	3	21	3	16	4	29	6	26	8	10	2	135	30
USC			13	0	15	0	10	0	11	0	2	0	14	0	16	3	29	7	110	10
UPLB					8	4	13	3	3	0	11	3	12	4	17	0	16	3	80	17
ACTUAL INTAKE	55	18	107	22	198	27	204	25	173	26	222	38	249	42	223	40	222	43	1653	281
TARGET	106	23	133	20	171	32	208	44	233	50	260	55	233	50	233	50	240	60	1817	384
HIT RATE (%)	52	78	80	110	116	84	98	57	74	52	85	69	107	84	96	80	93	72	91	73

Table 1. ERDT Local Graduate Scholarship Actual intakes of MS and PhD scholars from 2007 to 2015

While the total hit rates from 2007 – 2015 are relatively positive figures, ERDT still eyes for that hundred percent hit rates. The total 73% hit rate for PhD could indicate that perhaps there are still few RSEs in the country with MS degrees. The 91% hit rate for MS is seen as an opportunity for improving the PhD numbers. From the experience of ERDT, MS scholars serve as feeders to the PhD degree programs.



Engr. Ricardo Fornis, ERDT-USC Program Coordinator, presents the ERDT Scholarship Program to the graduating students in three universities namely University of Bohol, Bohol Island State University, and Holy Name University.

On the other hand, ERDT also records applicants who unfortunately were not able to secure scholarship slots primarily due to poor academic performance during their undergraduate years or lack of clear and feasible research topics. Unsuccessful applicants were advised to work first, gain information in their workplace, and re-apply in the future.

To fasten its effort in meeting the recommended critical number of RSEs by the United Nations Educational, Scientific and Cultural Organization or UNESCO and considering also the increasing population of the Philippines, ERDT seeks to expand the consortium by adding new member universities. The ERDT has already received applications from different universities for possible inclusion in the consortium. It also had several meetings and visits to other universities. However, the ERDT found out that most of these universities are still in the process of developing their graduate degree programs to become mature and research intensive.



ERDT MSU-IIT Project Leader Atty. Edgar Alan A. Donasco promotes the ERDT Scholarship Program to students of University of Mindanao, Cagayan De Oro College, and Father Saturnino Urios University.



In formalizing the expansion of the ERDT consortium, the program is now carefully studying possible metrics to be used in evaluating potential applicants. In large, ERDT seeks for mature and research intensive graduate degree programs. Presence of PhD degree programs with significant number of graduates and research works could indicate maturity of engineering programs. While preparing for other metrics, ERDT also opens its doors for trainings and mentoring of those universities who wish to be part of the consortium. These activities aim to accelerate the application process of future consortium member universities.



“My ERDT scholarship helped me make the most out of my MS studies. With the ERDT research grant, I was able to realize more possibilities with my research, raising the level and scope of my work. With the ERDT dissemination allowance, I was then able to share this research in an international conference abroad. These things would never have been possible if I still had to produce the resources on my own. Thanks, ERDT!”

Charles Ruel Novabos
MS Industrial Engineering
UP Diliman

“ERDT was an opportunity for me to take up higher education. It gave me an opportunity to pursue a Master's Degree without its financial burden. More so, it allowed me flexibility in terms of pursuing the research field I wanted, by providing me the resources that I need. It also gave me the chance to present my research abroad.”

John Steven Lee
MS Industrial Engineering
De La Salle University



“ERDT, for me, was not just a simple scholarship. It was my motivation and inspiration. It helped me finish my degree through financial means, and motivated me to finish my thesis. With ERDT, I was able to learn more about different researches through the congress it held. I was able to attend an international conference in Paris, France to present and publish my work. It was a very big opportunity for me to learn more and meet other people from different parts of the world and see their researches.”

Neil Erick Madariaga
MS Computer Engineering
Mapua Institute of Technology

"ERDT to me is one of a kind of scholarship program designed for Engineers. It enabled me to grow professionally by earning my Doctoral Degree in Agricultural Engineering. Undoubtedly, my horizon was broadened and I continue to see farther and brighter opportunities to further my capacity to provide quality service. I believe God is praised and pleased with all the achievements my co-scholars have reached through the ERDT."



Jeffrey A. Lavarías
PhD Agricultural Engineering
UP Los Baños



"ERDT is a great program to help those who are qualified but are not capable of affording post-graduate studies. It is one excellent government program to enhance the educational level of its people most especially for me who is in the academe."

Ivane Ann P. Banlawe
MS Electronics and Communications
Engineering
Mapua Institute of Technology

"I highly appreciate the role of ERDT in promoting R&D in the country. While taking MS Materials Science and Engineering, ERDT helped me to explore new frontiers in materials science by financing my research works and attendance in local and international conferences."

Lorenz Anthony Y. Fernando
MS Materials Science and Engineering
UP Diliman



In terms of graduates, ERDT has already produced 614 MS and 54 PhD local graduates as of December 2015. Table 2 shows the distribution of ERDT local graduates across the consortium from 2008 to 2015.

	2008		2009		2010		2011		2012		2013		2014		2015		TOTAL	
	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD
UPD	4		19		18	1	28	4	38	11	48	6	52	9	48	3	255	34
ADMU					8		10		12		6	1	3		12	2	51	3
CLSU					1		6		5	2	10	2	11	1	7	1	40	6
DLSU			2		8		6		24	1	10		21	1	23	3	94	5
MIT			1		6		5		5		4		25	1	21		67	1
MSU-IIT			1		2		3		7		14	1	21	2	11		59	3
USC					5		5		8		3		3		5		29	0
UPLB							7		4		5		2	1	1	1	19	2
TOTAL	4	0	23	0	48	1	70	4	103	14	100	10	138	15	129	10	614	54

Table 2. Local MS and PhD graduates from 2008 to 2015

Considering the actual intakes, scholars' entry to the program and desired span of study, ERDT is supposed to produce 1201 MS and 173 PhD local graduates by 2015. However, different factors like tedious procurement system, late finalization of research topic, changes in research advisers, and mismatch with research interest between adviser and scholar, affect the conduct of research and ultimately hinder on time graduation of ERDT scholars.

The ERDT program implementers have means to address these issues. These include requiring scholars to write their proposed research during their application to ERDT scholarship, matching them with faculty advisers, and assigning faculty advisers at the start of the program among others.

The names of all ERDT local graduates for the years of 2014 and 2015 and the titles of their theses/dissertations are shown in the Appendix of this report.

B. Sandwich Program

The ERDT Sandwich Program is a fellowship that is offered to ERDT local graduate scholars who wish to perform their research works in a university or research institution abroad for a maximum of one year. Aside from finding a suitable laboratory for chosen research topic, ERDT Sandwich Program scholars are also expected to gain broader approach and technical knowledge in conducting research while experiencing inter-cultural exchanges.

The scholar applies to the Sandwich Program and the application is deliberated by the Fellowship Selection and Screening Committee or FSSC.

The FSCC gives priority to those scholars pursuing research with topics identified as gaps in the R&D and could not be completed locally due to lack of expertise from the faculty resources and lack of physical resources. The awarded scholars are expected to finish their theses or dissertations, contribute to technical knowledge, and transfer the technology/techniques that they have learned from this fellowship.

Prior to 2014, the Sandwich Program was only offered and awarded to scholars in the PhD degree program. It was then extended to MS scholars in recognition of the opportunities it could offer and the necessity for collaboration to some research topics even at the Master's degree program level.

Later on, the program was further extended to faculty members taking their MS and PhD degrees at UP Diliman College of Engineering who were not necessarily ERDT local graduate scholars but wished to conduct research abroad.

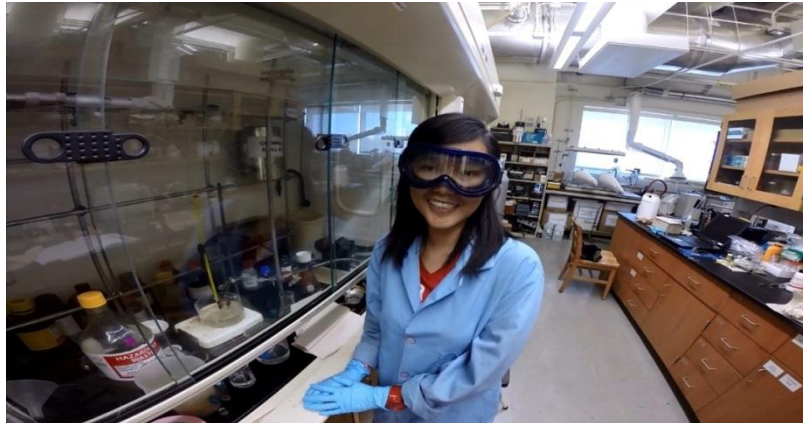
As of November 2015, there are 45 scholars who were given opportunities to conduct their researches with the assistance of the ERDT Sandwich Program. Three more scholars are bound to do their research works in international reputable academic institutions in the following year. Out of the 45 awarded Sandwich scholars; 27 have already graduated, 11 have returned and are expected to graduate soon, and 7 are still abroad conducting their research works.

Table 3 shows the yearly distribution of slots and the actual number of scholars who availed the Sandwich Program with their corresponding statuses.

Year	Slots	Actual Intake	Status
2008	7	1	Graduated
2009	10	3	Graduated
2010	12	3	Graduated
2011	8	7	Graduated
2012	8	5	4 Graduated, 1 Returned
2013	13	12	6 Graduated, 6 Returned
2014	10	9	3 Graduated, 2 Returned, 4 On-going
2015	19	8	2 Returned, 3 On-going, 3 Approved
Total	87	48	27 Graduated, 11 Returned, 7 On-going, 3 Approved

Table 3. Distribution of ERDT Sandwich Program per Year

“Thank you to the ERDT Sandwich Program for the opportunity to do research abroad where I get to work with complete resources, collaborate with great minds, and at the same time make new friends and share new experiences.”



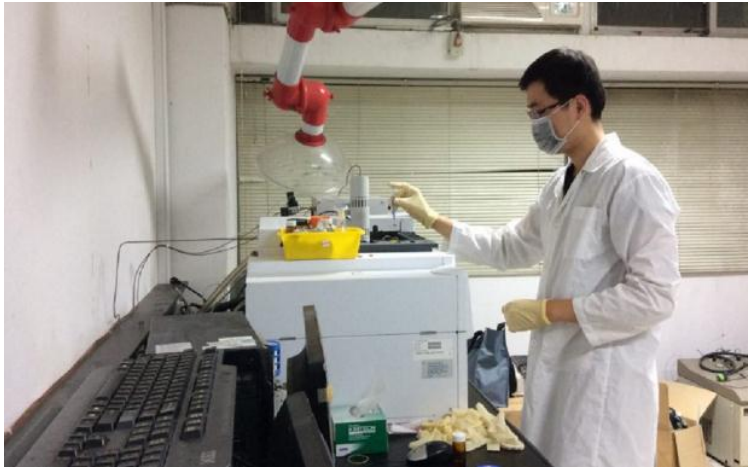
Jem Valerie D. Perez
PhD Chemical Engineering
UP Diliman
2014 ERDT Sandwich Program Recipient
University of Houston, USA



“Through my ERDT scholarship grant, I was able to hone my potentials and skills in the field of electronics engineering by focusing more on how a research should be systematically done with a strike of balance on technicality and awareness on the existing problems in our society in terms of development of sustainable technologies.

Throughout the duration of my Sandwich Program in Chung Yuan Christian University in Taiwan, I learned how to interact professionally and to conduct research on a more technical and scientific level because I was able to experience, in a new environment, working with a team of researchers, doctors, and engineers coming from different countries having varying specialization and disciplines. Thus, ERDT has helped develop my capacity as an electronics engineer both in personal and professional level. Big thanks to ERDT for everything.”

Alejandro H. Espera, Jr.
MS Electronics Engineering
Ateneo de Manila University
2015 ERDT Sandwich Program Recipient
Chung Yuan Christian University, Taiwan



“ERDT did not only helped my dreams of getting a chance to attain a doctorate degree a reality, but also paved and molded my passion to do more research. It was both an honor and a privilege to have honed and developed new skills, knowledge and technicalities through conducting research in another country which was made possible by the support of the ERDT program. I have also learned to adapt well in a different cultural experience which is an important aspect in one’s work ethics.”

Angelo Earvin Choi
PhD Chemical Engineering
De La Salle University
2014 ERDT Sandwich Program Recipient
Chia Nan University of Pharmacy and Science, Taiwan

“ERDT and Sandwich Program provided me with generous support financially and intellectually towards my goal of becoming a master’s student. With the help of the ERDT Sandwich Program, I was able to collaborate with international research laboratories and different researchers in different countries. The Sandwich Program gave me the opportunity to establish international connections. It also helped me improve my view and way of life. I consider ERDT as once in a lifetime opportunity and a memorable experience. I will be forever grateful and shall return this favor to my countrymen.”



Jan Alain Corvera
MS Electronics and Communications Engineering
Ateneo de Manila University
2015 ERDT Sandwich Program Recipient
Scuola Superiore Sant'Anna, Italy

C. Faculty Development Programs

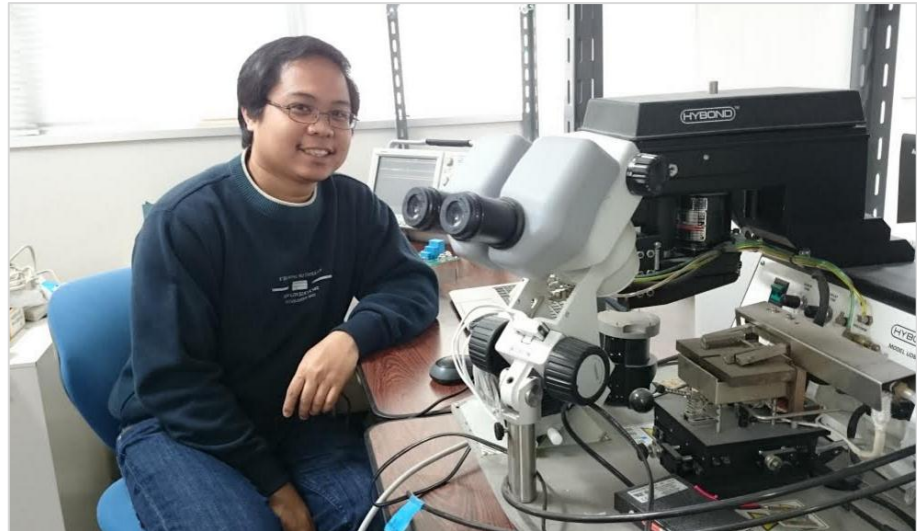
1. Foreign PhD Scholarships

To improve the faculty roster of UP Diliman College of Engineering, faculty members are given opportunities to pursue advanced degrees in a reputable and highly recognized international academic institution abroad, preferably on areas of specialization that needs to be strengthened, through the ERDT Faculty Development Program – Foreign PhD Scholarships.

Year	Awarded	Graduated	Returned	Terminated	On-Extension	On-going
2006-2008	10	6	2	2		
2009	7	4	1	2		
2010	5	3		1	1	
2011	4	1			2	1
2012	5			1		4
2013	6					6
2014	2					2
2015	6					6
2016	1					
Total	46	14	3	6	3	19

Table 4. Faculty Development – Foreign PhD Scholarship Statistics

To date, there are already 46 faculty members who were awarded with the scholarship. Out of the 46 grantees, 14 have already graduated and now rendering return service in UP Diliman. Three scholars have just returned and are now doing minor revisions in their dissertations. Three scholars have requested extensions of their scholarships. Contracts of 6 scholars were terminated due to failure to render return service, failure to finish degree programs, and non-renewal of faculty position. Repayment of contractual obligations of these scholars is already in process. Nineteen scholars are still abroad and 1 scholar has been awarded with the scholarship this 2015 and expected to leave in the following year.



“The ERDT Faculty Development Program has enabled me to bring the Filipino talent on the international stage and develop it further through collaboration and inter-cultural exchanges.”

Niño Christopher B. Ramos

Assistant Professor, Electrical and Electronics Engineering Institute, UP Diliman

2015 ERDT Foreign PhD Scholarship Awardee

Graduate School of Engineering, Osaka University, Japan

2. Post-Doctoral Grant

The ERDT Post-Doctoral Grant is a grant that provides retooling and trainings to faculty members. It is offered to faculty members who have doctoral degrees. It helps to ensure that research conducted and proposed under the ERDT program are current and relevant. The grant is for a minimum of two months and a maximum period of one year with financial support.

To date, there are already 12 recipients of the grant; 6 faculty members received the grant in 2009, 2 in 2010, 2 in 2012, 1 in 2014, and 1 in 2015.



“The ERDT Post Doc Grant provided the opportunity to carry out pure research work that I have hungered since after finishing my PhD.”

Dr. Louis Angelo M. Danao

2015 ERDT Post-Doctoral Fellow, University of Sheffield,
United Kingdom

Assistant Professor, Department of Mechanical Engineering,
UP Diliman

3. Faculty Research Dissemination Grant

The ERDT Faculty Research Dissemination Grant or FRDG gives opportunity to faculty members of the consortium to present their research works to an international audience of the same field of specialization. Every year, this grant is awarded to deserving faculty members who wish to participate in local and international conferences or as a support to publish papers in ISI journals. This is similar to the research grant of the local graduate scholars in the form of Research Dissemination Grant. Over the years, a significant number of conference participation is observed signalling an active research.

To date, a total of 303 research dissemination grants were awarded since the beginning of ERDT. Table 5 shows the list of presentations made by faculty members per year in international conferences through the support of FRDG.

The complete details of 2014 and 2015 ERDT FRDG recipients are shown in the Appendix of this report.

	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
FRDG	1	17	51	25	32	43	72	62	303

Table 5. FRDG Recipients from 2008 to 2015



“The faculty research dissemination grant (FRDG) under the DOST-ERDT program has given early career researchers like me the opportunity to present our research in local and international conferences. This is important for our advancement as academicians and researchers of the university.”

Dr. Mary Donnabelle Balela
 Department of Mining, Metallurgical and
 Materials Engineering
 UP Diliman

“The Faculty Research Dissemination Grant of ERDT helps me share my laboratory’s research results to a wider audience. The Grant also keeps me updated on recent results related to polymers and materials.”

Bryan B. Pajarito, D.Eng.
 Department of Chemical Engineering
 UP Diliman



4. Faculty Research Grant

In 2014, Faculty Research Grant was implemented to help faculty members who are currently enrolled in the ERDT supported graduate programs in an ERDT member university to complete all their requirements leading to a successful thesis/dissertation defense.

Recipients of this grant are considered (counted) as an ERDT scholar with lateral entry and shall be awarded with the grant for a period of one year for Master's and two years for PhD. A maximum of Php 114,000.00 and Php 228,000.00 research grant can be awarded to Master's and PhD faculty-scholars, respectively.

As of November 2015, there are already 13 recipients of the grant. Table 6 below shows the details of the ERDT Faculty Research Grant recipients.

Recipient	Degree and Course	University	Research Topic
Year 2014			
Reyes, Joseph Gerard Tancinco	PhD Environmental Engineering	UPD	The Effects of Varied Coconut Methyl Ester Biodiesel/Diesel Blend Ratios on the Performance and Nox Emissions of a Multi-cylinder Common Rail Diesel Engine
Gutierrez, Alma Maria Jennifer	MS Industrial Engineering	DLSU	Affective Design on Eco Product Labels
Ramirez, Shelah G.	MS Chemical Engineering	UPLB	Parametric and Optimization Studies of Palm Oil Biodiesel Production Using Basic Heterogenous Catalysts Derived from Eggshells
Laurio, Michael Vincent O.	MS Chemical Engineering	UPLB	Laboratory and Field Studies for the Improvement of Selective Recovery of Silver from Artisanal Gold Smelting Effluents by Electrochemical Deposition
Pilario, Karl Ezra Salgado	MS Chemical Engineering	UPD	Nonlinear Dynamic Data Reconciliation and Gross Error Detection using the Branch-and-Bound Technique with Application to Common Process Networks
Torio, Lestelle Velasco	MS Civil Engineering	UPD	Strength Characteristics of Redeposited Lahar
Year 2015			
Dulay, Ann E.	PhD Electronics and Communications Engineering	DLSU	Dynamic Hardware-Based Narrowband and Wideband Channel Emulator for Modem Testing in Low-Voltage Indoor Power-Line Communication Scenarios
Zalatar, Willy F.	PhD Industrial Engineering	DLSU	A Predictive Model of Corporate Sustainable Development Using Lean Manufacturing Practices
Lozano, Lorafe F.	MS Industrial Engineering	USC	Development of an Enterprise Resource Planning System to Address Cost and Operational Issues Experienced by Micro, Small and Medium Retailers in Cebu
Macuha, Richmark N.	MS Civil Engineering	UPD	Comparison of Analytical and Numerical Models in Estimating the Yield of Streambed Infiltration Gallery
Montealegre, Charlimagne M.	MS Chemical Engineering	UPD	Effect of Blumea Balsamifera Extract on the Crystallization Behavior of Calcium Oxalate
Victor, Jaime Angelo S.	MS Civil Engineering	UPD	Landslide Susceptibility Modeling and Mapping of Antipolo Rizal Through Heuristic, Deterministic and Statistical Methodologies

Santos, Ervin S.	MS Mechanical Engineering	UPD	Influence of Different CME-Diesel Blends on the Injection Parameters of a Common-Rail Direct Injection Diesel Engine
------------------	---------------------------	-----	----------------------------------------------------------------------------------------------------------------------

Table 6. Faculty Research Grant Recipients

“ERDT advances science and technology in the Philippines. It provides funding and technical assistance to graduate students pursuing degrees and conducting research in various engineering fields. While conducting research, a scholar will usually incur a lot of research-related expenses such as transportation, school supplies, etc. By providing this (Faculty Research Grant), ERDT encourages more graduate students to pursue MS/PhD degrees related to science and technology without thinking so much of where to get the necessary funding.”



Willy F. Zalatar
 PhD Industrial Engineering
 De La Salle University
 2015 ERDT Faculty Research Grant Recipient



“The ERDT program (Faculty Research Grant) is instrumental to the completion of my master’s degree which became a starting point for the research activities of my undergraduate advisees.”

Charlimagne M. Montealegre
 MS Chemical Engineering
 UP Diliman
 2015 ERDT Faculty Research Grant Recipient

D. Visiting Professors and Researchers Program

The ERDT Visiting Professor Program helps to invite and support internationally known professors of reputable academic institutions who are willing to give lectures on key areas of engineering education, speak in symposia, help develop new curricula and strengthen existing ones, and conduct R&D collaboration in the ERDT consortium.

Direct beneficiaries of program are ERDT scholars and, indirectly, their hosting institutions. The ERDT consortium will likewise benefit from this through potential R&D collaboration. Gaining of technical knowledge and experimental expertise and transferring of technology are the expected outputs of this component.

Most visiting professors came to give a series of lectures or seminars. Some of them became plenary speakers in the ERDT Congresses and Conferences.

Similar to the Visiting Professor Program, the ERDT Visiting Researcher Program invites and supports researchers from reputable laboratories and research institutions for a short or long term research engagement in a member ERDT consortium university. There were relatively a small number of invited visiting researchers compared to professors because most prospective visiting researchers could not stay for a long time in the Philippines.

To date, there are 87 professors and 4 researchers invited by the ERDT. Table 7 shows the number of invited professors and researchers from 2008 to 2015.

	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
VISITING PROFESSOR	10	21	12	3	9	11	9	12	87
VISITING RESEARCHER	1	2				1			4

Table 7. ERDT Visiting Professors and Researchers 2008 – 2015



Philippine Climate Change Commission Ambassador and 3rd ERDT Congress host Mr. Atom Araullo asks questions to ERDT Visiting Professor Dr. Norman Kerle after the professor's presentation on "Utility of geoinformatics for disaster risk management: linking structural damage assessment, recovery and resilience." The 3rd ERDT Congress was conducted last 25 July 2014 in partnership with DOST PCIEERD.



Professor Emeritus and ERDT Visiting Professor Dr. Makoto Hoki of Mie University talks about Agricultural Mechanization in the Asian Region at the 4th ERDT Congress held last 20 July 2015.

II. RESEARCH AND DEVELOPMENT

While the ERDT HRD addresses the need to produce well-trained engineering researchers, the ERDT Research and Development (R&D) component seeks to address the lack of quantity and quality of research in engineering in the country. It provides opportunities to ERDT scholars to participate and work on projects related to their theses and dissertations that are also aligned with the National Science and Technology Plan and Philippine Development Plan.

The ERDT R&D has focused on the following areas as its research tracks; 1) Energy Track, 2) Environment and Infrastructure Track, 3) Information and Communications Technology Track, 4) Semiconductor and Electronics Track, and 5) Manufacturing and Machinery Track which was launched in 2012 in line with the DOST Makinarya at Teknolohiya Para sa Bayan or Makibayan Project.

The complete list of DOST-funded R&D projects of faculty members of the ERDT consortium from 2008 to 2015 is displayed in the appendix of this report.

III. INFRASTRUCTURE DEVELOPMENT

In addition to the HRD and R&D components, Infrastructure Development was also prioritized by the ERDT Program. If you happen to pass by the CP Garcia Ave., Velasquez St., Magsaysay Ave., and Jacinto St. in UP Diliman, you might have noticed the constructed buildings constituting the National Engineering Complex.

The Infrastructure Development which includes construction and renovation of buildings, laboratories, and classrooms, aims to create an environment that stimulates and supports the academic and research need as well as encourage interactions between different fields.

Table 8 below shows the status of ERDT Infrastructure Development as of November 2015:

Project	Accomplishment	Remarks
Buildings		
Industrial Engineering – Mechanical Engineering Phase I	100%	The building was turned over and is currently being used by ME Department. The 2 departments are currently in the process of procuring services for the construction of IE-ME Building Phase 2.
Electrical and Electronics Engineering	99.9%	The building was turned over by the contractor and is currently being used by the Institute. However, the defective structured cabling system is not yet replaced by the contractor.
Chemical Engineering	99.9%	The building was turned over by the contractor and is currently being used by the Department. The final report regarding Variation Order No. 2 will be submitted by the Office of the Campus Architect to the Diliman Legal Office.
Civil Engineering	98%	The beneficial turnover is scheduled in December 2015. The Institute is planning to hold office and classes at the new building starting January 2016.
Energy and Environmental Engineering	97%	Until now the Office of the Campus Architect has not acquired the building permit. The end-user needs to look for funding due to the unresolved issue on Variation Order No. 2.
Renovation		
Engineering Science and Geodetic Engineering	100%	The offices and rooms are already being used.

Table 8. Status of ERDT Infrastructure Development Projects

IV. ANNUAL EVENTS AND ACTIVITIES

A. CONGRESS AND CONFERENCE

Annual events such as Congress and Conference and other activities are put in place to provide concrete platforms where scholars and faculty advisers can present their research works, exchange ideas, and collaborate with different local and international institutions.

The ERDT Congress is an event where researchers, ERDT scholars, visiting professors and venture capitalists gather and get inspired by plenary lectures of highly distinguished professors and industry leaders all over the world. It also seeks to provide a venue for ERDT scholars to publish their academic works through poster competition. Since 2012, the ERDT has already conducted 4 Congresses with varying themes from patents and commercialization, technopreneurship, and disaster preparedness and resiliency to agriculture.

On the other hand, the ERDT Conference is an event that provides an opportunity for scholars and faculty to present their academic and research works and publish them in a peer-reviewed journal. Since 2008, the ERDT has organized 12 Conferences. The most recent conducted 12th ERDT Conference was held last 9-11 December 2015 in partnership with several agriculture-related organizations. The first seven Conferences were organized solely by the ERDT. In 2012, upon the proposal of the IEEE TENCON Philippines through Dr. Joel Joseph S. Marciano, the ERDT started to venture in partnering with international professional bodies in co-locating its Conferences. The IEEE TENCON, APIEMS, HNICEM, and AUN/SEED-Net were among the professional bodies that ERDT got to partner with as of this date.

Table 9 below describes in details the conducted ERDT annual events from 2008 to 2015.

EVENT	THEME/DESCRIPTION	DATE	NO. OF ATTENDEES	VENUE
CONGRESS				
1st ERDT Congress	The Inventive Engineer: Patents and Commercialization	24 February 2012	740	Philippine International Convention Center, Manila
2nd ERDT Congress	K2M: Knowledge to Market (Engineering to Enterprise)	14 June 2013	591	PICC Manila
3 rd ERDT Congress in partnership with PCIEERD	Science and Technology for Disaster Preparedness and Resiliency	25 July 2014	638	SMX Convention Center, Pasay City
4 th ERDT Congress	Agriculture and Science and Technology for Inclusive Growth	20 July 2015	641	SMX Convention Center, Pasay City
CONFERENCES				
1st ERDT Conference	Setting the Backdrop for the ERDT R&D in the Next 10 Years: Challenges and Opportunities	12 September 2008	400	Renaissance Hotel
2nd ERDT Conference	Synergy in Multi-disciplinary R&D	20 February 2009	400	Diamond Hotel Manila
3rd ERDT Conference	Post Graduate Multidisciplinary Approach to Solving Philippine Problems	11 September 2009	631	EDSA Shangri-la Hotel
4th ERDT Conference	Charting the R&D Roadmap of the Philippines	19 February 2010	638	Sofitel Philippine Plaza
5th ERDT Conference	Philippine Competitiveness through ERDT	10 September 2010	770	Sofitel Philippine Plaza
6th ERDT Conference	Addressing the Grand Challenges Through Engineering Innovations	18 February 2011	700	Diamond Hotel Manila
7th ERDT Conference	Sustainability Through ERDT: Towards a Carbon-Neutral Economy	16 September 2011	755	Manila Hotel
8th ERDT Conference jointly with IEEE TENCON 2012	Sustainable Development through Humanitarian Technology	19-22 November 2012	800	Radisson Blu Hotel, Cebu City
9th ERDT Conference joint with Asia Pacific Industrial Engineering and Management Systems Conference	Operational Excellence Towards Green Growth	3-6 December 2013	500	Radisson Blu, Cebu City
10 th ERDT Conference joint with 7th IEEE International Conference on Humanoid,	Disaster Readiness through Humanitarian Technology	21-22 November 2014	250	Hotel Centro, Puerto Princesa, Palawan

Nanotechnology, Information Technology, Communication and Control, Environment, and Management 2014 IEEE HNICEM ISCIII 2014				
11 th ERDT Conference joint with 8 th AUN/SEED-Net Regional Conference on Electrical and Electronics Engineering	Envision, Enable and Empower Smarter and Resilient Societies	16-17 November 2015	120	Acacia Hotel, Alabang, Muntinlupa City
12 th ERDT Conference joint with 3 rd Regional Forum on Agricultural Mechanization in Asia and the Pacific, 11 th Annual GC and TC Sessions of the UNESCAP-CSAM and 3 rd ASEAN Conference on Agricultural and Biosystems Engineering	Human resource Development for Sustainable Agricultural Mechanization	9-11 December 2015	500	Century Park Hotel, Manila
R&D SUMMIT				
ERDT R&D Summit 2012	Strengthening Synergies between Industry and Academe towards a Needs-Based Research	7 December 2012	250	Diamond Hotel Manila

Table 9. ERDT Congress, Conference and Summit

3rd ERDT Congress ties up with PCIEERD to tackle Science and Technology and Disaster Risk Reduction and Management

After Patents and Commercialization in 2012 and Innovation and Entrepreneurship in 2013, the Engineering Research and Development for Technology (ERDT) in partnership with Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) once again successfully managed to converge its eight-technology inclined universities to discuss the very timely and significant concerns of disaster risk reduction and management at its 3rd ERDT Congress. “*Science and Technology for Disaster Preparedness and Resiliency*” was the theme of this year’s Congress.

Held last July 25, 2014 during the celebration of the Department of Science and Technology (DOST) National Science and Technology Week at the SMX Convention Center, Pasay City, the 3rd ERDT Congress was full of showcase from the jolly yet informative plenary presentations down to the nerve-racking announcement of best posters. Aside from the faculty and scholars of the ERDT consortium universities, officials and researchers from the industry, non-government organizations and other local universities were also present during the whole day event.



ERDT Program Leader Dr. Aura C. Matias welcoming participants of the 3rd ERDT Congress.

The Congress was graced by welcome remarks given by the ERDT Program Leader Dr. Aura C. Matias and opening remarks delivered by DOST Secretary Hon. Mario G. Montejo. These was immediately followed by an opening message from the Climate Change Commission Vice Chairperson and Executive Director Sec. Mary Ann Lucille Sering who shared her insights on the linkage and challenges of climate change and disaster risk management.



Science Education Institute Director Dr. Josette T. Biyo, DOST Secretary Hon. Mario G. Montejo, Climate Change Commission Executive Director Sec. Mary Ann Lucille Sering, and ERDT Program Leader Dr. Aura C. Matias posing for a group shot.

The whole day Congress was jam-packed with outstanding lectures. The first plenary presentation was delivered by Dr. Emmanuel M. Luna, Professor at the University of the Philippines (UP) College of Social Work and Community Development who shown the social aspects of disaster management through his presentation titled *“Reaching Out for Breath: Issues and Challenges for Disaster Risk Reduction.”*

After the first lecture, UP College of Engineering Associate Professor Dr. Enrico C. Paringit explained the DREAM Program, an international award winning project in the field of geo-informatics through his presentation titled *“Mapping the Hazards of our Environment through Nationwide Disaster Risk Exposure Assessment for Mitigation.”*

Another related geo-informatics lecture was delivered by Dr. Norman Kerle, Associate Professor and ERDT Visiting Professor from the Faculty of Geo-Information Science and Earth Observation of the University of Twente, The Netherlands with his presentation on *“Utility of geo-informatics for disaster risk management: linking structural damage assessment, recovery and resilience.”*

On the Philippines’ experience of the devastating Typhoon Yolanda Storm Surge, Professor Dr. Cesar L. Villanoy of the UP Marine Science Institute gave a presentation on how we can best understand the development of such storm surge using a scientific model.

Philippine Institute of Volcanology and Seismology Director Dr. Renato U. Solidum, Jr. shocked and calmed the audience through his frightening yet witty, informative, and comical presentation of *“Preparing for the Big One”* or anticipating and preparing for the massive earthquake that can hit the metropolis anytime. This lecture was then followed by the presentation on the different instruments and devices that can be utilized for early warning systems and this was demonstrated by UP Los Baños Associate Professor Nelio C. Altoveros.

Another comical yet substantive presentation was given by the Green Economist Governor and the Father of Albay Hon. Joey S. Salceda through his lecture titled *“Best Practices of Disaster Risk Management in Albay.”* The function room was filled by laughter as Gov. Salceda presented their best practices using culture-based approaches.

The last plenary lecture was presented by UP Institute of Civil Engineering Professor Dr. Benito M. Pacheco who tackled *“Disaster Risk Management Education in the Philippines.”* Dr. Pacheco showcased how Civil Engineering 10 or the DMAPS (Disaster Mitigation, Adaptation and Preparedness) was conceptualized and implemented in UP as a general course where students from various disciplines can enrol into and come up with a multi-disciplinary projects that can contribute to disaster risk management.

Before the day ends, a poster session was held to display ERDT scholars' research works and to invite interaction from co-scholars and other participants through question and answer and further suggestions to improve their studies if needed. Announcement of best posters succeeded the session. The scholars who won this year's best posters were Nikko M. Barongan from De La Salle University for the Energy Track (*Power Output Optimization of DSSC with FeNi Codopant, TiO-2 Photoanode and Carbon as Counter Electrode*), Rowena B. Carpio from UP Diliman for the Environment and Infrastructure Track (*Growth, Lipid Content, and Lipid Profile of the Green Alga, *Chlorella vulgaris* (Beij.), Under Different Concentrations of Fe and CO₂*), Diogenes Armando D. Pascua from the Mindanao State University – Iligan Institute of Technology for the Information, Communication and Technology Track (*Development of a Mobile Robot as a Test Bed for Tele-Presentation*), Angelo R. Dela Cruz from UP Diliman for the Semiconductor and Electronics Track (*Adaptive Intra-Refresh rate Algorithm for Joint Source-Channel Video Coding Over Wireless Channel*), Jayryn D. Javier from the Mindanao State University – Iligan Institute of Technology for the Manufacturing and Machinery Track (*Thermodynamic Evaluation of the Extraction of Lead from Assaying Waste Cupels*), and Kenneth Roi P. Toral from De La Salle University for the Best Poster that conforms to the 3rd ERDT Congress' theme (*Structural Retrofitting of Reinforced Concrete Beams using Exterior Post Tensioning*).



Participants grilling poster entries of ERDT scholars.

The Congress ended up with the closing remarks delivered by PCIEERD Executive Director Dr. Rowena Cristina L. Guevara.

The Congress was hosted by Climate Change Commission Ambassador and ABS-CBN news correspondent Mr. Alfonso Tomas P. Araullo, and former ERDT scholar Dr. Joel Ilao and Engr. Irene Ubay-Anongphouth who are both current faculty members of the De La Salle University.

4th ERDT Congress focuses on the role of S&T in boosting Philippine Agricultural Competitiveness and Innovation

Food security and a continuing growth in world population are two mega-needs that interact in a way that they can only become more palpable and not eclipsed by other needs. These two needs require multidisciplinary approaches, such as those that fuse science and technology with socioeconomics. For Engineering Research and Development for Technology (ERDT) to impact food security, it must combine S&T, agriculture and social and economic factors. In particular, inclusive growth means among other things equal access to markets, opportunities and resources. The role of the ERDT is to develop not only technologies but also a framework (e.g., intellectual property) by which these solutions can be made available to all sectors of society.



DOST Secretary Hon. Mario G. Montejo shares Philippine S&T programs and projects for agricultural competitiveness and innovation.

Recognizing the pressing concerns of the agricultural sector and the possible contributions that the science and engineering community can provide, the ERDT with its two lead agricultural consortium universities Central Luzon State University and University of the Philippines Los Baños successfully organized

and conducted 4th ERDT Congress last 20 July 2015 at the SMX Convention Center, Pasay City to initiate discussions and collaborations to tackle various efforts done and needed to be undertaken to boost Philippine agricultural competitiveness.

The Congress' theme was "Agriculture and Science and Technology for Inclusive Growth."

The Congress started through a welcome remarks delivered by ERDT Program Leader Dr. Aura C. Matias and opening messages by the Department of Science and Technology Secretary Hon. Mario G. Montejo and Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) Acting Executive Director Dr. Reynaldo V. Eborá.

Among the experts who delivered plenary speeches in this year's Congress were Philippine Center for Postharvest Development and Mechanization Director Rex L. Bingabing who discussed Farm Mechanization for Food Security, Mie University Professor Emeritus Makoto Hoki who talked about Agricultural Mechanization in the Asian Region, and Phil-LiDAR 2 Project Program Leader Ariel C. Blanco who tackled LiDAR and Geospatial Applications for Agricultural Land Resources Management.



Winners of Posters Competition pose for a group shot with PCAARRD Acting Exec. Dir. Dr. Reynaldo V. Eborá and ERDT Program Leader Dr. Aura C. Matias.

The Congress was tagged as one of the official pre-events of the National Science and Technology Week 2015. It ended up with the awarding of Best Posters and closing remarks delivered by ERDT UPLB Project Leader Dr. Arnold R. Elepaño.

8th AUN/SEED-Net Regional Conference on Electrical and Electronics Engineering co-located with 11th ERDT Conference on SME, ICT and Energy

The Electrical and Electronics Engineering Institute of the University of the Philippines Diliman, together with the DOST-Engineering Research and Development for Technology (ERDT) hosted the 8th ASEAN University Network-Southeast Asia Engineering Education Development Network (AUN/SEED-Net) Regional Conference on Electrical and Electronics Engineering (RCEEE) 2015, co-located with the 11th Engineering Research and Development for Technology (ERDT) Conference on Semiconductor Materials and Electronics, Information and Communications Technology and Energy, held at Acacia Hotel, Filinvest City, Alabang, Metro Manila, 16 to 17 November.



ERDT Program Leader Dr. Aura C. Matias, AUN/SEED-Net Acting Executive Director and Chief Advisor Dr. Ueda Tamon, DOST SEI Director Dr. Josette T. Biyo and UP Diliman EEI Director Dr. John Richard E. Hizon deliver their respective messages.

The joint conferences, with the theme “Envision, Enable, and Empower Smarter and Resilient Societies,” were participated in by more than a hundred representatives from AUN/SEED-net member institutions, ERDT scholars, and enthusiasts.

The AUN/SEED conference is an annual conference that serves as a “platform to share the most updated technology and research of regional common issues, as well as publicize research works” of the AUN/SEED-net member institutions. It also allows opportunities for participants “to discuss future collaborations and activities related to each engineering field.” The ERDT conference, on one hand, is also a regular event for ERDT faculty and scholars to showcase their academic and research works.



Participants of the 8th AUN/SEED-Net RCEEE and 11th ERDT Conference pose for a group photo.

The RCEEE 2015 and the 11th ERDT Conference featured five distinguished invited speakers. On the first day, Prof. Yukinori Kobayashi of Hokkaido University talked about “Robot Technologies for Smart Agriculture” while Prof. Tomoaki Ohtsuki of Keio University discussed “Self Organization in Wireless Communications”. The third speaker, Dr. Delfin Jay Sabido IX of IBM Systems, shared information on ongoing research and development activities in the local IT industry through his talk, “Analytics Solutions for Philippine Challenges in Disaster Preparedness, Agriculture and Healthcare.” On the second day, Prof. Costas Spanos of University California, Berkeley discussed collaborative research activities that address large-scale societal needs through his talk, “In the Interest of Society - collaborative research models and their application towards developing sustainable infrastructure in the tropics;” while Prof. Junichi Takada of Tokyo Institute of Technology shared the latest developments in “TV White Space for Rural Connectivity”. Apart from the keynote speakers, the said conferences were also graced by the presence of the Acting Executive Director and Chief Advisor of AUN/SEED-net, Dr. Ueda Tamon; Director of Science Education Institute of the National Department of Science and Technology (DOST-SEI), Dr. Josette Biyo; and Dean of the UP College of Engineering and Program Leader of ERDT, Dr. Aura Matias; and Director of UP EEI, Dr. John Richard Hizon, who delivered the opening messages on the first day.



Dr. Delfin Jay M. Sabido IX, R&D Executive of IBM Systems, presents "Analytics Solutions for Philippine Challenges in Disaster Preparedness, Agriculture and Healthcare" during plenary sessions.

Out of 89 papers presentations, the joint conferences gave out nine Best Paper Awards, which were handed out during the conference banquet. Listed below are the Best Paper Awardees:

- Detection of Micro-crack Defect on Eggshell by Means of Candle Lighting and Anisotropic Diffusion, by M.Z. Abdullah and M.H. Abdullah, Universiti Sains Malaysia
- Analysis of Proxy-Based Passive Duplicate Address Detection for Wireless Sensor Networks, by D. Blouin and S. Gordon, Thammasat University
- Investigation of Class J-Tuned Doherty Amplifier, by B.E. Esteves and M.C. Purisima, University of the Philippines Diliman
- Conversion Efficiency of Maximum Power Point Tracking for Photovoltaic String Under Partial Shading, by E. Leelarasmee and D. Benjardpongchai, Chulalongkorn University
- Growth Mechanism of Type II GaSb/GaAs Quantum Dot on (001) Ge Substrates by Zon, T. Paempool, P. Prongjit, S.S. Han, S. Kiravittaya, S. Sopitpan, S. Thainoi, S. Kanjanachuchai, S. Ratanathammaphan, and S. Panyakeow, Chulalongkorn University
- Study of Hybrid Methods for Melody Extraction of Polyphonic Signals for Philippine Indigenous Music, by J. Disuanco, V. Tan, and F. de Leon, University of the Philippines Diliman
- A Novel Power-Efficient HD3 Cancellation for High Linearity, Pseudo-Differential OTA, by M.D.I Alea, J.R. Hizon, and L. Alarcon, University of the Philippines Diliman
- Reliability and Material Characterization of Sintered Ag Die Attach on Varying Nitrogen levels for High Temperature Microelectronics Application, by R. Clemente and B. Basilia, Mapua Institute of Technology

- A Modified RF to DC converter CMOS rectifier design for Energy Harvesting, by J.M. Tolete and J. Hora, Mindanao State University - Iligan Institute of Technology

As part of the conference program, the AUN/SEED delegates were brought to the Department of Science and Technology (DOST) compound in Bicutan, Taguig for a technical tour of the Electronics Product Development Center (EPDC) and the Advanced Device and Materials Testing Laboratory (ADMATEL). The EPDC aims to further enhance the local electronics industry's global competitiveness by supporting the design, prototyping and testing of electronics hardware and software. A key facility of the EPDC is a 10 meter semi-anechoic chamber that supports standards-based Electromagnetic Compatibility testing of electronic products. The ADMATEL, on the other hand, is a facility that houses sophisticated equipment such as Focused Ion Beam-Field Emission Scanning Electron Microscope (FIB-FESEM), Auger Electron Spectroscopy (AES), and Time-of-Flight Secondary Ion Mass Spectrometer, which support failure analysis and reliability testing requirements of the local semiconductor and electronics industry. The technical tour served as an opportunity for the DOST to showcase innovative research and development outputs of the country - from processed food products and textiles - along with the state-of-the-art test facilities that support local IT, electronics and semiconductor industries.

12th ERDT Conference highlights Human Resource Development in Agriculture

The 12th Engineering Research and Development for Technology (ERDT) Conference co-located with 11th Annual Technical Committee and Governing Council Meetings of the United Nations Economic and Social Commission – Center for Sustainable Agricultural Mechanization (UNESCAP CSAM), 3rd Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific, and 3rd ASEAN Conference on Agricultural and Biosystems Engineering was held last 9-11 December 2015 at the Century Park Hotel, Manila.

Attended by hundreds of foreign and local participants, the joint conferences successfully discussed pressing issues in the field of agriculture and agricultural mechanization. The theme of the conference was "Human Resource Development for Sustainable Agricultural mechanization".



ERDT Program Leader Dr. Aura C. Matias delivers her welcome remarks at the 12th ERDT Conference co-located with other three events.

The joint conferences aimed to highlight the role of human resource development as a strategic pillar in the attainment of a sustainable agricultural mechanization in Asia and the Pacific, establish linkages and exchange of information between and among the countries in Asia and the Pacific on agricultural mechanization and human resource development, and facilitate cooperation actions and mechanisms between and among different stakeholders in the field of human resource development for agricultural mechanization within the region.

Aside from ERDT, the joint conferences were organized by UNESCAP CSAM, Board of Agricultural Engineering of the Philippine Professional Regulation Commission, University of the Philippines – Los Baños College of Engineering and Agro-Industrial Technology, Philippine Council for Agriculture and Fisheries, and the Philippine Society of Agricultural Engineers.

B. BENCHMARKING

ERDT meets Southeast Asian International Partner Universities

The Department of Science and Technology – Engineering Research and Development for Technology (DOST - ERDT) conducted collaboration and synchronization meetings with the Officials of three International Partner Universities in the Association of Southeast Asian Nations (ASEAN) Region last June 22-27, 2014. These three universities were the Institut of Teknologi Bandung in Bandung, Indonesia; University of Malaya in Kuala Lumpur, Malaysia; and Chulalongkorn University in Bangkok, Thailand.

The objectives of the meetings were to present the current engineering education system of the University of the Philippines (UP) and the ERDT program, to discuss synchronization of academic and curricular programs in the ASEAN Region; to discuss forms and avenues of institutional research collaborations to address common regional issues; and to discuss student, faculty, and staff mobility among ASEAN University Partners during the ASEAN integration.

Included in the agenda of the meetings were discussion and presentation of ASEAN education system; its current status, challenges and opportunities; formulation of strategic programs; and visit to laboratories and facilities.

With the approval of UP Diliman Chancellor Dr. Caesar A. Saloma, the ERDT team was composed of UP COE Dean and ERDT Program Leader Dr. Aura C. Matias; UP COE Associate Dean for Instructions and Research and ERDT – UP Diliman Project Leader Dr. Augustus C. Resurreccion; DOST Science Education Institute Director Dr. Josette T. Biyo; UP COE Institute of Electrical and Electronics Engineering Director Dr. Joel Joseph S. Marciano, Jr.; UP COE Department of Mining, Metallurgy and Materials Science Engineering Chairperson Dr. Magdaleno R. Vasquez, Jr.; UP COE Department of Mechanical Engineering Chairperson Dr. Menandro S. Berana; and ERDT Science Research Specialist II Mr. Pepito T. Dizon.

Institut of Teknologi Bandung Bandung, Indonesia

The coordination meeting at the Institut of Teknologi Bandung was held on June 23, 2014 at Meeting Room A (Rapim A), CCAR Building, Institut of Teknologi Bandung, Jalan Tamansari No. 64, Bandung, Indonesia.

At the Institut of Teknologi Bandung, the ERDT team met the officials of the Faculty of Engineering led by Prof. Dr. Ir. Hasanuddin Z. Abidin, M.Sc., Vice Rector for Communication, Partnership, and Alumni. Other officials present were Prof. Sri Widiyantoro, M.Sc., Ph.D., Dean of Faculty of Mining and Petroleum Engineering; Prof. Ir. Bermawi P. Iskandar, M.Sc., Ph.D., Dean of Industrial Technology; Prof. Dr. Ir. Suwarno, MT, Dean of School of Electrical Engineering and Informatics; Prof. Dr. Ir. Yatna Yuwana Martawirya, Dean of Faculty of Mechanical and Aerospace Engineering; and Prof. Ir. Suprihanto, Ph.D., Dean of Civil and Environmental Engineering.



The ERDT team with the Officials of the Institut of Teknologi Bandung in a group shot. Seating besides UP COE Dean and ERDT Program leader Dr. Aura C. Matias is ITB's Vice Rector for Communication, Partnership, and Alumni Prof. Dr. Ir. Hasanuddin Z. Abidin.

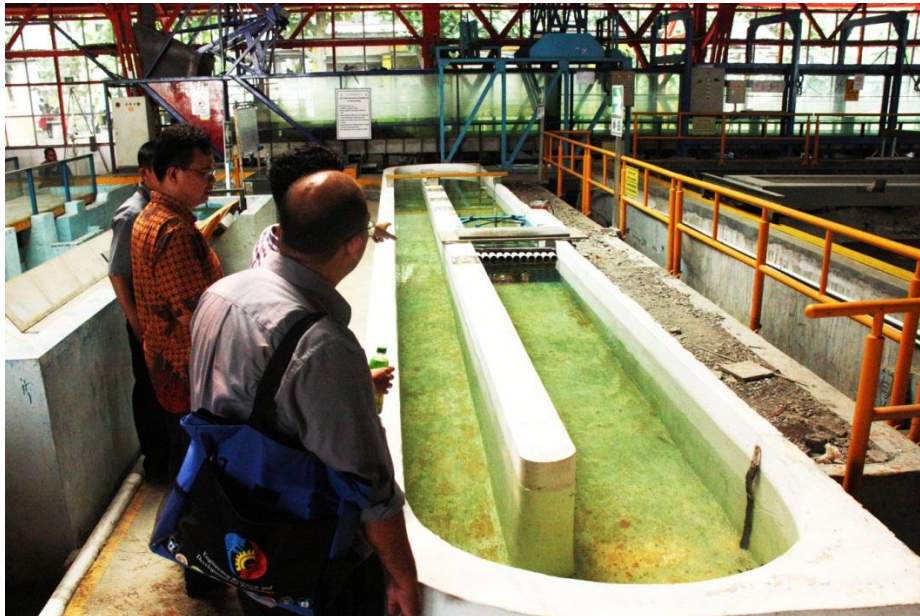
During the meeting, Dr. Matias presented the objectives of the coordination meetings, UP COE Curricular Programs, recent changes in the Philippine education system (K-12 and Academic Calendar Shift), ERDT program, and the points for discussion with the international partner universities like further strengthening of existing collaboration, research collaboration in common regional issues, student, staff, and faculty exchange and mobility, and other forms of collaboration.

After the presentation of Dr. Matias, Institut of Teknologi Bandung presented their degree programs including accreditation and existing memoranda of agreement with industry and other universities outside Indonesia.



UP COE Institute of Electrical and Electronics Engineering Dr. Joel Joseph S. Marciano, Jr. having counterpart discussion with Institut of Teknologi Bandung Dean of School of Electrical Engineering and Informatics Dean Prof. Dr. Ir. Suwarno, MT.

After the presentations, the ERDT team had a one on one discussion with counterparts. The discussion continued as the tour of laboratories and facilities started. The ERDT team was able to visit the laboratories of the Faculty of Civil and Environmental Engineering including Ocean (Coastal), Water Resources, and Water Treatment; laboratories of Faculty Mechanical and Aerospace Engineering including materials engineering; Laboratories of School of Electrical Engineering and Informatics including electronics and robotics; and Laboratories of Mining and Petroleum Engineering.



Institut of Teknologi Bandung Dean of Civil and Environmental Engineering Prof. Ir. Suprihanto, Ph.D. shows to UP COE Associate Dean for Instructions and Research Dr. Augustus C. Resurreccion the features of their Ocean (Coastal) Engineering laboratory.

University of Malaya Kuala Lumpur, Malaysia

The coordination meeting at the University of Malaya was held on June 25, 2014 at The Cube Level 2, Faculty of Engineering, University of Malaya, Kuala Lumpur, Malaysia.

At the University of Malaya, the ERDT team met the officials of the Faculty of Engineering led by Deputy Dean for Research Assoc. Prof. Dr. Hazlie Mokhlis, Head of the Department of Mechanical Engineering Dr. Noor Azizi Bin Mardi, Head of the Biomedical Engineering Department Dr. Ahmad Khairi Abdul Wahab, Head of the Electrical Engineering Department Dr. Hazlee Azil Illias, and other faculty members and staff.



The ERDT team in a group photo with the officials, faculty members and staff of the University of Malaya's Faculty of Engineering. Seating on the right side of Dr. Matias is Faculty of Engineering Deputy Dean for Research Assoc. Prof. Dr. Hazlie Mokhlis.

The coordination meeting started with an audio visual presentation from the University of Malaya boasting the University's significant increase in publication in the recent years, accreditation, and international programs. After which, an audio visual presentation of the Faculty of Engineering was also presented to the ERDT team.

It was then followed by the presentation of Dr. Matias. Similar to Institut of Teknologi Bandung, Dr. Matias began her presentation by stating the objectives of the coordination meetings and then she continued by discussing UP COE Curricular Programs, recent changes in the Philippine education system (K-12 and Academic Calendar Shift), ERDT program, and the points for discussion with the international partner universities like further strengthening of existing collaboration, research collaboration in common regional issues, student, staff and faculty exchange and mobility, and other forms of collaboration.

After the presentations, the two teams discussed mainly how University of Malaya was able to produce such numbers in the publication, attain a good faculty profile, have enough research funding, and create possible collaborations between UP and University of Malaya thru sandwich programs, faculty visits and talent exchange.

After the discussions, the ERDT team visited laboratories on surface engineering, materials engineering, and electrical engineering.



University of Malaya's Faculty of Engineering Deputy Dean for Postgraduate Studies Prof. Dr. Saad Mekhilef (wearing gray polo on the left side of the photo) shares their practices on increasing number of publication while conducting the electrical engineering laboratory tour for the ERDT team.

Chulalongkorn University Bangkok, Thailand

The first part of coordination meeting at the Chulalongkorn University happened on June 26, 2014 at Suan Ruam Jai 1, building 3, Chula Engineering, Chulalongkorn University, Bangkok, Thailand. On the following day, June 27, 2014, a courtesy call with the President and Vice President of the Chulalongkorn University and tour at University Library and Museum were held.

June 26, 2014

Meeting with the Faculty of Engineering

The ERDT team met the officials of the Faculty of Engineering, Chulalongkorn University headed by Asst. Prof. Dr. Manoj Lohatepanont, Associate Dean for Communication and International Affairs and Dr. Phongphaeth Pengvanich, Assistant Dean for Communication and International Affairs, together with the representatives from the Department of Electrical Engineering, Department of Civil Engineering, Department of Environmental Engineering.

An audio visual presentation of the Chulalongkorn University and its Faculty of Engineering was shown to start the meeting. It was followed by the presentation of Dr. Matias following the same format as to what she has presented at the Institut of Teknoligi Bandung and University of Malaya.

After the presentations, both teams discussed further the needed steps and strategies for collaboration to strengthen the relationship between the two Universities and then proceeded to laboratories visit. Among the laboratories

visited were the electrical engineering, civil engineering, and environmental engineering including its fire engineering facility.



The Chulalongkorn University listens carefully while UP COE Dean and ERDT Program Leader Dr. Aura C. Matias presents the Philippine education system including recent developments like the K-12 program and the academic calendar shift.

June 27, 2014

Meeting with the President of Chulalongkorn University

On the second part of the coordination meeting, the ERDT team was welcomed by Chulalongkorn University President Prof. Pirom Kamolratanakul, M.D., Vice President for Academic Affairs Asst. Prof. M.R. Kalaya Tingsabadh, Ph.D., and Assistant to the President and Acting Director of Office of International Affairs Asst. Prof. Kriengkrai Boonlert-U-Thai, Ph.D. President Pirom Kamolratanakul, M.D. affirmed its continuing support for further collaborations with the University of the Philippines. After all, the UP and Chulalongkorn University have been friends for a long time. It was discussed during this meeting the need to further increase faculty and student exchanges through the sandwich program and postdoctoral fellowships. Vice President Asst. Prof. M.R. Kalaya Tingsabadh, Ph.D. immediately offered opportunities for postdoctoral fellowships with funding support to faculty members of the UP Diliman College of Engineering. After the meeting, the ERDT team was given a tour of the University Library and the newly-built University Museum.



UP COE Dean and ERDT Program Leader Dr. Aura C. Matias receives a token of appreciation from Chulalongkorn University President Prof. Pirom Kamolratanakul, M.D.

General Observations on the Coordination Meetings with the Three International Partner Universities

Institut Teknologi Bandung	University of Malaya	Chulalongkorn University
Infrastructure		
Laboratory space: extensive research activities, building an 8-storey facility for extractive technologies (mining, petroleum, geothermal), Facility for microelectronics: design to fabrication; very good facility for coastal engineering, civil engineering and environmental engineering	There is sufficient laboratory space for extensive research activities for all engineering fields. There is office/workspace for students.	There is sufficient laboratory space for extensive research activities for all engineering fields. There is office/workspace for students. The faculty of Engineering has several buildings.
Faculty		
Faculty profile is 80 to 90% with PhD degree. The minimum degree requirement to hire is PhD. Teaching load is only 1 to 2 courses per term with low faculty- student. The faculty members are very open to collaboration.	Faculty profile is 80 to 90% with PhD degree. The minimum degree requirement to hire is PhD, with possibility to hire best foreign faculty. Teaching load is only 1 to 2 courses per term with low faculty- student. The faculty members are very open to collaboration. There is no limit in number of advisees. This depends on faculty	Faculty profile is 80 to 90% with PhD degree. The minimum degree requirement to hire is PhD, with possibility to hire best foreign faculty. Teaching load is only 1 to 2 courses per term with low faculty- student. The faculty members are very open to collaboration. The number of advisees per

	reputation/capacity/seniority to mentor students.	faculty is around 5 to 10.
Graduate Program		
Publication requirement for Master's and Doctoral level.	Publication requirement for Master's and Doctoral level. It was noted that 10 – 20% of BS graduates go to graduate school.	Publication requirement for Master's and Doctoral level. It was noted that 10 – 20% of BS graduates go to graduate school.

Strengths and areas to pursue for collaboration in the Three International Partner Universities

Institute Teknologi Bandung

Strengths: geothermal engineering and petroleum engineering. Conduct department/course specific benchmarking mission and compare courses and research activities with partner universities. The UP Department of Mining, Metallurgical and Materials Science Engineering is interested in looking at possible offering of courses related to petroleum engineering and geothermal engineering especially at the graduate level. One-on-one meeting is very effective. Funding may come from BCDA or realignment of Post-Doc funds from ERDT.

Universiti Malaya

Strengths: publication, electronics, materials and biomedical engineering. Research mission such as short term immersion programs for faculty and students (even undergraduate students) in the fields of biomedical, materials and electronics engineering can be done.

Chulalongkorn University

Areas to pursue for benchmarking: Civil Engineering (including Fire Engineering) Electrical, Robotics, Environmental and Biomedical Engineering

Learnings from the Coordination meetings with Southeast Asian International Partner Universities

In order for the UP Diliman College of Engineering to be competitive globally and ready for the ASEAN Integration in 2015, the following are suggested by the ERDT team. These suggestions were derived from the learning points of the conducted coordination meetings.

Internationalization strategy

Currently, there exists no agreement with the Institut of Teknologi Bandung and University of Malaya. In the case of the Chulaongkorn University, an existing Memorandum of Agreement (MOA) has expired already.

The only collaboration with the three universities is thru the AUN/SEED-Net

JICA Program where the three Universities are members. However, the relationship is not that strong as faculty members only interact when there is a regional conference organized by the AUN/SEED-Net.

There is a need for the implementation of existing MOA and creating new ones with the three universities to promote research collaboration and mobility and exchange of students and faculty among Universities. There is also a need to market the programs of the college to the region through the existing AUN/SEED-Net network and create other forms of collaborations. The AUN/SEED-Net funding should also be utilized to address common regional issues which could be a venue for the faculty of the three Universities to conduct research together addressing regional problems. Co-authorship of papers in ISI journals can also be done to encourage research collaboration.

There might be a need to hire foreign professors and researchers, as practiced in University of Malaya and Chulalongkorn University. Thus, it is recommended to review the university rules on hiring/employing foreign professors and researchers.

The exchange of student and faculty can be supported through the ERDT sandwich program (with possible credits) and postdoctoral fellowships or even short-term research immersion for both faculty and students. This exchange is relatively cheaper than sending ERDT students and faculty to USA or Europe. The output of this student and faculty exchange is an intensified common research with publications.

Faculty Development and increasing the quality of the faculty profile

There is a need to increase the faculty members with advanced degrees leading to an all PhD faculty. Stricter requirements for tenure and promotion that would require sufficient proof of international publications must be enforced. A comprehensive faculty development plan is needed. Hiring of new faculty should require a minimum of Master's or even a PhD degree.

Improving a research culture in the College of Engineering

The drive to increase and even require publications along with graduate student mentoring is all founded on a commitment and drive to instill a "culture of research" within departments, the College and the University as a whole. As observed in the three Universities, inculcating a culture of research and development in the academe would require:

1. **Physical Infrastructure** – Physical space to conduct the experiments and research, with appropriate equipment and tools. Without such physical space, it will be difficult to produce a research output. In addition, the appropriate equipment should be in place. There is an immediate need to finish all the infrastructure for both research

facilities and laboratories and as well as for instruction and research with well-defined laboratories that accommodate our senior undergraduate and graduate students, especially the ERDT scholars. In case the equipment needed is not available, sharing of equipment with partner universities could be done.

- 2. Manpower and human resources** – To boost research and development, there is a need to increase the number of faculty members with advanced degrees to be research adviser, hire foreign researchers with impressive qualifications, and increase the number of full time graduate students as part of the laboratory. To become a research university, graduate students (Master's and PhD) are the human resources that we need and the human capital to boost our research publications and output. Graduate students must be encouraged to produce publications through domestic publication (e.g. PEJ, Science Diliman, Philippine Science Letters, etc.) and special issues of PEJ or selected papers from national conferences (e.g. IMEP, SMEP, MicrosPhil, ERDT Congress, PCA Colloquium, etc.)

To become a research university, I think we should encourage and eventually impose the publication requirement especially at the PhD level. ERDT can also impose similar rules for MS (local publication) and PhD (local and ISI publications).

- 3. Research funding** – The faculty members should through the department/institution be active in submitting proposals that would fund the research of the department/institute/laboratory and fund as well the research of the graduate students. Expand/add facilities through increased R&D budget through funded projects with funds coming from the University or from the National government (e.g., DOST, DENR, DPWH). There should be more institutional linkage and collaboration with DPWH, DENR, DOTC, and DOE. Instituted and Departments of the UP Diliman College of Engineering should serve as the research arm of these government agencies.
- 4. Industry Collaboration** – The focus of graduate researches should be industry needs-based; obtaining new or improved product. Faculty members should be actively involved in the industry-academe partnership.
- 5. Incentive and rewards** – To be an active research university, more research faculty loading must be prioritized than teaching.
- 6.** Recognizing English as the medium of instruction in teaching engineering in the Philippines, there is a need to maintain and even enhance technical writing competency. The College can make this

function a part of the College Publication Board or it can create a committee with enough budget to perform such task. Reasonable incentive should also be considered.

Additional strategies for collaboration can be made thru:

- a. Use of online facilities for collaboration
- b. Joint seminar/programs or possible joint degrees
- c. Research collaboration thru joint R&D projects through AUN/Seed-Net joint projects, jointly funded by DOST and partner agency, e-ASIA JRP
- d. Joint publications can be designated as local, regional and international; local publications must not be discounted to help in effectively addressing local problems

How do we promote a culture of research? Doing research requires intellectual and emotional maturity on the part of both faculty and student. It starts with the faculty. When we hire faculty, do we actually hire them to do research? Or do we just expect them to teach. Perhaps the latter, since our entry point for faculty is still BS level. We should be hiring people with graduate degrees already. They can be expected to start mentoring and advising graduate students. But where do we get them if we do not produce enough? Proverbial chicken and egg, but the cycle can be broken. One good way to start doing this is to:

1. Establish straight MS or PhD programs but the big difference would be to having ERDT support. Our BS graduates who are faculty prospects could be goaded into full time PhD study (instead of MS) and given ERDT PhD scholarships.
2. Explore joint degree, dual degree or co-tutelle programs with other universities that can both relieve our faculty of some teaching load and possibly speed up their progress in graduate study too.

Additional points on possible areas of collaboration and ways to improve the culture of research in UP:

- Joint hosting of regional/international conferences/symposia
- Distance learning/conference/consultation via skype, etc.
- Explore the possibility of faculty members of partner universities to be external reviewers of graduate thesis/dissertation particularly for PhD dissertation
- Improve identity as a college – promotional materials: brochures, active internet presence and social media, official business card, tokens, and even jacket or equivalent similar to Chulalongkorn University
- To increase the publication in UP, incentives such as publication award through the ERDT program separate from the research dissemination grant. Special issue of Philippine Engineering Journal for papers of ERDT scholars or to come up with ERDT Scientific Journal
- Student exchange with credits. “Ronpaku” system for our faculty who

cannot leave the university for a long time, short-term visiting scholars (professors, researchers, students), Undergraduate internships

C. ROAD SHOWS

Road show is the primary promotional activity of the ERDT. Through the road shows, the ERDT tries to disseminate the program and hopes to recruit potential scholars. Road shows are usually conducted in other universities and colleges and even in board review centers. The road show also serves as an institutional linkage mechanism of the ERDT program.



Dr. Ireneo C. Agulto, ERDT-CLSU Project Leader (left photo) presents the ERDT program at Benguet State University. Ms. Gladys Cruz (right photo) discusses the ERDT Scholarship Program and DLSU Graduate Programs to the fourth and fifth year engineering students of University of Negros Occidental-Recoletos.

The list of road shows conducted in 2014 and 2015 are shown in the appendix of this report.

D. CONSORTIUM ACTIVITIES

USC conducts ERDT Scholars Colloquium aka “IP and Pizza Day”

The USC ERDT Scholars Colloquium aka “IP and Pizza Day” provides ERDT scholars the opportunity to present topics of interests and progress of their research work to fellow students and faculty mentors and engage with one another in a setting that is relatively informal but allows the fullest of intellectual exchanges. It is usually conducted twice a month and usually falls on Friday.



Engr. Rocky de Ramos (left photo) and Engr. Mark Vincent Abad (right photo) present their respected research topics in the USC ERDT Colloquium.

There are two presenters in each session. At the end of the session, students receive feedback on their dissertation, career paths, and inputs from the participants. The USC ERDT Project Leader, USC ERDT Coordinator and USC ITSO Patent Agents address questions and issues that pertain to professional growth, Intellectual property matters, and fund sources that can be tapped for specific projects. Of course, pizza is served.

Table 10 below indicates the speakers, dates and topics presented.

Intellectual Property and Pizza Day		
Date	Presenter	Title of Presentation
1/16/2015	Engr. Rocky Marius de Ramos	Extraction of High Value Product from Pineapple Peel
	Engr. Mark Vincent Abad	Mango Husk Reinforced Concrete
2/6/2015	Engr. Jaybee Lacea	A triangular Profile Modulation Using Switched-Capacitor Scheme of 0.78 um CMOS Technology
	Engr. Sheila Jungco	A low Power Oscillator for Wireless Sensor Network Application using 90 nm Technology
2/20/2015	Engr. Michael James Quidilla	Numerical Calculations and Analysis using Mathcad
	Engr. Ayn Cyril Tiangco	A design of a High Precision CMOS Bandgap Reference

Table 10. USC Intellectual Property and Pizza Day List of Presenters

USC ERDT Scholars attend Technopreneurship Workshop

ERDT scholars of the University of San Carlos together with faculty members and selected fifth year undergraduate students attended a one-week Technopreneurship Workshop at the University of San Carlos Talamban Campus from February 21 to February 28, 2015. The workshop was conducted by Professor Daniel Lacks, a Visiting Professor from the Case Western Reserve University (CWRU) in Cleveland, Ohio of the United States. The visit of Professor Lacks was sponsored by USAID STRIDE Program.



Prof. Daniel Lacks of Case Western Reserve University conducting workshop to USC ERDT Scholars, Engineering Faculty Members and Selected undergraduate students.

E. ENGINEERING FORUM SERIES

In February 2013, professors from the Case Western Reserve University of the United States of America requested the UP COE through the ERDT to provide a venue where they can share their research works and available opportunities in their university. After that, a series of requests from other foreign universities came to the ERDT office for the same reason. In the anticipation of future similar activities, the ERDT took the opportunity and decided to institutionalize ERDT Engineering Forum Series to provide concrete venue for foreign universities to deliver talks on various research topics. Aside from delivering talks, the forum series give ERDT scholars the chance to meet foreign faculty members, learn engineering in an international perspective, and establish possible collaboration through R&D projects or exchange studies.



Professors from the Case Western Reserve University and ERDT Program Leader Dr. Aura C. Matias pose for a group photo after the 1st ERDT Engineering Forum Series held last 12 February 2013 at the Engineering Theater, UP Diliman.

The conduct of Engineering Forum Series has actually led to availment of Sandwich Program of some local graduate scholars, invitation for faculty members to visit foreign universities and to deliver a talk on a given research topic, and other activities such as the think[box] Manila 2015: Innovation Symposium and Competition which was administered by ERDT with several partner institutions both local and international.



Dr. Eric Pallant of Allegheny College, USA answers queries from the audience after delivering his presentation on rehabilitating polluted rivers at Engineering Forum Series held last 22 September 2015 at UP College of Engineering.

As of November 2015, there are already 20 fora conducted under the Engineering Forum Series. Table 11 below shows the list of fora held from 2013 to 2015.

Series	Date	Venue	Speaker(s)	Partner Institution(s)	Forum Title
2013					
1	12 February 2013	Engineering Theater	Dr. Jeff I. Duerk, Dr. Daniel Ducoff, Dr. Gary E. Wnek, Dr. Rigoberto Advincula	Case Western Reserve University	Engineering Education in the 21st Century, International Engineering Experience, Economic Competitiveness, Developing Centers of Innovation, Graduate School, Nanomaterials, Biotechnology and Biomedical Engineering
2	4 March 2013	Geodetic Engineering Theater	Dr. Marian G. Mccord, Dr. Laura Bottomley, Dr. Francis De Los Reyes III	North Carolina State University	Textiles for Global Health and Well-being, K-12 Engineering Education and Women in Engineering, and Research in Water Resources and Environmental Engineering at North Carolina State University

3	10-13 June 2013	UPD, MIT, DLSU	Dr. Gary E. Wnek	Case Western Reserve University	Thinking Small About Polymer Fibers: Lessons from Biotechnology and Applications in Medicine
4	9 July 2013	Engineering theater	Dr. Ariel Pinto (Balik Scientist)	Old Dominion University	You and the ERDT Research Enterprise: Your Research as Piece of a Big Jigsaw Puzzle "The Lost Graduate Student: Mentor, Advisor, and You"
5	27 August 2013	Engineering Theater	Dr. Louis Angelo M. Danao, Dr. Joanna Z. Resurreccion, Dr. Eugene Rex L. Jalao, Ms. Sharon Maria S. Eposo-Betan	UP College of Engineering	Thesis Writing Workshop and Scholars' General Assembly Practical Tips on Writing Thesis/Dissertation
6	28 November 2013	Geodetic Engineering	Prof. Shimon Nof	Purdue University	Sustainability and Resilience in Supply Networks
7	12 December 2013	Geodetic Engineering	Prof. Toshifumi Igarashi	Hokkaido University	Groundwater Flow and Chemistry Around Tailings Dam of a Closed Mine and Countermeasures Against Seepage
2014					
1	14-Feb-14	Geodetic Engineering Theater	Dr. Daniel Ducoff, Dr. Andrew Rollins, Dr. Robert Lacks, Dr. Rigoberto Advincula, Dr. Diosdado T. Banatao	Case Western Reserve University, Sigmatech and PhilDev	Introduction of "Engineers Without Borders"
2	27-Mar-14	Faculty Lounge, Melchor Hall	Dr. Roland Cliff	University of Surrey	The Role of Industrial Ecology in Environmental Policy and Company Strategy
3	12-May-14	Engineering Theater	Dr. Gary Wnek	Case Western Reserve University	"ThinkBox" launching
4	24-Jul-14	Geodetic Engineering Theater	Dr. Norman Kerle	University of Twente and UPD- Department of Geodetic Engineering	Object Oriented Image Analysis Methods in Disaster Risk Management - State-of-the-Art and Prospects for the Philippines
5	22-Aug-14	Beta Epsilon Multimedia Hall	Dr. Ming K. Lim	University of Derby, De La Salle University and UPD-DIEOR	The Role of Technology Improving Visibility in Sustainable Supply Chain
6	22-Sep-14	Engineering Theater	Dr. Eric Pallant	Allegheny College	Rehabilitating Polluted Rivers: The Solution is Not in the Water
7	28-Oct-14	Geodetic Engineering Theater	Dr. Nimal Rajapakse	Simon Fraser University	Mechanical Behaviour of Graphene Using Molecular Dynamics and Atomic-Scale Finite Element Method
8	24-Nov-14	Geodetic Engineering Theater	Prof. Tom Veldkamp	ITC University of Twente	Modelling landscape disruption and responses: Lessons for community adaptation
2015					

1	18 February 2015	Geodetic Engineering Theater	Dr. Rigoberto Advincula	Case Western Reserve University	Biomedical Engineering Lecture: "Nanostructured Biomaterials and Interfaces"
2	25 March 2015	Beta Epsilon Multimedia Hall	Dr. Gong Yeng	Jiaotong University	Low Carbon Development through Industrial Ecology and Circular Economy
3	25-26 March 2015	Maynilad Room	Dr. Jaeyoung Lee	Gwangju Institute of Science and Technology	Energy Electrochemistry
4	29 April 2015	Geodetic Engineering Theater	Dr. Joost Santos	George Washington University	Input-Output Modeling Framework for Disaster Preparedness and Recovery
5	23-24 June 2015	Engineering Theater	Dr. Rigoberto Advincula	Case Western Reserve University	Chemical and Polymer Innovation via Nanostructuring; Lightweighting and Additive Manufacturing with 3-D Printing; Nanostructured and Polymer Materials for the Oil & Gas Industry; Open Discussion about Developing Philippine Industry and University Relationships

Table 11. Engineering Forum Series 2013 to 2015

F. OTHER ACTIVITIES

Other than the yearly events, ERDT also embarks in organizing different activities that aim to enhance the administration of the program and to provide more opportunities to scholars and faculty. These activities were usually held in partnership with different institutions and organizations.

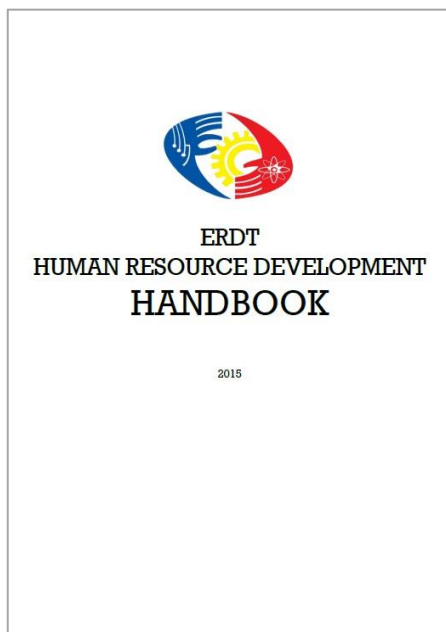
Table 12 below shows the details of these activities.

Activities	Description/Objectives	Date	Venue
Seminar on Urban Transport System for the Philippines (ERDT as a partner organization)	A seminar that aims to discuss current status, challenges and best practices on urban transport system	26 May 2014	Marco Polo Hotel
7 th ASEAN Environmental Engineering Conference (ERDT as a partner organization)	How can communities be ready for the next big hazard?: The Role of Environmental Engineering in Community Preparedness, Immediate Response and Environmental Sustainability	21-22 November 2014	Hotel Centro, Puerto Princesa, Palawan
Intellectual Property Awareness Orientation	In partnership with the UPD OVCRD, the orientation aims to inform students and faculty on the importance, challenges and issues of intellectual property and at the same time share the existing programs of the OVCRD on IP-related matters	30 September 2014	Engineering Theater, UP College of Engineering

ERDT Week Exhibit	The activity aims to showcase the accomplishment of the ERDT since it has started and to invite graduating undergraduate students to pursue graduate studies and apply for ERDT scholarship.	17-21 March 2014, 13-17 October 2014, 8-12 June 2015	2 nd Floor Lobby, UP College of Engineering
Think[box] Manila 2015: Innovation Symposium and Competition	The Think[box] Manila 2015 Symposium aims to provide a venue for faculty and students of the ERDT Consortium Universities on the use of innovation engineering practices in designing new solutions and materials through an environment that allows rapid prototyping and additive manufacturing in a University setting. On the other hand, the Innovation Competition component of the event provides an opportunity for our students enrolled in TechnoEntrepreneurship class to propose and pitch for their innovative ideas.	24 February 2015	UP College of Engineering

Table 12. Other Activities of ERDT 2010 – 2015

V. OTHER INITIATIVES IMPLEMENTED



With the goal of improving further the system, the ERDT has initiated several mechanisms to help the program deliver efficiently its services. Salient to these initiatives are the crafting of the Scholarship Handbook, Website Development, Scholars and Financial Management Database Development and Faculty Directory.

The ERDT Scholarship Handbook is a reference material that serves as a guide to scholars, faculty members, faculty advisers and key implementers of the ERDT program. The handbook contains information on the various ERDT HRD support services, their nature and descriptions, entitlements, and application processes. It also includes pertinent policies

and guiding principles in the implementation of those support services. Currently, the handbook is on its harmonization phase with concerned institutions such as the DOST and SEI and also the 8 member consortium universities.

The development of an official website for the ERDT is anchored on the idea of having a centralized information management system that can be accessed by the member consortium universities, current and future scholars, and possible collaborators and partners. The ERDT website highlights the 3

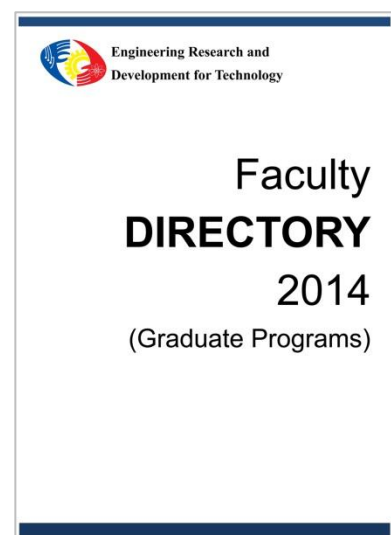
main components of the program. Information on the different HRD support services including application forms are posted in the website as well. The website also serves as a promotional tool for the program.

The website is already in use. The ERDT is now looking forward to improving the content of the website by adding information on the different engineering programs offered by the 8 consortium universities. The ERDT also seeks to change the address of the website to capture the 'consortium nature' of the program.



The Scholars and Financial Management Database is created to have a systematic and organized profiling, updating and reporting for the ERDT HRD component. Basic features of the database include student profiling and management, status monitoring system, financial bookkeeping, generation of performance summary report, and generation of statistical analysis. Profiling of scholars has already been done. The next phase of the database development is the inclusion of financial aspects of the ERDT program.

The ERDT Faculty Directory, currently in digital format, was created in early 2015 as an index of information from all eight ERDT member universities. It contains a description of each university's Mission and Vision, Institutes and Departments, Engineering Graduate Degree Programs supported by ERDT, and the Directory. The Directory is a listing of each institute's and department's graduate program faculty members and their profile. The profile lists down their educational background, their research interests, and contact information. The purpose of the Directory is to aide ERDT scholars in selecting the faculty advisers who can best assist them in their chosen research topics. It also serves as a reference material to industry and government for potential research collaboration works.



Appendices

List of 2014 and 2015 ERDT Graduates with Titles of their Theses and Dissertations

List of 2014 and 2015 ERDT FRDG Recipients

DOST-funded R&D Projects of Faculty Members of the ERDT Consortium from 2008 to 2015

List of 2014 and 2015 Road Shows

List of 2014 and 2015 ERDT Graduates with Titles of their Theses and Dissertations

A. Ateneo de Manila University

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Landrito, Zyra S.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2014	Quality of Service of Mobile Broadband in the Philippines
2	Silang, Angeli C.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2014	Wind Energy Projection for the Philippines Based on Climate Change Modeling
3	Andres, Juan Miguel L.	MS	Computer Science	Ateneo de Manila University	October 2014	A Study of the Relationships Between Learning and Affect Trajectories Within Newton's Playground
4	Abu, Patricia Angela R.	PHD	Computer Science	Ateneo de Manila University	March 2015	Improving the Teknomo-Fernandez Background Image Modeling Algorithm for Foreground Segmentation
5	Azcueta, John Patrick V.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	In Situ Sports Performance Analysis Systems Using Inertial Measurement Units, High-FPS Video Camera and the Android Platform
6	Dumlao, Samuel Matthew G.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	Demand Balancing Scheduler Implemented in Power Management to Mitigate Peak Load Consumption

7	Esling, Herbert Joseph R.	MS	Computer Science	Ateneo de Manila University	March 2015	Bi-modal Flash Code Combining Index-less Indexed Flash Code (ILFC) and Layered Index-less Indexed Flash Code (LILIFC)
8	Narboneta, Chelcie G.	MS	Computer Science	Ateneo de Manila University	March 2015	Multimodal Public Transportation Route Planner for Metro Manila
9	Oarde, Denica E.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	Design and Development of a Digital Motion Sensor System for Rehabilitation
10	Ortiz, Riz Rupert L.	PHD	Computer Science	Ateneo de Manila University	March 2015	K-Partition Flash Code with BIFC-based Sharing and some variants
11	Solis, Ron Jowell T.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	Quality of Service Analysis for Availability and Traffic of a GSM Network during a Typhoon in Metro Manila
12	Solpico, Dominic B.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	Wireless Sensor-Actuator for Aquaculture and Lake Resource Management
13	Talusan, Jose Paolo V.	MS	Electronics and Communications Engineering	Ateneo de Manila University	March 2015	Design, Development and Demonstration of a Highly Interactive Near Cloud Architecture for Institutions over Broadband Wireless IPTV Connectivity
14	Roa, Mary Anne S.	MS	Electronics and Communications Engineering	Ateneo de Manila University	July 2015	Development of a Portable Sensor-Based Indoor Air Quality Monitoring and Modelling System Using Artificial Intelligence Algorithm
15	Isla, Leandro T.	MS	Computer Science	Ateneo de Manila University	December 2015	An Efficient Algorithm for Determining Reconstruction Priority for Metro Manila Post-

						Disaster Road Network
16	Isla, Jhoanna T.	MS	Computer Science	Ateneo de Manila University	December 2015	Visualizing Text Data for Disaster Information
17	Sia, Maria Clara Isabel D.	MS	Computer Science	Ateneo de Manila University	December 2015	Improving an Exact Solution to the (l, d) - Planted Motif Problem

B. Central Luzon State University

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Castillo Claire Marie M.	MS	Agricultural Engineering	Central Luzon State University	April 2014	Grain Yield and Water Productivity of Irrigated Lowland Rice (<i>Oryza sativa</i> L.): The Effect of Alternate Wetting and Drying Technology and Crop Establishment Methods
2	Lagan, Cherrylene S.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Anaerobic Bioreactor for Village Level Bioethanol Production
3	Llanto, Carmelo S.	Ph.D.	Agricultural Engineering	Central Luzon State University	April 2014	Oil Palm(SN) Geotextile Net for Mitigating Hillslope Erosion and Runoff
4	Llarena, Alan A.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Engine Oil Regeneration Using Coconut Shell Charcoal & Volcanic Aggregates as Biosorbent Filter
5	Peneyra, Maribel B.	MS	Agricultural Engineering	Central Luzon State University	April 2014	Design, Fabrication and Evaluation of Sweet Sorghum Mechanical Chopper
6	Pueyo, Bennidict P.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Visible Spectral Imaging Technology for Early Detection of Mechanical Damage in

						Mango
7	Ramos, Joel A.	MS	Agricultural Engineering	Central Luzon State University	April 2014	Performance of a Four Stroke Spark Ignition Engine Using Scrubbed Producer Gas
8	Rico, Amy Lizbeth J.	MS	Agricultural Engineering	Central Luzon State University	April 2014	Improving Production and Quality of Bio-Digestion of Swine Manure and Jatropha Seeds
9	Sacdalán, John Paulo C.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Evaluation of Furrow Irrigation Method using Power Advance Approach of the Volume Balance Method
10	Suril, Analinda L.	MS	Agricultural Engineering	Central Luzon State University	April 2014	Minimizing Water Losses in Small Reservoir
11	Valentin, Marvin T.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Design, fabrication & Performance Evaluation of a Potato Grader for Village-Level Operation
12	Camania, Denver C.	MS	Agricultural Engineering	Central Luzon State University	November 2014	Characterization of Different Fresh Red Onion (<i>Allium cepa</i> L.) Bulb Varieties Based on Physical Quality Using CT Imaging
13	Batara, Glaizalyn B.	MS	Agricultural Engineering	Central Luzon State University	April 2015	Design, Fabrication and Performance Evaluation of a Small-Scale Barrel Type Potato (<i>Solanum tuberosum</i> L.) Washer
14	Delos Santos, Marlon T.	MS	Agricultural Engineering	Central Luzon State University	April 2015	Alternative Seedbed Media in Double Mulching Technique Seedbeds for Mechanical Rice Transplanter

15	Denson, Melba D.	MS	Agricultural Engineering	Central Luzon State University	July 2015 (Special Summer Term)	Design, Fabrication & Performance Evaluation of Mechanical carrot (<i>Daucus carota</i> L.) Washer
16	Gatmen, Novalyn C.	MS	Agricultural Engineering	Central Luzon State University	April 2015	Design, Fabrication & Performance Evaluation of Shelling Machine for Castor Bean (<i>Ricinus communis</i> L.)
17	Gavino, Jose Jr. T.	MS	Agricultural Engineering	Central Luzon State University	April 2015	Yield Response Model of Sweet Sorghum to Flooding at Different Growth Stages
18	Macarilay, Jennie G.	MS	Agricultural Engineering	Central Luzon State University	April 2015	Performance Evaluation of Evaporative Cooling System for Storing Vegetables
19	Morales, Antonio P.	PhD	Agricultural Engineering	Central Luzon State University	April 2015	Automated Solar Powered Aeration System for Fish Kill Prevention and Water Quality Improvement in Aquaculture
20	Pascua, Cherie S.	MS	Agricultural Engineering	Central Luzon State University	July 2015 (Special Summer Term)	Micro-hydro Power (MHP) Using Hydrokinetic Crossflow Swingblade Turbine for Electricity Generation.

C. De La Salle University

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Taclibon, Patrick Bernal	MS	Civil Engineering	De La Salle University	February 2014	Generation of a Strong Earthquake Accelerogram Using the particle filter with Richter magnitude, source depth and epicenter distance as

						model parameters
2	Fernando, Arvin Hidalgo	MS	Mechanical Engineering	De La Salle University	February 2014	Investigation of the Effects of Blade Profile Geometry in a Hinged Blade Cross Axis Turbine
3	Bautista, Joy Mari Sebastian	MS	Industrial Engineering	De La Salle University	February 2014	A Multi-Perspective Approach to Service Quality Assessment and Analysis in Hospitals for Service Improvement and Stakeholder Satisfaction
4	Solomon, Katrina Ysabel Camtan	MS	Computer Science	De La Salle University	June 2014	Modeling Blended Emotions in Spontaneous Filipino Laughter through Facial Expression Analysis
5	Abad, Raymund Paolo B.	MS	Civil Engineering	De La Salle University	June 2014	Integrated Land and Water Transport Operations in Jordan Wharf, Guimaras
6	Tapia , John Frederick D.	MS	Chemical Engineering	De La Salle University	June 2014	Development of Optimization Models for Source-Sink Matching in Carbon Capture and Storage Systems
7	Yu, Arvin Patrick T.	MS	Civil Engineering	De La Salle University	June 2014	Investigation on the Strength of Cold Formed Steel C-Section in Compression
8	Abranilla, Dane Rei B.	MS	Civil Engineering	De La Salle University	June 2014	Strength and Compressibility of coal ash as embankment material for land reclamation
9	Roquel, Krister Ian Daniel Z.	MS	Civil Engineering	De La Salle University	June 2014	Mode Choice Analysis of Inter-Island Passenger Travel From Ilollo to Negros Occidental
10	Ganzon, Maria Katrina M.	MS	Civil Engineering	De La Salle University	June 2014	Choice Analysis of Tourist Spots: The Case of Guimaras

						Province
11	Bidol, Paul Bryan P.	MS	Civil Engineering	De La Salle University	June 2014	An Investigation on the Influence of Coal Ash Replacement & Seawater Mixing and Curing on Bamboo - Reinforced Concrete
12	Brizuela, Kenneth S.	MS	Civil Engineering	De La Salle University	June 2014	Design of a Computer-Aided Earthquake Risk Management Tool for Safe School Communities
13	Konwat, John Clifford T.	MS	Electronics & Communicatio ns Engineering	De La Salle University	June 2014	Design and Characterization of a Fully Integrated Low Frequency, Low Voltage CMOS Clock Generator Circuit with Low Process Sensitivity using 0.25um Library
14	Tiam-Lee, Thomas James Z.	MS	Computer Science	De La Salle University	June 2014	Building a Sentiment Corpus Using a Gamified Framework
15	Ngo, Courtney Anne M.	MS	Computer Science	De La Salle University	June 2014	Using Machine Based Learning to Detect Pedestrian Locomotion Using Sensor-Based Data
16	Agustin, Natalie S.	MS	Computer Science	De La Salle University	June 2014	Using Self- Organizing Maps and Regression to Solve the Acoustic-to- Articulatory Inversion as Input to a Visual Articulatory Feedback System
17	Tan, Daniel Stanley Y.	MS	Computer Science	De La Salle University	June 2014	Rating Movies using an Arousal Model
18	Contreras, Justin S.	MS	Industrial Engineering	De La Salle University	October 2014	A Multi-Objective Closed-Loop Supply Chain Model for Multiple Generations of a Product with a Mandatory Product Take- back

19	Ocampo, Landon A.	PhD	Industrial Engineering	De La Salle University	October 2014	Probabilistic Fuzzy Decision Network Analyses in the Development of A Sustainable Manufacturing Strategy
20	Masilang, Rey Anthony A.	MS	Electronics & Communications Engineering	De La Salle University	October 2014	Design and Development of a Computer Vision-based Breast Self Examination Instruction and Supervision System
21	Lee, John Steven G.	MS	Industrial Engineering	De La Salle University	October 2014	A Bi-Objective Mathematical Model for a Simultaneous Pickup and Delivery Green Vehicle Routing Problem with Backhauls and Time Windows
22	Barongan, Nikko M.	MS	Chemical Engineering	De La Salle University	October 2014	Power Output Optimization of DSSC with Fe-Ni Codopant, TiO ₂ , Photoanode and Carbon Nanotubes as Counter Electrode
23	Gue, Ivan Henderson Vy	MS	Mechanical Engineering	De La Salle University	February 2015	Design of a Fuzzy GS-PID Controller for Payload Drops of Varying Mass for a Quadrotor
24	Abulencia, Geoffrey L.	MS	Electronics & Communications Engineering	De La Salle University	February 2015	Design and Implementation of a Low-Voltage Selectable Fractional-Order Differentiator in a .035um CMOS Technology
25	Baldovino, Rennan	MS	Electronics & Communications Engineering	De La Salle University	February 2015	Design and Development of a Fuzzy-PLC Controller for an Earthquake Simulator/Shake Table
26	Banelos, Luis Miguel F.	MS	Manufacturing Engineering and Management	De La Salle University	February 2015	Design for Assembly of the Jointed Articulating Laparoscopic Tool

27	See, Alvin Arthur A.	MS	Manufacturing Engineering and Management	De La Salle University	February 2015	Detection of Floating Impurities in Filled Beverage Bottles Using Digital Image Processing Techniques
28	Jurex, Gallo C.	PhD	Chemical Engineering	De La Salle University	February 2015	Development of a Photocatalytic Reactor with Immobilized AC/TiO ₂ for Turquoise Blue Removal
29	Lim, John Raymond C.	MS	Computer Science	De La Salle University	February 2015	Modeling Physiological Effects of Linalool and Linalyl acetate-based Odorants on Stress Levels of College Faculty Members
30	Go-Aco, Earl Henri E.	MS	Manufacturing Engineering and Management	De La Salle University	June 2015	Characterization of Different Stent Designs Throught Numerical Modelling
31	Sosuan, Frederick Lloyd A.	MS	Civil Engineering	De La Salle University	June 2015	Mode Choice Analysis of Urban Trips in Iloilo City, Philippines
32	Dilay, Germaine Ann C.	MS	Civil Engineering	De La Salle University	June 2015	Mode Shift Behavior of Bus Passengers to Rail System under Improved Rail Operations
33	Tepace, Jeffrey M.	MS	Civil Engineering	De La Salle University	June 2015	Evaluation of Properties of Pervious Concrete with Fly Ash and Bottom Ash
34	Chua, Renz Anderson D.	MS	Civil Engineering	De La Salle University	June 2015	Development of a Probabilistic Liquefaction Potential Map for Metro Manila
35	Yu, Kirk Kennedy U.	MS	Civil Engineering	De La Salle University	June 2015	Development of a Multi-Hazard and Risk Assessment Method for Heritage Buildings: Case of Iloilo City
36	Lim, Sam Jovinson D.	MS	Civil Engineering	De La Salle University	June 2015	A Study on the Performance of G.I Roof on Wood Purlin Subjected to Extreme Wind

						Loads:A Case Study on Surigao City
37	Dy, Adrian Fedrick C.	MS	Civil Engineering	De La Salle University	June 2015	Development of A Brief Code-Based Seismic Diagnostic Tool for Existing RC Buildings Considering Vertical Irregularities
38	Toral, Kenneth Roi P.	MS	Civil Engineering	De La Salle University	June 2015	Structural Retrofitting of Reinforced Concrete Beams using Turnbuckle Exterior Post Tensioning
39	Cutora, Miller D.	MS	Civil Engineering	De La Salle University	June 2015	The Compressibility and Hydrocompression Behavior of Copper Mine Tailing from Negros Oriental, Philippines
40	Jose, John Anthony C.	MS	Electronics & Communications Engineering	De La Salle University	June 2015	Development of Depth Level Estimation Algorithm for Breast Self-Examination
41	Are, Kristian Ray Angelo G .	MS	Chemical Engineering	De La Salle University	October 2015	Life Cycle Assessment of Ammonia as Transport Fuel
42	Co. Dana Mae S.	MS	Manufacturing Engineering and Management	De La Salle University	October 2015	Development of An Automated Transesterification Reactor Controller Using Refractive Index to Detect End Point of Reaction
43	Lumanlan, Joseph Mari F.	MS	Industrial Engineering	De La Salle University	October 2015	Development of the Positive Anticipated Experience and Emotion Engagement Model (PAXEEM)
44	Roxas, Nicanor Jr.	PhD	Civil Engineering	De La Salle University	October 2015	Inter-Island Passenger Mode Choice Analysis:The Case of Ilollo and Negros Occidental

45	Benjamin, Michael Francis D.	PhD	Chemical Engineering	De La Salle University	October 2015	Development of a Risk Analysis Methodology for Symbiotic Bioenergy Parks
46	Enriquez, Michelle D.	MS	Civil Engineering	De La Salle University	October 2015	Developing a System Safety Hazard and Risk Assessment (SSHRA) for the Surigao Metropolitan Water District
47	Del Prado, Marabelle R.	MS	Civil Engineering	De La Salle University	October 2015	Proposed Methodology on Performance Based Assessment and Retrofit of Reinforced Concrete Heritage Buildings with Case studies on Selected Heritage Buildings in the Philippines
48	Billones, Kerwin Robert	MS	Electronics & Communicatio ns Engineering	De La Salle University	October 2015	Design and Development of the Intelligent Operating Architecture for Audio-Visual Breast Self- Examination Multi-media Training System

D. Mapua Institute of Technology

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	David, Joana Haizan G.	MS	ECE Major in Microelectronics	Mapua Institute of Technology	3rd Quarter 2013-2014 January- March 2014	Nitrogen Deficiency Checker of Palay (Oryza sativa L.) Through Leaf Coloration
2	Meimban, Raymond Joseph R.	MS	ECE Major in Microelectronics	Mapua Institute of Technology	3rd Quarter 2013-2014 January- March 2014	Enhancement and Development of Loadboard Checker and Validating its Parameters Being used in Universal Parking Assistance Version C
3	Regalado, Rigor G.	MS	ECE Major in Microelectronics	Mapua Institute of Technology	3rd Quarter 2013-2014 January- March 2014	Soil PH and Nutrient (Nitrogen, Phosphorus Add Potassium) Analyser Using

						Colorimetry
4	Rodriguez, Angelo N.	MS	ECE Major in Microelectronics	Mapua Institute of Technology	3rd Quarter 2013-2014 January-March 2014	Design of 900 MHZ AC to DC Converter Using Native CMOS Device of TSMC 0.18 Micron Technology for RF Energy Harvest Application
5	Llamzon, Hernan C.	MS	Electrical Engineering	Mapua Institute of Technology	3rd Quarter 2013-2014 January-March 2014	Generalized Reduced Gradient Non-Linear Program of Penelco Grid
6	Gallarte, Benedict P.	BSMS	Environmental Engineering	Mapua Institute of Technology	3rd Quarter 2013-2014 January-March 2014	Design and Simulation of Network Plan for Pasig City Hall Data Back up and Recovery Systems
7	Monterozo, Monica Blanca C.	MS	Environmental Engineering	Mapua Institute of Technology	3rd Quarter 2013-2014 January-March 2014	Optimization of Operational Parameters of Electro Loagulation for the COD Removal of Piggery Waste Water
8	Vilando, Anabella C.	MS	Chemical Engineering	Mapua Institute of Technology	3rd Quarter 2013-2014 January-March 2014	Thermophysical Characterization of Aqueous Potassium and Sodium Salts of Aminocaproic Acid and L-Lysine
9	Calagui, Mary Jane C.	PhD	Environmental Engineering	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	Study of the Removal of Indium Ions from Aqueous Solution using Chitson-coated Bentonite Beads in a Perniable Reactive Barrier
10	Maducdoc, Peter Harold B.	MS	Civil Eng'g. major in Construction Engineering and Management	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	Factors Affecting Labor Productivity in Residential Projects at Nueva Ecija
11	Montaño, Vincent D.	MS	Computer Engineering	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	ECG Signal Classification for Remote Area Patients Using Artificial Neural Networks in Smartphone

12	Banlawe, Ivane Ann P.	MS	Electronics Engineering	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	Aural and Photonic Spectrum Based Digital Pest Controller for Oryza Sativa
13	Landicho, Lloyd Charles L.	MS	Electronics Engineering	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	A Method of Precise Gain Measurement Using Frequency Domain Analysis Technique as a solution to a high rate of in-line sampling failure
14	Uy, Valfia S.	MS	Electrical Engineering	Mapua Institute of Technology	4th Quarter 2013-2014 April-June 2014	Application of a Voltage Constraint in a co-optimised Model for Energy and Reserve
15	Manuel, Joana Tess M.	MS	Chemical Engineering	Mapua Institute of Technology	1st Quarter 2014-2015 July-September 2014	Optimization of the drying parameter for short-form spray dryer producing powdered egg with 20% Tapioca Starch Additive
16	Mariano, Michael Valer G.	MS	Electrical Engineering	Mapua Institute of Technology	1st Quarter 2014-2015 July-September 2014	Photovoltaic Power Booster Utilizing Seebeck in Motor Pump Application
17	Santos, Jon Roston D.	MS	Civil Engineering	Mapua Institute of Technology	1st Quarter 2014-2015 July-September 2014	Forecasting Model of Cell sites Structure on the Influence of Corrosion & Zinc Coating on the frequency and Prioritization of maintenance using Fuzzy Logic approach
18	Lim, John Victor M.	BSMS	Computer Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Temperature Compensated Electronics Nose for Fruit Ripness Determination Using Component Correction Principal Component Analysis
19	Madariaga, Neil Erick	BSMS	Computer Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Application of Neural Network and Background Subtraction for Determining Body Mass Index (BMI) in Android

						Devices using Bluetooth
20	Manalo, Kevin D.	BSMS	Computer Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Classification of Myoelectric Signals using Multilayer Perceptron Neural Network with Back Propagation Algorithm in a wireless Surface Myoelectric Prosthesis of the Upper-Limb
21	Sanchez, Jayron Lester	BSMS	Computer Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	RFID Based indoor Navigation with Obstacle Detection Based on A* Algorithm for the Visually Impaired
22	Lluisma, Larry Lucian III	MS	Electrical Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Distribution Impact Study (DIS) for Net-Metering with Photovoltaic Renewable energy Resource using SynerGee
23	Apao, Marvin	MS	Materials Science and Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Study on Electrospun Polyurethane (PU) / Na-Montmorillonite (Na-MMT) Nanofibrous Membrane as Water Softener
24	Lagura, Vivian U.	MS	Materials Science and Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Synthesis and Characterization of Cadmium Sulfide Quantum Dots iota-Carrageenan Biocomposite for Potential Biomedical Applications
25	Sebial, Craig Francis M.	MS	Materials Science and Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Development and Characterization of Electrospun Polylactic acid (PLA) / Cellulose Acetate (CA) / Chitosan (CS) Blended Nanostructured Composite for

						Potential wound Dressing Application
26	Pangilinan, Mark Nelson E.	MS	Electronics Engineering	Mapua Institute of Technology	2nd Quarter 2014-2015 October-December 2014	Design and Development of an Oil Spill Detection and Transmission system using Artificial Illumination with LEDs
27	Amado, Timothy	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Wireless Flood Monitoring Using Integrated Hydrological Sensors and Flood Prediction Via Artificial Neural Network
28	Palma, Patricia Roxanne	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Visibility and Atmospheric Loss Monitoring for Fog Occurrence between Point-to-point Broadcast Communication via GSM-based Notification System
29	Tolentino, Roselito	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Application of Euclidean-Cosine in Kinect for Mimicking Robot with One Degree of Freedom in Different Point of View
30	Ibañez, Vladimir	MS	Computer Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Development of an Android Application for Power Consumption Management System Using Programmable Toggle Switch
31	Manzanas, Willen Mark	MS	Computer Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Modified Programmable Toggle Switch Using a Low Power 433MHz ISM Band Wireless Module
32	Soberano, Leonel	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Packaging of Conventional MOSFET Structure in a Stack Die Configuration for a DC-DC Synchronous Buck Converter

33	Tabal, Keith Marlon	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Microcontroller-Implemented Artificial Neural Network for Electrooculography-based Wearable Drowsiness Detection with Alert System
34	Valenzuela, Ira	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Parameter Extraction of Optoelectronic pH Sensor Based on the Hue Absorbance of a pH Test Strip
35	Bernal, Christine	MS	Electronics Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	A design of Temperature-Independent MOSFET-Only Current Reference
36	Villariña, Mark Erwin	BSMS	Computer Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Palm Vein Recognition System using Directional Coding and Back-Propagation Neural Network
37	Caranguian, Karen	MS	Materials Science and Engineering	Mapua Institute of Technology	3rd Quarter 2014-2015 January-March 2015	Preparation and Optimization of Carbon Black Precursor from coconut Shell and Sugar cane Bagasse by Hydrolysis-Carbonization
38	Mamuad, Roselle Y.	MS	Chemical Engineering	Mapua Institute of Technology	4th Quarter 2014-2015 April - June 2015	Factors Affecting Oxalate Recovery from Wastewater in Fluidized Bed Reactor
39	Lauresta, Ivy Mica B.	MS	Electrical Engineering	Mapua Institute of Technology	4th Quarter 2014-2015 April - June 2015	Renewable Energy from River using Hydrokinetic Device
40	Diaz, Mel James P.	MS	Electronics Engineering	Mapua Institute of Technology	4th Quarter 2014-2015 April - June 2015	Generic Algorithm Based Dead Reckoning and Remote Positioning System with Integrated Kalman Filter for 3D Space Mapping
41	Carpio, Joy N.	MS	Electronics Engineering	Mapua Institute of Technology	4th Quarter 2014-2015 April - June 2015	An Earthquake-Activated Power Interrupting Device using A Tri-Axis

						Accelerometer
42	Aborde. Perry Ann B.	MS	Environmental Engineering	Mapua Institute of Technology	4th Quarter 2014-2015 April - June 2015	Effect of ClO ₂ as Disinfectant and of ClO ₂ -by-product on Drinking Water Quality Parameters
43	Quiton, Khyle Glainmer N.	MS	Chemical Engineering	Mapua Institute of Technology	1st Quarter 2015-2016 July - September 2015	Hexavalent Chromium and Bivalent Zinc Removal from Aqueous Solutions using Koolin-Supported Bacterial Biofilms of E. Coli and S. epidermidis
44	De Jesus, Kevin Lawrence M.	MS	Civil Engineering	Mapua Institute of Technology	1st Quarter 2015-2016 July - September 2015	Artificial Neural Network on High-Volume Roads: Model for Predicting Pavement Distress
45	Artuz, Maria Theresa C.	MS	Environmental Engineering	Mapua Institute of Technology	1st Quarter 2015-2016 July - September 2015	Comparative Analysis of Biosorption of Copper, Lead and Nickel on Two different Bacterial Species Supported by Granular Activated Carbon in a Simulated Waste water
46	Mellano, Ma. Evangeline R.	MS	Environmental Engineering	Mapua Institute of Technology	1st Quarter 2015-2016 July - September 2015	Removal of Cu (II), Ni (II) and Pb (II) from Aqueous Solution Using Bacterial Biofilm, Supported with Kaolinite Clay
47	Tolentino, Lean Karlo S.	MS	Electronics Engineering	Mapua Institute of Technology	1st Quarter 2015-2016 July - September 2015	Maximum Power Point Tracking Controller for Community-Based Solar-Powered LED Street Emergency Lighting

E. Mindanao State University – Iligan Institute of Technology

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Albiento,	MS	Civil Engineering	Mindanao	April 2014	GIS Based Flood

	Elizabeth Edan M.			State University-Iligan Institute of Technology		Risk Management Plan: An Approach to Disaster Risk reduction in Barangay Hinaplanon, Iligan City
2	Opon, Joel G.	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	Design and Behavior Analysis of Fabricated Modular Ferrocement Floor Slab System for Interior Application
3	Sanchez, Kristine D.	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	Reliability of rebound Hammer Test in Concrete Compressive Strength estimation
4	Capilayan, Mycel A.	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	HSPICE Analysis on Performance Trade-Off Versus Simulation Time
5	Gatal, Jennibeth F.	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	FPGA-Based H.264 Video Decoder in RTP Payload Format
6	Husayan, Gladdy Christie G.	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	Improved IP Configuration Process of Lattice FPGA Devices
7	Santillan, Jofrey G.	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	Dual-mode Current Control Boost Converter for Battery Application
8	Magomnang, Antonio-Abdu Sami M.	MS	Mechanical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	Removal of Hydrogen Sulfide from Biogas using Dry Desulfurization Systems
9	Mamalias, Junil Bien A.	MS	Mechanical Engineering	Mindanao State University-Iligan Institute of Technology	April 2014	An Evaluation of Energy Consumption Changes due to Variations of Operational Parameters of Household

						Refrigerator
10	Galindo, Joseph Lester	MS	Mechanical Engineering	Mindanao State University-Iligan Institute of Technology	April-14	Performance Investigation of Modified Split Reaction Water Turbine (SRWT) with Guide Cone
11	Pascua, Diogenes Armando D.	MS	Computer Applications	Mindanao State University-Iligan Institute of Technology	April 2014	Development of a Mobile Robot as a Test Bed for Tele-Presentation
12	Talorete, Veldin Jr.	MS	Computer Applications	Mindanao State University-Iligan Institute of Technology	April 2014	Intelligent Machine Vision for Automated Fence Intruder Detection using Self Organizing Map
13	Deuda, Cecille Cube	DOE	Material Science Engineering	Mindanao State University-Iligan Institute of Technology	May 2014	Reduction of Nickeliferous Laterite Ores from Palawan and Surigao, Philippines
14	Abingosa, Marion Rey	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Interconnect Modeling of Global Metals for 40nm Node
15	Cabanilla, Babie Lynn	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Assessment of Compressive and Shear Strengths of Interlocking Compressed Earth Blocks (ICEB)
16	Sinadjan, Cheery May	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Comparative Analysis of Construction Cost of Three Alternative Concrete Floor Systems for the 3-Storey Department of Education School Building
17	Albuero, Raul	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Strength Performance of Plastic-Coconut Coir Composite Lumber Using Polystyrene Post-Consumer Waste

						and Coconut Coir
18	Grecia, Kelvin	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	November-14	The Working Stresses of Unseasoned Lithocarpus Mindanaense (Mindanao Oak/Gusokan) in Misamis Occidental
19	Galangque, Cherry Mae	MS	Computer Applications	Mindanao State University-Iligan Institute of Technology	November-14	Artificial Neural Network Classification for Gunshot Detection and Localization System
20	Limpahan, Kenneth S.	MS	Mechanical Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Performance Evaluation of Direct Contact Cooling Tower Used on Thermoelectric Module and parabolic Trough Collector for Power Generation
21	Mosqueda, Alexander	MS	Material Science Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Synthesis of Clay-Based Ceramic/carbon Composite by Starch Consolidation Casting and Reductive Sintering
22	Sequera, Marjun	MS	Computer Applications	Mindanao State University-Iligan Institute of Technology	November-14	Naïve Bayes Classifier and Fuzzy Logic System for Computer-Aided Detection and Classification of Mammamographic Abnormalities
23	Asturia, Randy	DOE	Civil Engineering	Mindanao State University-Iligan Institute of Technology	November-14	Laboratory and Full-Scale Simulations of the Behavior of Reinforced Cement-admixed iligan City Alluvial Soil Deep Mixing Applications

24	Ahalajal, Mary Ann Nuestro	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Effects of Carbon Fiber reinforced Polymer Strips on the Flexural Strength and Deflection of Steel I-Beam
25	Calunsag, Milbert James Tagolgol	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Rainwater Harvesting Potential for Residential Application in the Philippines
26	Cantila, Kenny Bacara	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Structural Efficiency and Deflection Characteristics of Precast Reinforced Concrete Slab Strip Notched at Tension Zone
27	Castil, Evalyn Joy Maximo	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Potential of Producing High Strength Hollow Core Reinforced Concrete Slab with Silica Fume and Polypropylene Fiber
28	Cavero, Applegen I.	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Shear Strength of Soil Stabilized with Portland Cement-Rice Husk Ash (RHA) Mix for Deep Mixing Application
29	Gorospe, John Michael Abao	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Low Voltage Ultra Low Power PVT Independent and High PSRR Voltage Reference in 65NM CMOS Process
30	Jilluh, Qadier Idres	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April-15	A Piezoelectric Energy Harvesting Interface Circuit Using Negative Voltage Converter with Active Diode and DC-DC Buck Converter
31	Labadan, Rimmon Salvacion	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Design of Post-Tension Prestress Concrete Beam Using Excel Spreadsheet

				Technology		
32	Sabado, Carmel Buniel	MS	Civil Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Compressive Strength and Economic Viability of Roller Compacted Concrete Pavement Containing Pulverized Sand and Fly Ash
33	Tahud, Anacita Palma	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April-15	Evaluation of Potential Hydropower Sites in Iligan City Using Geographic Information System (GIS)
34	Tolete, John Michael Cuarto Cruz	MS	Electrical Engineering	Mindanao State University-Iligan Institute of Technology	April-15	A Modified RF to DC Converter CMOS Rectifier Design for Energy Harvesting

F. University of the Philippines Diliman

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Antonio, Rheamay V.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Adsorptive Desulfurization of Model Die Fuel Using Activated Clay (AC): Batch and Column Studies
2	Aquinde, Jean Audrey E,	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Development of Starch-Clay Nanocomposite on Recycled Paperboard for Single-Use Packaging Application
3	Barela, Mary Claire A.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	An Empirical Study on the Performance of an Energy Detection Scheme for a Cognitive Radio Prototype
4	Bermillo, Hanna Lee P.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Kinetic Modeling of the Fixed Bed Column Adsorption of Pb(II) Cu(II) and Ni(II) from Ternary

						Metal Ion Solution using Chitosan coated Bentonite
5	Carpio, Rowena B.	MS	Energy Engineering	University of the Philippines, Diliman	March 2014	Growth, Lipid Content, and Lipid Profile of the Green Alga, <i>Chlorella Vulgaris</i> Beij., Under Different Concentrations of Fe and CO ₂
6	De Juan, Lyn Marie Z.	MS	Materials Science and Engineering	University of the Philippines, Diliman	March 2014	Investigation of Adhesion Property and Superhydrophobicity of Silica/PDMS coating from Electrophoretic Deposition on 316 Stainless Steel Substrate
7	Espeña, Glen D.	MS	Mechanical Engineering	University of the Philippines, Diliman	March 2014	Heat Driven Ejector Refrigeration System for Hot-Spring Resorts Application
8	Flores, Edgar D.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Removal of Copper Ions from Aqueous Solution Using Adlai Shell (<i>Coix lacrym-jobi</i> L.) Adsorbents
9	Indardaya, Abdulah P.	MS	Industrial Engineering	University of the Philippines, Diliman	March 2014	Designing an Arm Support Model to Minimize UECD Risk among Filipino Electronic Technicians Using QFD, KANO Model, TRIZ and Anthropometry
10	Jurado, Climaco Jr. A.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Adsorption of Ammonium-Nitrogen from Aqueous Solution Using Chitosan-Coated Bentonite (CCB) Beads
11	Laciste, Maricris T.	PhD	Environmental Engineering	University of the Philippines, Diliman	March 2014	Performance of a Multi-Element (Ag, F, N, W)-Doped Titanium Dioxide in the Photocatalytic Degradation of Gaseous Formaldehyde Under Visible Light

12	Lagrimas, Charine Faith H.	MS	Chemical Engineering	University of the Philippines, Diliman	March 2014	Isothermal Crystallization Kinetics of Methyl Laurate
13	Laguna, Ann Franchesca B.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	Philippine Language Identification using Acoustic, Phonotactic and Prosodic Approaches
14	Martinez, Philip A.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	Shearing Simulation of Non-Standard Cable Geometries for Time-Domain Reflectometry-Based Slope Monitoring Applications
15	Mendoza, Earl Anthony V.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	Speed Sound Compensation of an Ultrasonic Extensometer System for Landslide Applications
16	Millanar, Jessa Marie J.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Hydrothermal Synthesis of K-MOS 2 and its Application on the Thermal Catalytic Oxidation of Toluene and Benzene
17	Monisit, Kristofer M.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	An Energy Harvesting Module for a 23k Distribution Line Sensor Node in 65nm CMOS
18	Nuestro, Renan C.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	Integration Based LDO Design in Power Line Energy Harvested Sensor Nodes
19	Onishi, Sakura E.	MS	Chemical Engineering	University of the Philippines, Diliman	March 2014	Effect of Particle Loading, Temperature and Surface Treatment on Moisture Absorption of CFB Fly Ash Reinforced Thermoset Composite
20	Pacaba, Dominic Dave P.	MS	Electrical Engineering	University of the Philippines, Diliman	March 2014	Chance-constrained Supply Function Equilibrium Model

						of Elasticity Markets with Wind Generation
21	Redo, Mark Anthony B.	MS	Mechanical Engineering	University of the Philippines, Diliman	March 2014	Design and Experimental Analysis of Heat Driven Ejector Refrigeration System
22	Reyes, Joy Erika P.	MS	Chemical Engineering	University of the Philippines, Diliman	March 2014	Effect of Surface Treatment and Particle Loading on the Mechanical Properties of CFB Fly Ash Reinforced Thermoset Composite
23	Rivera, Kim Katrina P.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Alachlor Removal over Fe-TiO ₂ Loaded on Granular Activated Carbon Support under UV and Visible Light Irradiation
24	Sabarillo, Noel S.	MS	Chemical Engineering	University of the Philippines, Diliman	March 2014	Characterization of Latent Heat Storage System of MEPCM-incorporated paint
25	Sapitan, Jhomee (Jaja) Fe F.	MS	Environmental Engineering	University of the Philippines, Diliman	March 2014	Adsorption of Sulfone Compounds Produced in the Oxidative Desulfurization Process using Activated Clay
26	Tomoling, Ed Carla Mae	MS	Geomatics Engineering	University of the Philippines, Diliman	March 2014	GIS Assessment and Modeling of Environmental and Socio-economic Impacts of Tourism Development in Boracay, Island, Philippines
27	Yumul, Mariane D.	MS	Energy Engineering	University of the Philippines, Diliman	March 2014	Thermal and Electrical Conductivity of Carbon Nanutube-1-Hexadecyl-3-Methylimidazolium Bromide (CNT-HDMIM[Br]) and

						Carbon Nanotube-Water (CNT-Water) Nanofluids
28	Angco, Marc Jordan G.	MS	Electrical Engineering	University of the Philippines, Diliman	May 2014	Depth Perception through Adaptive 3D View Perspective and Motion Parallax
29	De Leon, Maria Rossana C.	MS	Industrial Engineering	University of the Philippines, Diliman	May 2014	A Crop Yield Prediction Model Framework
30	Musico, Yvonne Ligaya F.	PhD	Environmental Engineering	University of the Philippines, Diliman	May 2014	Functionalized Graphene-Based Nanomaterials for the Removal of Lead (II) and Bacteria for Water and Wastewater Treatment Applications
31	Ortiz, Joana Rochelle R.	MS	Electrical Engineering	University of the Philippines, Diliman	May 2014	An Integration-Biased BER-Aware Design Methodology of a BPSK Analog Transceiver Front-End for Power Line Sensor Nodes
32	Sale, Rose Ann V.	MS	Computer Science	University of the Philippines, Diliman	May 2014	A Design for a Task-Role Based Access Control for a Personal Health Record Systems
33	Tablang, Martin Leandro C.	MS	Computer Science	University of the Philippines, Diliman	May 2014	An Adaptive, Real-Time Speech Hiding System Using High-Capacity Stenography Techniques Applied in Innocuous Music Streams
34	Lagrada, Rey M.	MS	Electrical Engineering	University of the Philippines, Diliman	July 2014	A Probabilistic Reliability Assessment for Transmission Development Planning in the Philippine Restructured Power Industry
35	Tanyag, Riyeth P.	MS	Electrical Engineering	University of the	July 2014	Implicit Palm Rejection Using

				Philippines, Diliman		Hand Occlusion Behavior and Touch Characteristics for Tablet Devices
36	Rocamora, Josyl Mariela B.	MS	Electrical Engineering	University of the Philippines, Diliman	July 2014	Using Hierarchical DHT's to Mitigate Churn Effects in Mobile Networks
37	Rasco, Raymund B.	MS	Chemical Engineering	University of the Philippines, Diliman	July 2014	Characterization of Perchlorate Biodegradation of Sulfur Oxidizing Enrichment Culture
38	Sebastian, Sherry Joy Alvionne V.	MS	Electrical Engineering	University of the Philippines, Diliman	July 2014	PVT-Aware Digital Techniques for Low-Power, 0.5V, On-Chip Processing Unit for the Smart Wire Node in 65nm CMOS
39	Villanueva, Helen S.	MS	Computer Science	University of the Philippines, Diliman	July 2014	Ionic Contamination Identification and Estimation in Printed Circuit Boards Using Visual Characteristics of Electrochemical Migration Patterns
40	Yap, Jan Michael C.	PhD	Computer Science	University of the Philippines, Diliman	July 2014	A Framework for Regression-Based Inference of Candidate Genes Causal o Salt Tolerance in Rice
41	Abaya, Ernesto B.	PhD	Civil Engineering	University of the Philippines, Diliman	December 2014	Development of Drive Cycles and Measurement of Fuel Consumption of Light Duty Vehicles in Metro Manila
42	Aguilar, Emerico A.	MS	Computer Science	University of the Philippines, Diliman	December 2014	The Design and Implementation of a Web Ontology for Personal Learning Environments
43	Aguila, Diosa Marie M.	MS	Environmental Engineering	University of the Philippines, Diliman	December 2014	Investigating the Formation of Acid Mine Drainage of Toledo Pyrite Concentrate Using Column Cells

44	Arazo, Renato O.	PhD	Environmental Engineering	University of the Philippines, Diliman	December 2014	Biofuels from Digested Sewage Sludge: Pyrolytic Biofuel Production and Catalytic Upgrading Studies
45	Caldona, Eugene B.	PhD	Chemical Engineering	University of the Philippines, Diliman	December 2014	Rubber-Modified Polybenzoxazine-Based Materials for Surface Coating Applications
46	Dela Cruz, Angelo R.	PhD	Electrical and Electronics Engineering	University of the Philippines, Diliman	December 2014	Error-Resilient Joint Source-Channel Video Coding Using Intra-Refresh and Dynamic Rate-Allocation Based on Distortion Analysis in H.264 for Low Bitrate Wireless Video Transmission
47	Devanadera, Ma. Catriona E.	PhD	Environmental Engineering	University of the Philippines, Diliman	December 2014	Membrane Fouling Due to Soluble Algal Organic Matter (sAOM) from <i>Chlorella</i> sp. And <i>Microcystis aeruginosa</i> and its Mitigation in Ceramic Microfiltration System
48	Lim, Kramer Joseph A.	MS	Environmental Engineering	University of the Philippines, Diliman	December 2014	Aerogels of Graphene Oxide-Clay Nanocomposite as Reusable and Highly Selective Absorbent
49	Custodio, Aisa Grace D.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2014	Palladium Electrodeposited on Silver Alloy as Electrocatalyst for Hydrogen Production via Water Electrolysis
50	Pelayo, Bernard Raymond D.	MS	Electrical Engineering	University of the Philippines, Diliman	December 2014	Design Methodology for Process and Temperature Resilience of Switched Capacitor Regulator for Power Line Harvesting Applications

51	Lapeñas, Louie A.	MS	Environmental Engineering	University of the Philippines, Diliman	December 2014	Dark fermentation of piggery wastewater and food waste integrated with mixotrophic microalgae cultivation for recyclable and CO ₂ – neutral biohydrogen production
52	Maalihan, Reymark D.	MS	Chemical Engineering	University of the Philippines, Diliman	December 2014	Effect of Colorant, Thickness, and Pro-oxidant Loading on Degradation of Low-Density Polyethylene Films During Thermal Aging
53	Bausas, Michael D.	MS	Energy Engineering	University of the Philippines, Diliman	December 2014	The Influence of Cambered-Airfoil on the Aerodynamic Performance of Vertical Axis Wind Turbines
54	Gecain, Ma. Kristina R.	MS	Energy Engineering	University of the Philippines, Diliman	December 2014	Preparation and Properties of Microencapsulated Lauric Acid Phase Change Material Incorporated in Glass Sheet for Thermal Regulation
55	Santos, Basil James S.	MS	Chemical Engineering	University of the Philippines, Diliman	December 2014	Synthesis and Application of CuSO ₄ -Doped TiO ₂ for the Visible Light Photocatalytic Degradation of Phenol
56	Bating, Carlos B.	MS	Electrical Engineering	University of the Philippines, Diliman	December 2014	Experimental Measurements of the Detection Performance of Cyclostationary-Based Spectrum Sensing
57	Bonifacio, Ryan M.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2014	Electrocatalyzed Water Electrolysis Using Electrodeposited Rhodium on Silver Alloy

58	Cabrera, Ryan M.	MS	Mechanical Engineering	University of the Philippines, Diliman	December 2014	Computational Solution to the Torsion of Rectangular Cross-Section Prismatic Bars Made of Functionally Graded Materials
59	Curampez, Reynold E.	MS	Environmental Engineering	University of the Philippines, Diliman	December 2014	Synthesis and Electrochemical Characterization of PDDA-mixed Polyvinyl Alcohol Ion Exchange Membrane for Gradient Power Generation
60	Macailing, Marianne Lorene L.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2014	Synthesis and Characterization of Chitin-Cellulose Nanocomposite Laminates
61	Medina, Ruji Pinero	PhD	Environmental Engineering	University of the Philippines, Diliman	December 2014	Graphene Oxide-Based Polymer Nanocomposites for the Enhanced Removal of Lead (II) from Water
62	Abarro, Ghizelle Jane E.	MS	Materials Science Engineering	University of the Philippines, Diliman	May 2015	Synthesis and Thermal Property Characterization of Lignin-Based Polybenzoxazines with Terminal Alkene and Acetylene Groups
63	Acang, James Patrick A.	MS	Computer Science	University of the Philippines, Diliman	May 2015	CXSense: A Scalable Password-Based Key Management Scheme for Mobile Ad-hoc Networks
64	Ananoria, Abhel Y.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Sorption and Mechanical Properties of Natural Rubber Vulcanizates in Aqueous Media
65	Arabit, Jimyl M.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Surface Migration of Additives in Surfactant-Loaded Natural Rubber Vulcanizates

66	Balanay, Mary Jozen S.	MS	Materials Science Engineering	University of the Philippines, Diliman	May 2015	Synthesis of Yttrium-doped Barium Zirconate and Yttrium-doped Barium Cerate Core-Shell Structure as Proton-Conducting Solid Electrolyte for Intermediate Temperature Solid Oxide Fuel Cells
67	Bedes, Louie I.	MS	Metallurgical Engineering	University of the Philippines, Diliman	May 2015	Recovery of Fine Activated Carbon with Absorbed Gold from Cyanidation Tails through Cationic Flotation
68	Bibera, Wyndell Love M.	MS	Computer Science	University of the Philippines, Diliman	May 2015	Securing BGP as Path with Hash Chain and Digital Signature
69	Cabarle, Francis George C.	PhD	Computer Science	University of the Philippines, Diliman	May 2015	Computations in Spiking Neural P Systems: Simulations and Structural Plasticity
70	Caddarao, Patrick S.	MS	Environmental Engineering	University of the Philippines, Diliman	May 2015	Phosphate Removal and Recovery as Brushite by Unseeded Granulation in a Fluidized-Bed Reactor
71	Caraga, Chaitanya S.	MS	Metallurgical Engineering	University of the Philippines, Diliman	May 2015	Prediction of Zeta Potential Behavior of Minerals Using Column Flotation Technique
72	Cruz, Mar B.	MS	Industrial Engineering	University of the Philippines, Diliman	May 2015	A Stochastic Analytic Hierarchy Process- Based Methodology for Supplier Selection Problem in Group Context
73	Delgado, Aileen L.	MS	Environmental Engineering	University of the Philippines, Diliman	May 2015	Rice Hull Immobilized Indigenous Bacteria as a Novel Biofungicide Against Rice Blast Disease

74	Dulce, Elvin D.	MS	Electrical Engineering	University of the Philippines, Diliman	May 2015	Reliability Evaluation of Two Interconnected Power Systems Incorporating Intermittency and Seasonal Variation in Generation and Load Forecast Uncertainty
75	Fernando, Lorenz Anthony T.	MS	Materials Science Engineering	University of the Philippines, Diliman	May 2015	Extraction of Chitin from Philippine Blue Swimming Crab (<i>Portunus pelagicus</i>) Shells
76	Gumera, Vida Joan G.	MS	Electrical Engineering	University of the Philippines, Diliman	May 2015	Optimization of Generator Reactive Power Dispatch
77	Manapat, Jill Z.	MS	Materials Science Engineering	University of the Philippines, Diliman	May 2015	Electrophoretic Characterization of Clay Mineral Systems for Smectite Recovery
78	Matira, Emmanuela M.	MS	Environmental Engineering	University of the Philippines, Diliman	May 2015	Degradation of Dimethyl Sulfoxide through Fluidized-bed Fenton Process
79	Mercado, Jose Gabriel E.	MS	Mechanical Engineering	University of the Philippines, Diliman	May 2015	Influence of CME-Diesel Blends on the Performance and Emissions of a Light Duty Automotive Common Rail Direct Injection Engine
80	Mina, Maria Teresa M.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Development of Natural Fiber-Reinforced Plastic Composite Using Pandanus simplex (karagumoy) Fiber
81	Mondejar, Lalilen C.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Superstructure Approach to Synthesis of Mass Exchange Networks for Batch Process
82	Mulimbayan, Francis M.	MS	Materials Science Engineering	University of the Philippines, Diliman	May 2015	Corrosion Behavior of Austenitic Chromium-Manganese Stainless Steels in Citric Acid

83	Musa, Jerome S.	MS	Metallurgical Engineering	University of the Philippines, Diliman	May 2015	Determination of Breakage Parameters of Andesite in Dry Ball Mill Grinding
84	Novabos, Charles Ruel G.	MS	Industrial Engineering	University of the Philippines, Diliman	May 2015	How Good is this Destination Website?: Developing A User-Perceived Quality Tool
85	Pandan, Mary Ann T.	PhD	Environmental Engineering	University of the Philippines, Diliman	May 2015	Advanced Water Quality Studies Using Sensorial Methods and Indicators
86	Ramis, Jopeth M.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Optimized preparation of electrospun Polyvinyl Alcohol – Gelatin Nanofibers using the Taguchi Method
87	Salcedo, Angel Frances M.	MS	Environmental Engineering	University of the Philippines, Diliman	May 2015	Recovery of Nickel from Industrial Wastewater by Homogenous Fluidized-Bed Granulation (FBG) Process
88	Sunga, Jon Errol L.	MS	Environmental Engineering	University of the Philippines, Diliman	May 2015	Anaerobic Co-Digestion of Sugar Industry Press Mud and Raw Wastewater: Effect of Mixture Composition and Amount of Inoculum on Methane Production and Waste Treatment Performance
89	Tenorio, Arnel Llanto	MS	Geomatics Engineering	University of the Philippines, Diliman	May 2015	Geographic Information System and Participatory Mapping in Identifying and Monitoring Root and Tubers Crops in Benguet, Philippines
90	Vasquez, Jeddah Marie G.	MS	Chemical Engineering	University of the Philippines, Diliman	May 2015	Synthesis and Characterization of a Self-Assembling Hydrogel from Water-Soluble Cellulose

						Derivatives and Sodium Hydroxide/Thiourea Solution
91	Villanueva, Mylene Jimenez	MS	Geomatics Engineering	University of the Philippines, Diliman	May 2015	RS and GIS-based Assessment and Modeling of Urban Environmental Conditions for Sustainable Urban Landscape Development
92	Virata, Adrian Jay A.	MS	Electrical Engineering	University of the Philippines, Diliman	May 2015	Simultaneous Maximum Power Tracking of Wind Turbine and Diesel Engine for Optimal Power Extraction of a Small-Scale Hybrid Wind-Diesel System
93	Del Mundo, Joseph Benjamin	MS	Computer Science	University of the Philippines, Diliman	June 2015	Intrusion Detection Clustering Using OPTICS
94	Nuñez, Gandy M.	MS	Energy Engineering	University of the Philippines, Diliman	June 2015	Fabrication and Characterization of Proton-Conducting Solid Oxide Electrolyte for Fuel Cell Application
95	Arriola, Nicollete Ann A.	MS	Electrical Engineering	University of the Philippines, Diliman	July 2015	Coordinated Maximum Power Point Tracking in Modular Photovoltaic Systems
96	Bahinting, Sandra Enn D.	MS	Chemical Engineering	University of the Philippines, Diliman	July 2015	Assessment of Bismuth Film Gold Ultramicroelectrode Array for the Determination of Trace Heavy Metals in Water
97	Capito, Jenelyn A.	MS	Environmental Engineering	University of the Philippines, Diliman	July 2015	Copper Removal and Recovery from Copper-Containing Wastewater by Unseeded Fluidized-bed Process
98	Mercado, Chine H.	MS	Environmental Engineering	University of the Philippines, Diliman	July 2015	Synthesis, Characterization and Application of Visible-Light-Responsive CuSO ₄ -doped TiO ₂

						Photocatalyst for Methylene Blue Degradation
99	Salamero, Jayson Y.	MS	Civil Engineering	University of the Philippines, Diliman	July 2015	Transformed Section Method for Estimating the Effective Tensile Modulus Derived from Compression Test and Four-Point Bending Test Results for Modelling of Bamboo Material
100	Tan, Michael R.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2015	Synthesis of Copper Nanowires and its Application as Transparent Conducting Electrode
101	Ambait, Johanna Michelle S.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2015	Recovery of Smectite and Kaolinite from Pottery Clay via Supercentrifugation Technique
102	Tanguilig, Neil Richard P.	MS	Energy Engineering	University of the Philippines, Diliman	December 2015	Performance Analysis of a Cut-Out Hollow-Pipe HAWT Blade Using Hybrid CFD and BEM Methods
103	Tamisin, Abern Palmiano	MS	Energy Engineering	University of the Philippines, Diliman	December 2015	Thermal Performance Evaluation of the TEC-Cooled Oscillating Heat Pipe Charged with CNT-HDMIM[Br] Nanofluid
104	Parca, Marie Felipe B.	MS	Geomatics Engineering	University of the Philippines, Diliman	December 2015	Geographic Information Assisted (GIS-Assisted) Tourism Destination Management: Development of a Spatial Database for Narra, Palawan
105	Llanos, Princess Stephanie P.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2015	Synthesis and Characterization of Carbon Coated Nanograined Lithium Iron

						Phosphate (LiFePO ₄) as Cathode Material for Lithium-ion Batteries
106	Divinagracia, Maricor F.	MS	Energy Engineering	University of the Philippines, Diliman	December 2015	Equilibrium, Kinetic and Thermodynamic Studies of Ethanol Adsorption by Polydivinylbenzene-silica
107	Doliente, Lorenzo Miguel T.	MS	Energy Engineering	University of the Philippines, Diliman	December 2015	<i>In Situ</i> Transesterification of <i>Chlorella</i> sp. Using LiOH-Pumice as Heterogeneous Catalyst
108	De Los Reyes, Florencio D.	MS	Materials Science Engineering	University of the Philippines, Diliman	December 2015	Development of Multi-Flame Retarders Using Rice Husk-derived Silica, Phosphorus, and Nitrogen-based Compounds for Polystyrene
109	Mora, Joy Marie R.	MS	Energy Engineering	University of the Philippines, Diliman	December 2015	NaOH/Pumice and LiOH/Pumice as Heterogeneous Solid Base Catalysts for Biodiesel Production from Soybean Oil: An Optimization Study
110	Menor, Terence Lucero F.	MS	Metallurgical Engineering	University of the Philippines, Diliman	December 2015	Electrokinetics and Stability of Solder Powders in Aqueous and Non-Aqueous Media
111	Cañezal, Edwin Roven T.	MS	Metallurgical Engineering	University of the Philippines, Diliman	December 2015	Microbubble Size Control: Effect of PH, Frother Type and Dosage
112	Sundo, Marloe B.	PhD	Civil Engineering	University of the Philippines, Diliman	December 2015	Estimation of Energy Demand and Carbon Dioxide Emission in Philippine Road Transport Using Inter-Regional Passenger and Freight O-D Data

G. University of the Philippines Los Baños

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Manuel, Luther John R.	MS	Agricultural Engineering Major in Farm Power and Machinery Minor in Agricultural and Bio Process Engineering	UPLB	April 2014	Development of a Fry Counter fo Striped Catfish Using Machine Vision
2	Fortu, Alfredo Jr. F.	MS	Agricultural Engineering Minor in Farm Power and Machinery	UPLB	October 2014	Optimizing Rice Straw, Corn Chaff, and Binder Levels for Fuel Briquettes
3	Lavarias, Jeffrey A.	PhD	Agricultural Engineering Cognate in Farm Power and Machinery	UPLB	December 2014	Optimization of a Mechanical sheller using response surface methodology
4	Calixto, Bethany Grace S.	PhD	Agricultural Engineering	UPLB	June 2015	DENSIFICATION OF SHREDDDED RICE STRAW
5	Ang, Roejae Carlo A.	MS	Agricultural Engineering	UPLB	June 2015	Development of a Wind-driven Water-pumping System for Supplemental Irrigation in Pililla, Rizal, Philippines

H. University of San Carlos

	NAME OF SCHOLAR	DEGREE COMPLETED	FIELD OF STUDY	SCHOOL GRADUATED	MONTH AND YEAR GRADUATED	TITLE OF THESIS/ DISSERTATION
1	Obeso, Bryan A.	ME	Mechanical Engineering	University of San Carlos	March 2014	Design, Fabrication and Testing of a Coconut Dehusker
2	Nunez, Warren A.	ME	Electronics and Communications Engineering	University of San Carlos	May 2014	Simulation and FPGA Implementation of Television-White Space Energy Detection Cognitive Radio
3	Cañete, Christy A.	ME	Electronics and Communications Engineering	University of San Carlos	October 2014	Simulation and FPGA Implementation of A Matched Filter for Cognitive Radio
4	Forcadilla, Percival J.	ME	Electronics and Communications Engineering	University of San Carlos	March 2015	Development of a Studio - Type Course for Digital IC Design Using Verilog-HDL and

						SYNOPTIS Tools with FPGA Verification
5	Dar, Karla Louissa Marie A.	ME	Computer Engineering	University of San Carlos	March 2015	Multilayer Feedforward Artificial Neural Network (MLFANN) Application for Suitable Crop Recommendation Based on Environmental Plant Growth Factors
6	Elnas, Karen C.	MS	Civil Engineering	University of San Carlos	October 2015	Rainfall - Runoff Modeling of Pampanga River Basin in Luzon Island, Philippines Using Linear Genetic Programming
7	Guivencan, Catherine Leah G.	ME	Computer Engineering	University of San Carlos	October 2015	Resource Mapping of Mango Orchards in Cebu Using LiDAR Data and Aerial Images
8	Llames, Gerome Jan M.	ME	Electronics and Communications Engineering	University of San Carlos	October 2015	Real - Time Implementation of an Energy Detection - Based Spectrum Sensing in a Software Defined Radio Platform

List of 2014 and 2015 ERDT FRDG Recipients

A. 2014 ERDT FRDG Recipients

Name	Duration	Paper Presentation	Conference	Venue
Institute of Civil Engineering				
Ma. Brida Lea D. Diola	March 29 - April 2, 2014	Assessment of the Solid Waste Management of Commercial Establishments in UP Diliman	29th International Conference on Solid Waste Technology and Management	Philadelphia, USA
Christian R. Orozco	March 29 - April 2, 2014	Waste Management Strategies for Construction Waste in the Philippines	29th International Conference on Solid Waste Technology and Management	Philadelphia, USA
Doreen E. Candelaria	March 29 - April 2, 2014	Performance Testing of Controlled Low Strength Material Containing Processed Industrial	29th International Conference on Solid Waste Technology	Philadelphia, USA

		Waste Fly Ash	and Management	
Oscar Victor M. Antonio Jr.	September 1-3, 2014	Improved Artificial Neural Network Prediction of concrete Strength Based on Non-Destructive Test Results	5th International Conference on Concrete Repair	University Belfast, United Kingdom
Ma. Brida Lea D. Diola	May 30-31, 2014	Effect of Varying the Slope and Particle Size on the Performance of Capillary Barrier: Sensitivity Analysis and Simulation using HYDRUS - 2D	13TH Global Joint Seminar on Geo-Environmental Engineering (GEE 2014)	Sapporo, Japan
Christian R. Orozco	May 30-31, 2014	Strength Performance of Cement Treated Base Course Made from Dredge Materials of San Juan River	13TH Global Joint Seminar on Geo-Environmental Engineering (GEE 2014)	Sapporo, Japan
Maria Antonia N. Tanchuling	September 8-14, 2014	Estimation of Leachate Generation at the Quezon City Controlled Facility, Philippines	ISWA 2014 Solid Waste World Congress	Sao Paolo, Brazil
Christian R. Orozco	September 29-30, 2014	Evaluation and Calibration of Methods to determine concrete crack depth using ultrasonic pulse velocity	7th AUN/SEED Net Geological Engineering Conference and the 2nd AUN/SEEd - Net Natural Disaster	Yangon, Myanmar
Doreen E. Candelaria	September 29-30, 2014	Probabilistic Seismic Hazard Analysis for a Business District in Metro Manila, Philippines	7th AUN/SEED Net Geological Engineering Conference and the 2nd AUN/SEEd - Net Natural Disaster	Yangon, Myanmar
Diocel Harold M. Aquino	September 29-30, 2014	Correlation of flood depth and disaster waste generation in residential buildings in suburban Philippines Setting	7th AUN/SEED Net Geological Engineering Conference and the 2nd AUN/SEEd - Net Natural Disaster	Yangon, Myanmar
Jose Regin F. Regidor	November 22-23, 2014	Long Term Strategies for Low Carbon Transport Systems in the Philippines	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines
Fernando J. Germar	November 22-23, 2014	Retrofitting Concrete Buildings for Environmental Sustainability	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines
Department of Chemical Engineering				
Bryan O. Pajarito	May 13-16, 2014	Diffusion in Polymer Composites Reinforced with Flakes and Triangular - Shaped Filters	9th International Materials Technology Conference and Exhibition	Kuala Lumpur, Malaysia
Florencio C. Ballesteros	March 23-27, 2014	Coupling artificial neural network and Genetic Algorithm in redesigning cities for flood resistance	7th International Conference on Advances in Computer Interactions	Barcelona, Spain
Bryan O. Pajarito	June 2-6, 2014	Moisture Sorption of Epoxy Composites Reinforced with Aligned and Notched Triangular Bars	Mechanics of composite Materials XVIII International Conference	Riga, Latvia
Analiza P. Rollon	June 5-6, 2014	Treatment of paper mill wastewater using upflow anaerobic sludge blanket (UASB) reactor at different hydraulic retention time and ozonation pre- or post-treatment	International Water Association	Moscow, Russia
Mark Daniel G. De Luna	August 10-14, 2014	Removal of CR(VI) from aqueous solutions by adsorbents synthesized from drinking water treatment residuals: Isotherm and kinetic studies	248th American Chemical Society (ACS) National Meeting	California, USA

Terence P. Tumolva	September 21-22, 2014	Degradation Behaviour of CFB Fly Ash Filled Unsaturated Polyester Composites under Acidic Environment	2014 International Conference on Green Materials and Environmental Engineering	Hongkong
Hyacinth Mae G. Tambago	December 27-28, 2014	Intrinsic Kinetic Modelling of hydrogen production by photocatalytic water splitting using cadmium zinc sulfide catalyst	3rd International Conference on Chemical Science and Engineering	Phuket, Thailand
Maria Lourdes P. Dalida	September 29-30, 2014	Autotrophic perchlorate biodegradation and kinetics of sulphur oxidizing enrichment culture in the presence of nitrate	7th AUN/SEED - Net Geological Engineering Conference	Myanmar
Department of Computer Science				
Prospero C. Naval, Jr.	April 7-9, 2014	A Coral Mapping and Health Assessment System based on Texture Analysis	6th Asian Conference on Intelligent Information and Database Systems	Bangkok, Thailand
Vena Pearl Boñgolan	July 28-August 1, 2014	Stochastic Storm Surge Modelling in a Philippine Setting	Asia Oceania Geosciences Society 11 th Annual Meeting	Sapporo, Japan
Henry Adorna	October 16, 2014		Bio-Inspired Computing: Theory and applications 2014	Wuhan, China
Susan Festin	December 8-10, 2014	Integrating Computer Security into the Undergraduate Software Engineering Classes: Lessons Learned	1st International Workshop on Information and Communication Security CANDAR Symposium	Shizuoka, Japan
Susan Festin	December 10-12, 2014	An Access Control Framework for Semitrusted Storage Using tribute Encryption with Short Ciphertext and Mediated Revocation	IEEE International Conference on Teaching Assessment and Learning for Engineering	Wellington, New Zealand
Electrical and Electronics Engineering Institute				
John Richard E. Hizon	May 31-June 6, 2014	A reconfigurable FGMOS based OTA C Filter	2014 IEEE International Symposium on Circuits and Systems (ISCAS)	Melbourne, Australia
Michael Angelo A. Pedrasa	May 20-23, 2014	Demonstration of direct Load Control of Air Conditioners in high Density Residential buildings	2014 IEEE Innovative smart Grid Technologies - Asia	Kuala Lumpur, Malaysia
Joel Joseph S. Marciano, Jr	October 10-13, 2014	Monitoring System for Deep - Seated Landslides Using Locally - Developed Tilt and Moisture Sensors: System Improvements and Experiences from Real World Deployment	2014 IEEE Global Humanitarian Technology Conference	San Jose, California, USA
Rowel O. Atienza	August 28-30, 2014	3D Gestures on 2D Screen for Mobile Games	IEEE Asia Pacific Conference on Wireless and Mobile (APWIMob 2014)	Bali, Indonesia
Miguel Carlo L. Purisima	September 28-October 1, 2014	Design Considerations for X-Bands Class J Power Amplifiers	2014 IEEE Symposium on Wireless Technology and Application (ISTWA 2014)	Kota, Malaysia
Franz De Leon	August 20-23, 2014	Music Genre Classification using Polyphonic timbre Models	19th International Conference on Digital Signal Processing	Hongkong
Rowel O. Atienza	October 8-10, 2014	Smooth Writing Card for a Messaging App	7th IEEE International Workshop on Selected topics in Wireless and Mobile Computing	Larnaca, Cyprus
Rowel O. Atienza	October 22-25, 2014	Librorum: a Crowdsourcing Filipino - English Dictionary Mobile Application	IEEE TENCON 2014	Bangkok, Thailand

Allan C. Nerves	October 22-25, 2014	Multi Objective Optimization Network Reconfiguration With Capacitor and Distributed Generator Placement	IEEE TENCON 2014	Bangkok, Thailand
Wilbert Rey D. Tarnate	October 22-25, 2014	Binary Distribution System Reliability Optimization Model Considering Substation Bus Schemes and Feeder Devices	IEEE TENCON 2014	Bangkok, Thailand
John Richard E. Hizon	October 22-25, 2014	An Ultra-Low Voltages Standard Cell Library in 65 - nm CMOS Process Technology	IEEE TENCON 2014	Bangkok, Thailand
Rhandley D Cajote	December 9-12, 2014	Low-Complexity Adaptive Intra Refresh for Real-Time Wireless Video Transmission	Asia Pacific Signal and Information Processing Association Annual Summit and Conference	Siam Reap, Cambodia
Roel M. Ocampo	October 27-28, 2014	Multipath Bandwidth Scavenging in the Internet of Things	2014 International Conference on IoT Service	Rome, Italy
Nestor C. Tiglao	November 13-14, 2014	Transmission Window Optimization for Caching - based Transport Protocols in Wireless Sensor Networks	8th International Wireless Internet Conference (WICON 2014)	Lisbon, Portugal
Joel Joseph S. Marciano, Jr	November 11-14, 2014	Automatic Tuning of a 2.45 GHz Rectangular Slotted Waveguide Antenna	2014 AUN Seednet Conference on Electrical and Electronics	Kuala Lumpur, Malaysia
Louis P. Alarcon	November 17-20, 2014	Timing Analysis and Optimization of voltage Scaled CMOS Digital Circuits with Dual - Vth Devices	IEEE Asia Pacific Conference on Circuits and Systems Conference	Okinawa, Japan
Department of Geodetic Engineering				
Enrico B. Paringit	June 16-21, 2014	Survey Requirements for river flood assessment and spatial planning : Experiences from river hydrographic measurements and LIDAR surveys in the Philippines	FID Congress 2014	Kuala Lumpur, Malaysia
Louie P. Balicanta	June 16-21, 2014	The Systematic Land Verification (syLVer) Protocol	XXV FIG Congress	Kuala Lumpur, Malaysia
Ariel C. Blanco	October 6-8, 2014	Geospatial analysis of poverty incidence in two contrasting cities in the Philippines using factor analysis and spatial Regression	XXII ISPRS 2014	Toronto, Canada
Ariel C. Blanco	June 14-18, 2014	3D GIS - based Assessment and Modelling of Urban Environmental Conditions Towards for Sustainable Urban Landscape Redevelopment	10th AsiaGIS 2014 Conference	Chiang Mai Thailand
Czar Jakiri S. Sarmiento	September 29-30, 2014	Cooperation of Policy and technology for Disaster Mitigation in the Philippines	7th AUN/SEED Net Geological Engineering Conference and the 2nd AUN/SEEd - Net Natural Disaster	Yangon, Myanmar
Ayin M. Tamondong	October 27-31, 2014	Changes in Seagrass Fractional Cover in Bolinao and Anda, Philippines Derived from Landsat Images	35th Asian Conference on Remote Sensing 2014	Nay Pyi, taw, Myanmar
Ma. Rosario Concepcion O. Ang	October 27-31, 2014	Development of Geospatial Tools for Tidal Current Energy Resource Assessment: A Case of Verde Island Passage, Philippines	35th Asian Conference on Remote Sensing 2014	Nay Pyi, taw, Myanmar
Enrico C. Paringit	October 27-31, 2014	Survey Requirements for river flood assessment and spatial planning : Experiences from river hydrographic measurements and LIDAR surveys in the	35th Asian Conference on Remote Sensing 2014	Nay Pyi, taw, Myanmar

		Philippines		
Department of Industrial Engineering and Operations Research				
Eugene Rex L. Jalao	January 7-9, 2014	Industrial Engineering Education in Philippines	4th International Conference on Industrial Engineering and Operations Management	Bali, Indonesia
Aura C. Matias	July 19-23, 2014	Designing an Arm Support Device to Minimize UECD among Filipino Electric Technicians Using QFD, TRIZ and Antropometry	5th International Conference on Applied Human Factors and Ergonomics (AHFE 2014)	Poland
Joanna Z. Resurreccion	July 14-18, 2014	LIDAR - Based Framework for Integrating Local-specific vulnerability Conditions in Deriving Perturbations to the Dynamic Inoperability Input Output Model	22nd International Input-Output Conference	Lisbon, Portugal
Roland U. Po	July 19-23, 2014	Emergency Room Process and Patient Characterization for a Public Hospital	5th International Conference on Applied Human Factors and Ergonomics (AHFE 2014)	Poland
Iris Ann G. Martinez		A comparative Study of Performance between Operators with Work Discontinuity and without Work Discontinuity (<i>Paper Publication</i>)		
Joanna Z. Resurreccion	November 21-22, 2014	Utilizing Flood Hazard Map Data in Economic Risk Assessment: The Case of Typhoon Sendong in Mindanao	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines
Department of Mechanical Engineering				
Menandro S. Berana	July 1-4, 2014	Determination of Efficiency of converging - diverging nozzles with transcritical and transonic flow of Co ₂	World Congress on Engineering 2014	London, United Kingdom
Ferdinand G. Manegdeg	July 1-4, 2014	The effect of Minimum Temperature Difference in the Design and Optimization of Heat Exchanger Networks of a Brewery based on Pinch Methodology	World Congress on Engineering 2014	London, United Kingdom
Louis Angelo M. Danao	July 1-4, 2014	Development of Velocity Flow field Measurement Method Around a Vertical Axis Wind Turbine Blade Using Particles Image velocimetry	World Congress on Engineering 2014	Hanoi, Vietnam
Menandro S. Menandro	October 9-10, 2014	Ejector Powerplant System for Low-Enthalphy Geothermal Heat Sources in the Philippines	Aun/SEED-Net Regional Conference in mechanical and Manufacturing Engineering 2014	Zurich, Switzerland
Menandro S. Menandro	October 25-26, 2014	Solar - Biomass Driven Ejector Cooling System	2nd International Conference on Advances in Mechanical and Robotics Engineering	Bangkok, Thailand
Edwin N. Quiros	November 13-14, 2014	Fuel Economy of Jeepneys Using 2% and 5% CME - Diesel Blends in the Philippines	7th AUN/SEEd-Net RCeneE 2014	Bangkok, Thailand
Louis Angelo M. Danao		Visualizing Dynamic Stall Around A Vertical Axis Wind turbine Blade Through Particle Image		

		Velocimetry (Book Publication)		
Department of Mining, Metallurgical and Materials Engineering				
Michael Leo L. Dela Cruz	January 26-31, 2014	Effect of Anodization Voltage on the Surface Characteristics of Titanium Oxide/porcine bone-derived Hydroxyapatite Composite	38th International Conference and Exposition on Advanced Ceramics and Composites	Florida, USA
Eduardo R. Magdaluyo, Jr.	January 26-31, 2014	Compressive Strength and Durability of Concrete Utilizing Recycled Concrete Aggregate	38th International Conference and Exposition on Advanced Ceramics and Composites	Florida, USA
Mary Donnabelle L. Balela	March 22-23, 2014	Growth to Cobalt Nanowires under Eternal Magnetic field	4th International Conference on Key Engineering Materials	Bali, Indonesia
Khryslyn G. Araño	May 15, 2014	Synthesis of Iron Modified Montmorillonite as Filter for Electrospun Nanocomposite Fibers	ICSME 2014: International Conference on Materials Science and Technology	Amsterdam, Netherlands
Herman D. Mendoza	October 20-24, 2014	Seeding Mechanism of finely dispersed particles in an aqueous suspension	XXVII International Mineral Processing Congress (IMPC 2014)	Santiago, Chile
Mary Donnabelle L. Balela	May 8-9, 2014	Formation of Cobalt Nanoparticles from CO(OH) ₂ Suspension	International Conference on Materials and Manufacturing Technology	Kuala Lumpur, Malaysia
Mary Donnabelle L. Balela	September 2-9, 2014	Effect of Nickel addition on the Morphology of Cobalt Nanowires Prepared in Propylene glycol	2014 4th International Symposium on Materials for Enabling Nanodevices (ISMEN 2014)	Tainan, Taiwan
Myra Ruth S. Poblete	November 22-23, 2014	Extraction, Film Production and Biodegradation of Chitin from Carapace of Blue Swimming Crab (<i>Porunus pelagicus</i>)	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines
Karlo Leandro D. Baladad	November 22-23, 2014	Determining the Zeta Potential of Microbubbles in the Absence of Surfactants by Microelectrophoresis	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines
Astrid Ayla E. Liberato	November 22-23, 2014	Efficiency of Lead (III) Ion Adsorption by fishbone-extracted Hydroxyapatite with Varying Sorbent Dosage and Solution pH	7th ASEAN Environmental Engineering Conference	Puerto Prinsesa, Philippines

B. 2015 ERDT FRDG Recipients

Name	Duration	Paper Presentation	Conference	Venue
Institute of Civil Engineering				
Ma. Brida Lea D. Diola	May 20-23, 2015	Environmental Contamination and Residential Exposure of Mercury in Artisanal gold Mining Area in Benguet, Philippines	International Conference on Civil and Environmental Engineering	Nevsehir, Turkey
Christian R. Orozco	May 20-23, 2015	Spatial Variation and Heavy Metal Concentration in Sediments of Bued River: A Preliminary Assessment of a River Nearby Small-Scale Mining Sites in the Philippines	International Conference on Civil and Environmental Engineering	Nevsehir, Turkey
Doreen E. Candelaria	May 20-23, 2015	Use of fly Ash in the Design of Controlled Low-Strength Material Mixture	International Conference on Civil and Environmental Engineering	Nevsehir, Turkey

Jaime Y. Hernandez	February 11-13, 2015	Fastener Pull-Out Tests to Determine Threshold Values for Roof Failure Modes Observed After Typhoon Haiyan in the Philippines	17th Australasian wind Engineering Society Workshop	Wellington, New Zealand
Maxell P. Lumbera	May 20-23, 2015	Integrating Storage Sizing and Slow Sand filtration for Residential Rainwater Harvesting Applications in the Philippines	International Conference on Civil and Environmental Engineering	Nevsehir, Turkey
Maria Antonia N. Tanchuling	April 12-15, 2015	Managing Disaster Wastes of Typhoon Yolanda in Leyte, Philippines	2nd Symposium of the IWWG-ARB (International Waste Working Group - Asia Regional Board)	Shanghai, China
Diocel Harold M. Aquino	May 20-23, 2015	Development of Fragility Curves for Self-Supporting Trussed Towers in the Philippines Considering Severe Wind Loads	International Conference on Civil and Environmental Engineering	Nevsehir, Turkey
Karl B.N. Vergel	September 11-14, 2015	Evaluation of compliance of Dimensions and Selected Systems and Components of Customized Local Road Vehicles (CLRV) with Vehicle Regulations and Standards	11th International Conference of the Eastern Asia Society for Transportation Studies (EASTS)	Cebu, Philippines
Jose Regin F. Regidor	September 11-14, 2015	State of Pavement Engineering in the Philippines and Implications on the Economic Life of National Roads and Challenges of Urban Transport Development in Metro Manila : A look back at the last 40 year"	11th International Conference of the Eastern Asia Society for Transportation Studies (EASTS)	Cebu, Philippines
Ricardo D. Sigua	September 11-14, 2015	Selection of Metro Manila BRT Corridors using Multi - Criteria Assessment	11th International Conference of the Eastern Asia Society for Transportation Studies (EASTS)	Cebu, Philippines
Augustus C. Resurreccion	August 23-24, 2015	Assessment of Nutrients in Bued River	8th ASEAN Environmental Engineering Conference	Kuala Lumpur, Malaysia
Eric Augustus J. Tingatinga	September 15-18, 2015	Development of Earthquake Vulnerability Curves of Key Building Types in the Philippines	Collaborative Conference on Earthquake Science and Engineering	Chengdu, China
Mary Jane F. Venus	November 5-7, 2015	Effects of Reinforcing Bars in Ultrasonic Pulse and Rebound Number Measurement in Concrete	Regional Symposium on Infrastructure Development	Bangkok, Thailand
Department of Chemical Engineering				
Bryan G. Pajarito	February 4-6, 2015	Effect of ingredient loading on vulcanization characteristics of a natural rubber compound	2nd International Materials, Industrial and Manufacturing	Bali, Indonesia
Mark Daniel G. De Luna	March 22-26, 2015	Effect of upflow velocity on nutrient recovery from swine wastewater by fluidized bed struvite crystallization	249th American Chemical Society National Meeting and Exposition	Colorado, USA
Terence P. Tumolva	February 18-21, 2015	Mechanical Strength of Unsaturated Polyester Resin Filled with CFB fly Ash and Ligninocellulosic Waster	76th PIChE National Convention	Palawan, Philippines
Rizalinda L. De Leon	February 18-21, 2015	Thermal Conductivities of Nanofluids with Ionic Liquids	76th PIChE National Convention	Palawan, Philippines
Maria Lourdes P. Dalida	May 7-9, 2015	Design and Performance of Immobilized Photocatalytic Reactor for Water Treatment	International congress on Chemical, biological and Environmental Sciences	Kyoto, Japan

Patrick J. Ramoso	May 7-9, 2015	Design and Optimization of an air sparged TiO_2 -Immobilized Tabular Photocatalytic Reactor for the Degradation of Methylene Blue	International congress on Chemical, biological and Environmental Sciences	Kyoto, Japan
Analiza P. Rollon	September 3-5, 2015	Treatment of Distillery Wastewater Using Combinations of Advance Oxidation Processes: UV/O ₃ , UV/H ₂ O & H ₂ O ₂ /O ₃	14th International Conference on Environmental Science and Technology 2015	Rhodes, Greece
Terence P. Tumolva	May 7-9, 2015	Mathematical modelling and simulation of microencapsulated n-octadane in urea-melamine formyldehyde shell for latent heat storage	International congress on Chemical, biological and Environmental Sciences	Kyoto, Japan
Florencio C. Ballesteros, Jr	September 3-5, 2015	Assessing the Efficacy of third party audits such as alternative regulatory tool to tripartite monitoring in the enforcement of company obligated measures in the Environmental Impact Assessment Process	2015 International Conference on Environmental Science and technology	Rhodes, Greece
Department of Computer Science				
Cedric Angelo M. Festin	Feb 24-26, 2015	A hybrid Incentive-based Peer Selection Scheme for Unstructured Peer to Peer Media Streaming Systems	6th ICISA 2015	Pattaya, Thailand
Vena Pearl A. Bongolan	August 2-7, 2015	Scenario Analysis for flooding and Vulnerability using Genetic Algorithm	Asia Oceania Geosciences Union 2015	Singapore
Cedric Angelo M. Festin	June 14-17, 2015	Streaming 4K/UHD Video to the Rest of US: Can Bandwidth Sharing Help?		Boston, USA
Prospero C. Naval, Jr.	October 1-2, 2015	Coral Texture Recognition from Superpixelized Images using Gabor Filters and Support Vector Machines	Regional Conference for Computer and Information Engineering 2015	Hanoi, Vietnam
Prospero C. Naval, Jr.	November 3-6, 2015	Classification of Heart Sound using Discrete and Continuous Wavelet Transform and Random Forests	3rd Asian Conference on Pattern Recognition (ACPR 2015)	Kuala Lumpur, Malaysia
Electrical and Electronics Engineering Institute				
Wilbert R. Tarnate	June 10-13, 2015	Maximizing Reliability by Optimal Siting of Distributed Generation and Protective Devices	2015 IEEE 15th International Conference on Environment and Electrical Engineering	Italy
Rhandley D. Cajote	July 20-25, 2015	Framework of Surveillance Video Analysis and Transmission System Using Background Modelling and MIMO-OFDM	IEEE International Conference on Digital Signal Processing	Singapore
Roel M. Ocampo	July 7-10, 2015	Delay-Based End-to-End Congestion Control for Wireless Sensor Networks	7th International Conference on Ubiquitous and Future Networks	Sapporo, Japan
Adelson N. Chua	September 1-4, 2015	Delay variation compensation through Error Correction using RAZOR	6th International Workshop on CMOS Variability	Salvador, Brazil
Rowel O. Atienza	September 9-11, 2015	Implicit Palm Rejection using Real-time Hand Model Filters on Tablet Devices and BBCast: Cloud - Based Interactive Public Bulletin Board	9th International Conference on Next Generation Mobile applications, Services and Technologies	United Kingdom
Nestor Michael C. Tiglao	November 1-4, 2015	MATES: A MATLAB – based Analytical Energy Harvesting Simulator	IEEE TENCON 2015	Macau, China
Rhandley D. Cajote	October 6-10, 2015	Wireless Video Transmission over MIMO - OFDM using Background Modelling for Video Surveillance Applications	International Symposium on Comms and Information technology (ISCIT	Nara, Japan

			2015)	
John Richard E. Hizon	November 1-4, 2015	An Energy Efficient 2.4 Gz OOK RF Transceiver Implemented in a 65 nm CMOS Process	IEEE TENCON 2015	Macau, China
Marc D. Rosales	October 26-29, 2015	Substrate diode effect on the performance of Silicon Germanium Phototransistors	2015 IEEE International Topical Meeting on Microwave Photonics	Cyprus
Michael Angelo A. Pedrasa	November 4-6, 2015	Scheduling of Virtual Power Plant with High Penetration of Distributed Generation	2015 IEEE Innovative Smart Grid Technologies Asia	Bangkok, Thailand
Allan C. Nerves	November 1-4, 2015	Optimization of Generator Reactive Power Dispatch in Restructured Power Systems	IEEE TENCON 2015	Macau, China
Jordan Rel C. Orillaza	November 15-18, 2015	Stochastic Analysis on the Effect of Fault Impedance and Fault type to the Area of Vulnerability	IEEE - PES Asia - Pacific Power and Energy Engineering Conference (APPEEC 2015)	Brisbane, Australia
Nestor Michael C. Tiglao	December 1-3, 2015	Congestion Control for Caching – Aware Transport in Wireless Sensor Networks	4th International Conference on Internet Applications, Protocols and Services	Malaysia
Franz A. De Leon	November 27-29, 2015	Study of Automatic Melody Extraction Methods for Philippine Indigenous Music	5th IEEE Conference on Control System, Computing and Engineering	Malaysia
Department of Geodetic Engineering				
Ayin T. Tamondong	April 22-25, 2015	Coastal Resources Extraction from Lidar Point Cloud Data and world View 2 Satellite Imagery	12th CoastGIS 2015	Cape Town, South Africa
Ma. Rosario Concepcion O. Ang	May 18-19, 2015	Learner - Based Readability Indexing using Combined Grammar and Content Feature	17th International Conference on Geographic Information Systems	Paris, France
Ariel C. Blanco	June 28-31, 2015	Agricultural Land Use Mapping from LiDAR, Landsat and MODIS Data	13th South East Asian Survey Congress	Singapore
Mark Edwin A. Tupas	June 28-31, 2015	Framework for Data Access and Distribution for the Philippine LiDAR Programs	13th South East Asian Survey Congress	Singapore
Rosalie B. Reyes	June 28-31, 2015	Analysis of corrective surfaces: A refinement approach in geoid modelling	13th South East Asian Survey Congress	Singapore
Angillyn Mae C. Perez	September 21-24, 2015	Hydrologic Dataset (PHD) from LiDAR and other remotely - sensed data	SPIE Remote Sensing conference 2015	France
Department of Industrial Engineering and Operations Research				
Iris Ann G. Martinez	July 26-30, 2015	Investigating the Effect on the Learning Curve of Performing Similar Work during the Break between Work Stints	6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015)	USA
Eugene Rex L. Jalao	July 26-30, 2015	Developing the Manpower Complement for Business Analytics Service Professionals: A Case Study in the Challenges Faced by the Philippines	6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015)	USA
Aura C. Matias	July 26-30, 2015	An Assessment of the new 8-piece Pallet Welding Process in a Plastics Manufacturer; Determining the Ideal Number of Crew per Workstation in a Jelly Sticks Manual Packing Line	6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015)	USA

Joanna Z. Resurreccion	July 19-23, 2015	Integrating Geospatial Information in Economic Interdependency Modelling and Sector Prioritization under Extreme - Event Conditions	SRA World Congress on Risk 015: Risk Analysis for Sustainable Innovation	Singapore
Joanna Z. Resurreccion	December 6-10, 2015	Analysis of the Efficacy of Capacity - based Resilience - enhancement Options for Passenger Rail system Disruptions	Society for Risk analysis 2015	USA
Department of Mechanical Engineering				
Menandro S. Berana	November 13-19, 2015	Ejector Profile Modelling for Heat-Driven Ejector Refrigeration System without Involving Shock	ASME - International Mechanical Engineering Congress and Exposition (IMECE 2015)	USA
Louis Angelo M. Danao	July 20-22, 2015	Performance and PIV Measurements on the Influence of Dynamic Stall on a Wind Tunnel Scale Vertical Axis Wind Turbine	International Conference on Engineering and applied Science	Japan
Jon Dewitt E. Dalisay	November 8-10, 2015	Design of an Energy Efficient, Effective, Healthy and Vibrant Public Market Infrastructure	4th International Symposium on Engineering, Energy, and Environment	Pattaya, Thailand
Edwin N. Quiros	September 11-14, 2015	Fuel Economy of Public Utility Jeeps Using 2% and 5% Coco Methyl Ester (CME) - Diesel Blends - A Limited Preliminary Study	11th International Conference of the Eastern Asia Society for Transportation Studies (EASTS)	Cebu, Philippines
Department of Mining, Metallurgical and Materials Engineering				
Harvey B. Lucy	May 12-13, 2015	Feasibility of phytomining for Nickel and Iron deposit using <i>Phyllanthus eruthrotrichus</i> assisted by ethylenediaminetetracetate	Mining, Environment and Society Beyond Sustainability Building Resilience	South Africa
Rinlee Butch M. Cervera	May 21-23, 2015	On the formation of nanograined $\text{LiCo}_2\text{Co}_3(\text{OH})$ Spinel-type Material Synthesized via Modified Low - temperature Sol-gel approach	2015 5th International Conference on Key Engineering Materials (ICKEM 2015)	Singapore
Mary Donnabelle L. Balela	August 10-14, 2015	Formation of Silver Nanowires in Ethylene Glycol for Transparent Conductor Applications	2015 International Symposium on Micro/Nano Optical Engineering	Taiwan
Jill Z. Manapat	October 8-11, 2015	Service Learning Integration in Undergraduate Materials Engineering Courses	Global Humanitarian Technology Conference 2015	Washington, USA
Magdaleno R. Vasquez, Jr.	November 15-18, 2015	Effect of plasma treatment on surface morphology and optical properties of low-density polyethylene sheets	International Thin Films Conference	Taiwan
Rinlee Butch M. Cervera	October 22-24, 2015	Fabrication of Nanograined Carbon-coated LiFePO_4 composite as Li-ion Cathode Material	METCON 2015	Bacolod, Philippines

DOST-funded R&D Projects of Faculty Members of the ERDT Consortium from 2008 to 2015

Title	Start Date	Completion Date	Implementing Agency	Project Leader / Proponents	Total Project Cost	Sector	Classification / Monitoring Agency
-------	------------	-----------------	---------------------	-----------------------------	--------------------	--------	------------------------------------

Enzyme-Catalyzed Conversion of Used Cooking Oil into Biodiesel	1-May-08	30-Apr-10	MIT	Kevin B. Dagbay / Mr. John Ysrael G. Baluyut / Dr. Jonathan L. Salvacion	761,761.91	Energy	ERDT
Multi-dimensional Analysis of User-Machine Interactions Towards the Development of Models of Affect	1-Jun-08	31-May-10	ADMU	Dr. Ma. Mercedes T. Rodrigo	2,701,799.99	Information and Communications Technology	ERDT
RF CMOS Integrated Circuits	1-Sep-08	17-Jul-12	UPD-EEEI	Prof. Maria Theresa A. Gusad	32,913,915.95	Semiconductor and Electronics	ERDT
Analog and Mixed Signal Design	1-Sep-08	17-Jul-12	UPD-EEEI	Prof. Anastacia P. Ballestil-Alvarez	15,671,333.60	Semiconductor and Electronics	ERDT
Low Power RISC Design	1-Sep-08	17-Jul-12	UPD-EEEI	Prof. Joy Alinda P. Reyes	15,510,908.45	Semiconductor and Electronics	ERDT
Development of Biological+Ozonation Process as Treatment of Effluents of Distillery and Large-Water Demand Industries	1-Oct-08	30-Sep-11	UPD-DCHE	Dr. Analiza P. Rollon	5,641,495.11	Environment and Infrastructure	ERDT
Photocatalytic Treatment of Colored Wastewater from Textile Industries	1-May-08	30-Apr-11	DLSU	Dr. Susan M. Gallardo	6,596,773.40	Environment and Infrastructure	ERDT
Development/Adaptation of Prediction Models to Determine the Level of Deterioration of Reinforced Concrete in Marine Environment	1-Nov-08	31-Oct-09	UPD-DCE	Dr. Norbert S. Que	1,309,911.20	Environment and Infrastructure	ERDT
Evaluation of Strength and Durability Parameters of Plain and Reinforced Concrete Using Local Cements	1-Nov-08	31-Oct-11	UPD-DCE	Dr. Nathaniel B. Diola	17,841,377.57	Environment and Infrastructure	ERDT
Analysis of Deterioration of Reinforced Concrete Structures in Local Marine Environment	1-Nov-08	31-Oct-10	UPD-ICE	Dr. Nathaniel Diola/ Melito A. Baccay	8,874,797.55	Environment and Infrastructure	ERDT
Development of Performance-Based Maintenance System for Marine Concrete	1-Nov-08	31-Oct-10	UPD-DCE	Dr. Eric C. Cruz	3,456,366.58	Environment and Infrastructure	ERDT
Leak-Proof Pre-Cast Panels for Modular Housing Projects	1-Dec-08	30-Nov-12	UPD-ICE	Dr. Nathaniel B. Diola	23,111,016.34	Environment and Infrastructure	ERDT
Alternative Building Systems for Residential Structures Considering Seismic Loads	1-Dec-08	30-Nov-12	UPD-ICE	Dr. Jaime Y. Hernandez, Jr.	58,643,993.22	Environment and Infrastructure	ERDT
Fire-Hazard Mitigation System for Cluster Housing	1-Dec-08	30-Nov-12	UPD-ICE	Dr. Benito M. Pacheco	37,847,130.01	Environment and Infrastructure	ERDT
Alternative Technology for Processing of Laterite Ores: Fe-Ni Production	1-Jan-09	31-Dec-11	MSU-IIT	Dr. Nathaniel M. Anacleto	6,115,244.10	Environment and Infrastructure	ERDT
ASIC and System Level Design	1-Mar-09	28-Feb-12	UPD-EEEI	Prof. Anastacia Ballestil-Alvarez	6,592,774.24	Semiconductor and Electronics	ERDT
High Speed PCB Design	1-Mar-09	28-Feb-12	UPD-EEEI	Prof. Percival S.C. Magpantay	8,798,756.66	Semiconductor and Electronics	ERDT
Interface Module Design	1-Mar-09	28-Feb-12	UPD-EEEI	Prof. Joy Alinda P. Reyes	7,310,309.81	Semiconductor and Electronics	ERDT
Information Visualization via Data Signatures	15-Apr-09	14-Apr-11	UPD-DCS	Dr. Henry N. Adorna	2,807,969.95	Information and Communications Technology	ERDT
Alternative Method to Amalgamation and Cyanidation for the Recovery of Gold (ERDT)	19-May-09	30-Apr-13	UPD-DMMME	Dr. Herman D. Mendoza	14,799,515.99	Environment	DOST-GIA
Development of Philippine Montmorillonite Purification Technique for Nanocomposite Applications (ERDT)	19-May-09	31-May-13	UPD-DMMME	Dr. Leslie Joy L. Diaz	10,020,191.39	Environment	DOST-GIA
Copper Flotation Technology for Small-Scale Mining Industry (ERDT)	19-May-09	10-Feb-12	UPD-DMMME	Dr. Herman D. Mendoza	5,626,512.00	Environment	DOST-GIA
Assessing Biosorption Performance of Water hyacinth (E. crassipes) and other Aquatic plants in Cleaning Mine Tailings	27-May-09	31-May-12	ADMU	Evangeline B. Enriquez	2,500,824.00	Environment and Infrastructure	ERDT
Innovation and Design for Manufacturability of Microwave and Millimeter-wave Radio Modules Through Industry	1-Jun-09	31-May-12	UPD-EEEI	Prof. Paul Jason Co and Dr. Joel S. Marciano Jr. Prof. Siegfried	23,472,709.02	Semiconductor and Electronics	ERDT

Collaborations				Balon			
Development of Nanofiber Membrane with Modified Nanoclay for Wastewater Treatment (formerly Polyethylene Nanofiber Membrane with Modified Nanoclay for Wastewater Treatment)	1-Jun-09	31-May-12	UPD-DMMME	Dr. Leslie Joy L. Diaz	8,307,723.59	Environment and Infrastructure	ERDT
Copper Flotation Technology for Small-Scale Mining Industry (Minimizing Solid Waste by Small-Scale Copper Recovery)	1-Jun-09	31-May-10	UPD-DMMME	Dr. Herman D. Mendoza	5,626,512.00	Environment and Infrastructure	ERDT
Alternative Method to Amalgamation and Cyanidation for the Recovery of Gold	1-Jun-09	30-Sep-12	UPD-DMMME	Dr. Herman D. Mendoza	12,606,308.29	Environment and Infrastructure	ERDT
Development of Philippines Montmorillonite Purification Technique for Nanocomposite Applications	1-Jun-09	30-Sep-12	UPD-DMMME	Ms. Lady Marianne Polinga /Dr. Leslie Joy L. Diaz	10,020,191.39	Environment and Infrastructure	ERDT
SoDeRa: Development of Software Defined Radio Platforms and Techniques for Enabling Next Generation Wireless Communication Networks	1-Jun-09	31-May-11	UPD-EEEI	Dr. Joel Joseph S. Marciano, Jr.	21,065,533.02	Information and Communications Technology	ERDT
Life Cycle Analysis for Small-Scale Production Systems: The Case of Gold (formerly Integrating Clean Production Technologies in Small-Scale Production Systems)	1-Jun-09	31-May-12	UPD-DIE	Dr. Virginia J. Soriano	7,473,072.23	Environment and Infrastructure	ERDT
Assessing Biosorption Performance of Seaweeds in Cleaning Mine Tailings (Biosorption Performance of Microalgae and Seaweeds in Cleaning Mine Tailing)	1-Jun-09	31-May-12	ADMU	Dr. Teresita R. Perez	2,412,824.00	Environment and Infrastructure	ERDT
Development of Novel Algorithms for Gene Regulatory Network Inference	15-Jun-09	14-May-10	UPD-DCS	Dr. Prospero C. Naval, Jr./ Dr. Caro	1,220,075.00	Information and Communications Technology	ERDT
Dynamic Modeling of Biochemical Networks Using Simulated Annealing & S-systems	15-Jun-09	14-May-10	UPD-DCS	Prof. Michael T. Echavez	1,244,115.00	Information and Communications Technology	ERDT
Using Ant Colony Optimization in Estimating Biochemical Models	15-Jun-09	14-May-10	UPD-DCS	Prof. Philip Christian C. Zuñiga	1,124,400.00	Information and Communications Technology	ERDT
Modification of the Surface Properties of Polymer Materials by Plasma Treatment	1-Jul-09	30-Jun-11	UPD-DMMME	Dr. Alberto V. Amorsolo	7,942,763.57	Semiconductor and Electronics	ERDT
Deposition of Superior Metallization Layers for the Semiconductor and Electronics Industry by Pulse Plating Technique	1-Jul-09	September 31, 2011	UPD-DMMME	Prof. Jeffrey DG Venezuela	2,507,762.61	Semiconductor and Electronics	ERDT
Fabrication of Philippine Nanoclay/Polymer Composite as Thermally Conducted Materials for the Semiconductor and Electronics Applications	1-Jul-09	30-Jun-11	UPD-DMMME	Dr. Leslie Joy L. Diaz	9,625,776.35	Semiconductor and Electronics	ERDT
Transesterification of Jatropha Curcas Oil and Coconut Oil by Microwave Irradiation	1-Oct-09	30-Sep-10	DLSU	Dr. Susan Rocas	1,288,820.00	Energy	ERDT
Secure Distribution of Digital Content for Resource-Constrained Devices	1-Oct-09	31-Aug-10	UPD-EEEI	Dr. Susan Pancho Festin	1,793,717.60	Information and Communications Technology	ERDT
Printable Solar Cell Device Coupled with a Supercapacitor Energy Storage Device	1-Nov-09	31-Oct-11	ADMU	Dr. Erwin Enriquez/Dr. Nathaniel Libatique/Dr. Greg Tangonan	15,797,602.10	Semiconductor and Electronics	ERDT
CCD Interface with Color to Monochrome Image Conversion	24-Mar-10	20-Jun-12	USC	Ms. Ellen Agnes Zafra	2,440,372.00	Semiconductor and Electronics	ERDT
Design of a High PSSR 2-Stage Operational Amplifier	24-Mar-10	20-Jun-12	MIT	Mr. Ramon Garcia	2,454,462.00	Semiconductor and Electronics	ERDT
Towards a Context Aware	15-May-10	30-Apr-12	UPD-DCS	Dr. Cedric	3,842,669.00	Information and	ERDT

Classification and Retrieval System of e-Learning Materials				Angelo M. Festin		Communications Technology	
Microcontroller Design for Micromouse Applications	21-Jun-10	20-Sep-12	UPD-EEEI	John Richard Hizon / Christian Raymund K. Roque	26,373,857.80	Semiconductor and Electronics	ERDT
18-Bit Oversampling Audio Delta Sigma D/A Converter Design	21-Jun-10	20-Sep-12	MSU-IIT	Ms. Mercedenia Lambino	2,499,770.00	Semiconductor and Electronics	ERDT
Rain Water Monitoring and Alarm System Using Hybrid Wireless Networks as Sensors (formerly Disaster Monitoring and Sudden Hazard Management Systems and Mobile Disaster Management and National Sudden Hazard System)	15-Sep-10	14-Sep-13	ADMU	Engr. Maria Leonora Guico	4,078,706.00	Environment and Infrastructure	ERDT
The Development of an Educational Data Mining Workbench	22-Oct-10	28-Feb-13	ADMU	Dr. Ma. Mercedes T. Rodrigo	6,854,727.88	Information and Communications Technology	ERDT
Project 2: Establishment of Spillover Elevation Along Flood Prone River System: Marikina-Pasig River	21-Oct-10	20-Oct-11	UPD-TCAGP	Dr. Enrico C. Paringit	1,501,051.00	Environment and Infrastructure	ERDT
Access Control for Collaborative Internet-Based Digital Content	1-Jan-11	31-Dec-11	UPD-DCS	Dr. Susan Pancho Festin	2,474,152.00	Information and Communications Technology	ERDT
LEAP: Learning While Playing	1-Feb-11	1-Aug-12	UPD-EEEI	Dr. Rowel O. Atila	3,824,275.00	Information and Communications Technology	ERDT
Development of a Permanent Magnet Generator	1-Mar-11	31-Aug-12	UPD-DME	Engr. Rex L. Bingabing	2,461,417.01	Energy	ERDT
Power Electronics for Wind Power System	1-Mar-11	31-Aug-12	UPD-EEEI	Prof. Lew Andrew Tria/ Prof. Carl Michael F. Odulio	2,491,205.51	Energy	ERDT
Wind Turbine Emulator	1-Mar-11	31-Aug-12	UPD-EEEI	Prof. Miguel T. Escoto Jr.	2,743,479.26	Energy	ERDT
MicroEd North: Enhancing Microelectronics Education in the Philippines	2-Mar-11	31-Dec-12	UPD-EEEI	Engr. John Richard E. Hizon	5,631,462.77	Human Resource Development	DOST-GIA
Modeling of Flashflood Events by Integrated GIS and Hydrological Simulations	1-Apr-11	31-Mar-12	UPD-DGE	Engr. Jojene R. Sanfillan	12,199,971.41	Environment and Infrastructure	ERDT
Development of Geospatial Analysis Tools for Catchments Runoff Responses to Extreme Rainfall Events and Implications for Disaster and Environmental Management (Formerly Geospatial Analysis Tools for Catchment Runoff Responses to Extreme Rainfall Events and Applications for Disaster and Environmental Management)	1-Apr-11	31-Mar-13	UPD-DGE	Dr. Enrico C. Paringit	16,229,236.00	Environment and Infrastructure	ERDT
Interdisciplinary Signal Processing for Pinoys (ISIP Program) : Project 7 - Development of an English Language Training Software for Call Centers	6-May-11	14-Jul-13	UPD-DCS	Dr. Susan Festin	21,924,362.00	Information and Communications Technology	PCIEERD-GIA
Interdisciplinary Signal Processing for Pinoys (ISIP Program) : Project 1 - Digital Database of Filipino Words (Bantay Wika)	6-May-11	14-Jul-13	UPD-EEI	Dr. Rhandley D. Cajote	1,536,315.00	Information and Communications Technology	PCIEERD-GIA
Interdisciplinary Signal Processing for Pinoys (ISIP Program) : Project 6 - Philippine Languages Database for Mother Tongue-Based Multilingual Education and Applications	6-May-11	14-Jul-14	UPD-EEI	Dr. Rhandley D. Cajote	5,795,969.57	Information and Communications Technology	DOST-GIA
Digital Database of Filipino Words (Bantay Wika)	15-Jul-11	14-Jul-13	UPD-EEEI	Rhandley D. Cajote	706,100.00	Information and Communications Technology	ERDT
Automatic Detection of Code-switching from	15-Jul-11	14-Jul-12	DLSU	Rachel Edita O. Roxas	468,822.00	Information and Communications	ERDT

English to Filipino						Technology	
Real-time Closed Captioning for Broadcasted News in Filipino	15-Jul-11	14-Jul-13	UPD-EEEI	Federico M. Ang	967,900.00	Information and Communications Technology	ERDT
Development of an Automated Filipino Essay Grader	15-Jul-11	14-Jul-12	UPD-DGE	Darrel Alvin Ong Abigail R. Razon	443,140.00	Information and Communications Technology	ERDT
Implementation of a Real-time Filipino Speech Synthesizer	15-Jul-11	14-Jul-12	UPD-EEEI	Lito Rodel S. Lazaro /Rhandley D. Cajote	516,800.00	Information and Communications Technology	ERDT
Philippine Languages Database for Mother Tongue-Based Multilingual Education and Applications	15-Jul-11	14-Jul-14	UPD-EEEI	Rhandley D. Cajote (Program Leader)/ Rowena Cristina L. Guevara	4,146,600.00	Information and Communications Technology	ERDT
Development of an English Language Training Software for Call Centers	15-Jul-11	14-Jul-13	UPD-EEEI	Dr. Susan Festin/ Rowena Cristina L. Guevara	6,579,096.00	Information and Communications Technology	ERDT
Interdisciplinary Signal Processing for Pinoys (ISIP Program) : Project 3 - Real-time Closed Captioning for Broadcasted News in Filipino	25-Feb-11	14-Jul-13		Prof. Federico M. Ang	1,222,655.00	Information and Communications Technology	PCIEERD-GIA
Project 2. Dissolved Oxygen (DO) Modeling of Estero de Paco	15-Nov-12	14-Nov-13	UPD	Dr. Ma. Antonia Tanchuling	1,202,540.00	Environment	PCIEERD-GIA
Smart Wire Program : Project 1 - Energy Efficient Data Acquisition and Conditioning for the SmartWire Sensor Node Project	1-Oct-12	30-Sep-15	UPD-EEEI	Dr. Louis P. Alarcon	20,137,175.00	Electronics Technology	PCIEERD-GIA
Smart Wire Program : Project 3 - Energy Ultra-Low Power Computation and Communication for the SmartWire Sensor Node Project	1-Oct-12	30-Sep-15	UPD-EEEI	Dr. Christian Raymond K. Roque	13,429,541.60	Electronics Technology	PCIEERD-GIA
Smart Wire Program : Project 2 - Integrated Energy Harvesting, Storage and Regulation for the SmartWire Sensor Node	1-Oct-12	30-Sep-15	UPD-EEEI	Dr. John Richard E. Hizon	21,644,431.00	Electronics Technology	PCIEERD-GIA
Synthesis and Application of Novel Nano-scale Photocatalysts with Different Dopants for the Treatment of A) Dimethyl Sulfoxide, B) Chlorophenols In Aqueous Solutions And C) Gaseous Formaldehyde	1-Oct-12	30-Sep-13	UPD-DCHE	Dr. Mark De Luna	7,315,265.00	Nanotechnology	DOST-GIA
Design and Implementation of a Power Distribution System for Data Centers	1-Jan-13	31-Dec-13	UPD-EEEI	Dr. Michael Angelo A. Pedrasa	1,266,046.00	Energy	PCIEERD-GIA
Rapid Electric Vehicle Charging (Charm)	1-Jan-13	30-Jun-14	UPD-EEEI	Lew Andrew R. Tria	16,247,338.00	Energy	PCIEERD-GIA
Pilot Testing of Wind Turbine Generator	1-Jan-13	30-Jun-14	UPD-EEEI	Prof. Miguel T. Escoto	17,937,177.00	Energy	PCIEERD-GIA
SENSLOPE: Development and Deployment of Landslide Sensors and Data Communication System	1-May-13	31-Dec-14	UPD-EEEI	Dr. Joel Joseph S. Marciano, Jr.	46,486,764.00	Disaster Mitigation	DOST-GIA
ROGER: Robust and Rapidly Deployable GSM Base Station and Backhaul for Emergency Responses	1-Jun-13	31-Jul-15	UPD-EEEI	Dr. Joel Joseph S. Marciano, Jr.	20,026,601.88	Evacuation and Rehabilitation	PCIEERD-GIA
Field-Testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Bicol, Panganiban)	1-Jan-14	31-Dec-16	UPD-DMMME	Dr. Herman D. Mendoza	41,167,982.60	Environment	PCIEERD-GIA
PROGRAM A. Data Acquisition, Integration, Archiving, Distribution and Capacity Building Project 6. Training on LIDAR Data Acquisition, Processing, Validation and Flood Modeling	1-Mar-14	28-Feb-17	UPD-COE	Dr. Enrico C. Paringit	10,286,960.00	Disaster Mitigation	PCIEERD-GIA
Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions CAR	1-Apr-14	31-Dec-16	UPD-DMMME	Dr. Herman D. Mendoza	35,230,064.00	Environment	PCIEERD-GIA

Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions CARAGA-Agusan del Norte	1-Aug-14	31-Jul-16	UPD-DMMME	Dr. Herman D. Mendoza	37,486,641.22	Environment	PCIEERD-GIA
MINERS Project B. Modeling of Fate and Transport of Heavy Metals in Surface Waters: From Source at Mining Site to Downstream Receiving Waters	1-Jun-14	31-May-15	UPD-ICE	Dr. Augustus C. Resurreccion	1,269,780.00	Mining and Minerals	PCIEERD-GIA

List of 2014 and 2015 Road Shows

A. ERDT Road Shows 2014

De La Salle University

University/Institution	Presenter	Date	No. of Registered Attendees
Holy Angel University	Dr. Joel Ilao	22-Feb-14	51
De La Salle University – Dasmariñas	Dr. Joel Ilao	25-Feb-14	38

University of San Carlos

University/Institution	Presenter	Date	No. of Registered Attendees
University of SouthEastern Philippines	Dr. Evelyn B. Taboada	6-Feb-14	34
University of Mindanao	Engr. Ricardo L. Fornis	6-Feb-14	64
Ateneo de Davao University	Dr. Evelyn B. Taboada	7-Feb-14	36
Cebu Technological University	Engr. Ricardo L. Fornis	13-Feb-14	26
University of San Jose Recoletos	Engr. Ricardo L. Fornis	13-Feb-14	45
University of San Carlos	Engr. Ricardo L. Fornis	19-Feb-14	155
University of Cebu	Engr. Ricardo L. Fornis	21-Feb-14	24

Silliman University	Dr. Evelyn B. Taboada	28-Feb-14	18
Negros State University	Dr. Evelyn B. Taboada	28-Feb-14	43
Bohol Island State University	Engr. Ricardo L. Fornis	14-Mar-14	38
Prime Review Center	Engr. Ricardo L. Fornis	28-Aug-14	314
Besavilla Review Center	Engr. Ricardo L. Fornis	28-Aug-14	50
Excel Review Center	Engr. Ricardo L. Fornis	29-Aug-14	38

University of the Philippines Los Baños

University/Institution	Presenter	Date	No. of Registered Attendees
Don Emilio B. Espinosa Memorial State College of Agriculture and Technology, Mandaon, Masbate	Dr. Rossana Marie C. Amongo	7-10 Apr-14	23

University of the Philippines Diliman

University/Institution	Presenter	Date	No. of Registered Attendees
Polytechnic University of the Philippines - Manila	Dr. Menandro S. Berana	10-Feb-14	32
Technological University of the Philippines - Manila	Prof. Marjorie Baynosa	10-Feb-14	57
University of Santo Tomas	Prof. Marjorie Baynosa	14-Feb-14	9
Batangas State University	Dr. Menandro S. Berana	24-Feb-14	60
Westmead School	Dr. Menandro S. Berana	24-Feb-14	34
Lyceum of the Philippines University - Batangas	Dr. Menandro S. Berana	24-Feb-14	16
Eastern Visayas State University (CE students)	Dr. Maria Antonia Tanchuling	22-Apr-14	48
Eastern Visayas State University (EE, IE and GE students)	Dr. Maria Antonia Tanchuling	23-Apr-14	
University of the Philippines Baguio	Dr. Augustus C. Resurreccion	16-Oct-14	16
Northwestern Samar State University	Dr. Augustus C. Resurreccion	27-Oct-14	11

B. ERDT Road Shows 2015

Ateneo de Manila University

University/Institution	Presenter	Date	No. of Registered Attendees
University of Saint Louis, Tuguegarao	Dr. Rosula S.J. Reyes	09-Mar-15	197
University of Cagayan Valley	Dr. Rosula S.J. Reyes	09-Mar-15	16
AMA College	Dr. Rosula S.J. Reyes	09-Mar-15	6

Cagayan State University	Dr. Rosula S.J. Reyes	10-Mar-15	20
St. Mary's University, Bayombong	Dr. Rosula S.J. Reyes	11-Mar-15	18

Central Luzon State University

University/Institution	Presenter	Date	No. of Registered Attendees
Benguet State University	Dr. Ireneo C. Agulto	17-Aug-15	20

De La Salle University

University/Institution	Presenter	Date	No. of Registered Attendees
Eastern Visayas State University	Ms. Gladys Cruz	12-May-15	
University of Negros Occidental	Ms. Gladys Cruz	15-Aug-15	

Mapua Institute of Technology

University/Institution	Presenter	Date	No. of Registered Attendees
Microcity Computer College Foundation Inc.	Mr. Rigor Regalado	27-Jan-15	9
Bataan Peninsula State University	Mr. Rigor Regalado	27-Jan-15	79
Holy Angel University	Mr. Rigor Regalado	29-Jan-15	90
University of the Assumption	Mr. Rigor Regalado	29-Jan-15	20
Negros Occidental State University	Mr. Rigor Regalado	11-Mar-15	4
Foundation University	Mr. Rigor Regalado	11-Mar-15	26
Siliman University	Mr. Rigor Regalado	12-Mar-15	12
University of the Immaculate Conception	Mr. Rigor Regalado	18-Mar-15	18
Ateneo De Davao University	Mr. Rigor Regalado	19-Mar-15	14
University of Southeastern University	Mr. Rigor Regalado	20-Mar-15	12
University of Mindanao	Mr. Rigor Regalado	20-Mar-15	7

Mindanao State University – Iligan Institute of Technology

University/Institution	Presenter	Date	No. of Registered Attendees
Father Saturnino Urios University	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	4-Mar-15	16

Cagayan De Oro College	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	4-Mar-15	39
University of Mindanao	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	5-Mar-15	26
MSU-General Santos City	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	5-Mar-15	35
Central Mindanao University	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	6-Mar-15	24
Cebu Technological University	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	29-Jun-15	43
Besavilla Review Center	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	30-Jun-15	75
Excel First Review Center	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	30-Jun-15	59
Prime Review Center	Atty. Edgar Alan A. Donasco, Dr. Eliseo P. Villanueva, Dr. Jonathan C. Maglasang, Prof. Alexander O. Mosqueda	30-Jun-15	75

University of San Carlos

University/Institution	Date	No. of Registered Attendees
University of Bohol	30-Jan-15	39
Bohol Island State University	30-Jan-15	26
Holy Name University	30-Jan-15	35
Central Philippine University	16-Feb-15	7
Western Institute of Technology	16-Feb-15	64

University of San Agustin	16-Feb-15	84
Holy Trinity University, Puerto Princesa	16-Feb-15	30
Western Philippine Universit	16-Feb-15	27
University of St. La Salle	17-Feb-15	90
West Negros University	17-Feb-15	41
Palawan State University	17-Feb-15	79
Flores Review Center	10-Oct-15	60

ERDT Program Advisory Council

Hon. Mario G. Montejo
Secretary, Department of Science and Technology

Dr. Rowena Cristina L. Guevara
Undersecretary, Scientific and Technological Services,
Department of Science and Technology

Dr. Josette T. Biyo
Director, Science Education Institute
Department of Science and Technology

Dr. Aura C. Matias
Dean, College of Engineering
University of the Philippines Diliman
ERDT Program Leader

Dr. Danilo C. Lachica
President, Semiconductor and Electronics Industry in the Philippines, Inc.
(SEIPI Inc.)

Dr. Delfin Jay Sabido IX
R&D Executive, IBM Philippines

ERDT Program Steering Committee

Dr. Josette T. Biyo
Director, Science Education Institute
Department of Science and Technology

Dr. Aura C. Matias
Dean, College of Engineering
University of the Philippines Diliman
ERDT Program Leader

Dr. Evangeline P. Bautista
Dean, School of Science and Engineering
Ateneo de Manila University
ERDT Project Leader

Dr. Ireneo C. Agulto
Dean, College of Engineering
Central Luzon State University
ERDT Project Leader

Dr. Rosemary R. Seva
Dean, Gokongwei College of Engineering
De La Salle University
ERDT Project Leader (May 2012-July 2015)

Dr. Jonathan R. Dunga
Dean, Gokongwei College of Engineering
De La Salle University
ERDT Project Leader (July 2015-Present)

Dr. Jonathan W.L. Salvacion
Dean, Graduate Studies
Mapua Institute of Technology
ERDT Project Leader

Atty. Edgar Alan A. Donasco
Dean, College of Engineering
Mindanao State University – Iligan Institute of Technology
ERDT Project Leader

Dr. Feliciano B. Alagao
Professor, College of Engineering
Mindanao State University – Iligan Institute of Technology
ERDT Project Leader

Dr. Evelyn Taboada
Dean, College of Engineering
University of San Carlos
ERDT Project Leader

Engr. Ricardo Fornis
Associate Professor, College of Engineering
University of San Carlos
ERDT USC Program Coordinator

Dr. Arnold R. Elepaño
Dean, College of Engineering and Agro-Industrial Technology
University of the Philippines Los Baños
ERDT Project Leader

Dr. Augustus C. Resurreccion
Associate Dean for Instructions and Research, College of Engineering
University of the Philippines Diliman
ERDT Project Leader

ERDT R&D Track Heads

Energy R&D Track Heads

Dr. Rizalinda L. De Leon
Dr. Louis Angelo M. Danao (August 2013-July 2015)
Dr. Michael Angelo A. Pedrasa (August 2015-Present)

Environment and Infrastructure R&D Track Heads

Dr. Alexis Philip A. Acacio (August 2011-July 2014)
Dr. Ricardo G. Sigua (August 2014-Present)
Dr. Maria Antonia N. Tanchuling

Information and Communications Technology R&D Track Heads


Dr. Cedric Angelo M. Festin (March 2013-March 2014)
Dr. Prospero C. Naval, Jr. (April 2014-Present)
Dr. Ariel C. Blanco

Semiconductor Materials and Electronics R&D Track Heads

Dr. Joel Joseph S. Marciano, Jr. (March 2009-February 2015)
Dr. John Richard Hizon (March 2015-Present)
Dr. Magdaleno R. Vasquez, Jr.

Manufacturing and Machinery R&D Track Heads

Dr. Menandro S. Berana (June 2012-May 2015)
Prof. Ralph Jose (June 2015-Present)
Prof. Lowell L. Lorenzo



*ERDT Central Office
Room 201, Melchor Hall,
UP College of Engineering,
Diliman, Quezon City 1101
(02) 434-0304; (02) 981-8500 loc. 3160
www.erdt.coe.upd.edu.ph*