



# PATHEIN UNIVERSITY

## RESEARCH PAPER READING OF BEST PAPER AWARDS 2020

### ABSTRACT BOOK

1st September 2020



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OF BEST PAPER AWARDS  
2020**

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# Rector's Message



Dr. Si Si Hla Bu

First and foremost, on behalf of the organizing committee, I would like to warmly welcome all of you and particularly I'd like to say "thanks" to all the members of the Selection Board of Research Paper Reading of Best Paper Awards 2020 for your time, patience, great enthusiasm, keen insights and kind contribution to reviewing the submitted papers. My sincere gratitude also goes to the presenters from all the academic departments for sharing your invaluable knowledge and having competitive courage. I sincerely and truly believe that your active participation is much more appreciable than your expectations for winning awards. I wish you all a successful, satisfied, and enjoyable moment throughout the day.

Regards,

A handwritten signature in blue ink, likely belonging to Dr. Si Si Hla Bu. The signature is stylized and cursive, with a prominent 'S' and 'H'.

Dr. Si Si Hla Bu  
Rector  
Patheingyi University

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Dr. Wah Wah Lwin, Professor & Head, Department of Botany

1<sup>st</sup> September 2020

Agenda (Arts)

Seminar Room (3)

Time (hrs.)	Title	Presenter
09:00 – 09:30	Opening	Meeting Room
09:30 – 09:55	ခြပ်မဲ့ယဉ်ကျေးမှုနှင့်ဧရာဝတီတိုင်းဒေသကြီး အတွင်းရှိခြပ်မဲ့ယဉ်ကျေးမှုအမွေအနှစ်များ	ဦးဝင်းနိုင်ဦး (မြန်မာစာ)
09:55 – 10:20	An Evaluation of New Language Leader Course book 2 Based on Bloom's Revised Taxonomy	Daw Lay Lay Than (English)
10:20 – 10:45	Geographic Analysis on Summer Paddy Cultivation in Myaungmya Township	Daw Khin Thet Lwin (Geography)
10:45 – 11:10	Coffee Break	
11:10 – 11:35	Turning Round Ceremony of Nigrodha Buddha Image in Pathein	U Myo Thet Lwin (History)
11:35 – 12:00	A Study of the Important Role of Doubt in Search of Certainty	Daw Thet Thet Myint (Philosophy)
12:00 – 1:00	Lunch	
1:00 – 1:25	The Construction of the Bar-On Emotional Quotient Inventory	Dr. Ei Ei Chaw (Psychology)
1:25 – 1:50	Jurisdiction of the Coastal State over its Maritime Zones under UNCLOS	Dr. Aye Hla Mon (Law)
1:50 – 2:15	The Origin of Donation of Buddhist Monasteries as Described in the Buddhist Scriptures	Dr. Marlar Oo (Oriental Studies)
2:15 – 3:00	Tea Break	
3:00 – 3:30	Closing	

1<sup>st</sup> September 2020

Agenda (Science)

Seminar Room (1)

Time (hrs.)	Title	Presenter
09:00 – 09:30	Opening	Meeting Room
09:30 – 09:55	Analysis of Physicochemical Water Parameters and Purification of Seasonal Variation of Water Turbidity by Papaya Seeds	Dr. Yin Yin Myint (Chemistry)
09:55 – 10:20	GSM Based Real Time Vehicle Theft Security System	Dr. Khin Mar Lar Lwin (Physics)
10:20 – 10:45	Special Case of Generalized Plane Couette Flow	Dr. Khin Pyone Hmwe (Maths)
10:45 – 11:10	Coffee Break	
11:10 – 11:35	Analyses of Gram-positive and Gram-negative Bacteria in Different Aquaculture Ponds at the Hatchery of Fisheries Department, Patheingyi	Dr. Win Win Maw (Zoology)
11:35 – 12:00	Initial Scanning for Some Functional Genes of <i>Bacillus</i> sp. and <i>Lysinibacillus</i> sp. by Advance Genomic Technology	Dr. Sabai Thein (Botany)
12:00 – 1:00	Lunch	
1:00 – 1:25	Flood Risk Mapping of the Thabaung Township, Ayeyarwady Region, Myanmar	U Hein Min Htet (Geology)
1:25 – 1:50	Estimation of Population Parameters of Indian Oil Sardine, <i>Sardinella longiceps</i> (Valenciennes, 1847) from Nga-Yoke-Kaung Bay	Daw Soe Thaw Thaw Tun (Marine Science)
1:50 – 3:00	Tea Break	
3:00 – 3:30	Closing	



## စာတမ်းရှင်



ဦးဝင်းနိုင်ဦး

ဦးဝင်းနိုင်ဦး သည် ကျုံစိန်ကညင်ကုန်းကျေးရွာ၊ အိမ်မဲမြို့နယ်၊ ဧရာဝတီတိုင်းဒေသကြီးတွင် မွေးဖွားခဲ့ပါသည်။ မဟာဝိဇ္ဇာဘွဲ့ ကို ပုသိမ်တက္ကသိုလ် မှရှိခဲ့ပါသည်။ ပင်လုံတက္ကသိုလ် တွင်နည်းပြဆရာ အဖြစ် ၂၀၀၅ တွင်စတင်တာဝန်ထမ်းဆောင်ခဲ့ပါသည်။ လက်ရှိတွင် ကထိက ရာထူးဖြင့်၊ မြန်မာစာဌာန၊ ပုသိမ်တက္ကသိုလ် တွင်တာဝန်ထမ်းဆောင်လျက်ရှိပါသည်။ စာတမ်းရှင်သည် မြန်မာစာ ကျောင်းသား/သူများ ၏ ဘွဲ့ကြို/ဘွဲ့လွန်စာတမ်းများနှင့် ကျမ်းများကိုကြီးကြပ် တာဝန်ဆောင်ရွက်ခြင်း၊ ပညာရပ်အကျိုးပြုနှင့် ဒေသအကျိုးပြု သုတေသနစာတမ်းများရေးသားခြင်း၊ တင်သွင်း ဖတ်ကြားခြင်းတို့ကို ဆောင်ရွက်ခြင်း၊ ပင်လုံဒေသမှ ဒေသီယဘာသာစကားများလေ့လာချက် (၂၀၀၆၊ ပင်လုံ တက္ကသိုလ်)၊ ရှမ်းစာဆိုတော်ကြီးများ၏ အတ္ထုပ္ပတ္တိ လေ့လာချက်(၂၀၀၇၊ ပင်လုံ တက္ကသိုလ်)၊ တောင်ရိုးလူမျိုးများ၏ရိုးရာ တေးကဗျာများလေ့လာချက်(၂၀၁၀၊ ပုသိမ် တက္ကသိုလ် )၊ Third Myanmar - Japan International Symposium, Patheingyi University, December, ၂၀၁၆ စာတမ်းဖတ်ပွဲတွင် “The study on the Archaeological Evidence of Ancient Myaung Mya” စာတမ်း အစရှိသည်တို့ကို ဖတ်ကြားတင်သွင်းခဲ့ခြင်း၊ တိုင်းဒေသကြီးအဆင့် ခြပ်မဲ့ယဉ်ကျေးမှု အမွေအနှစ်များ ထိန်းသိမ်းမြှင့်တင်ရေးကော်မတီတွင် “အဖွဲ့ဝင်” အဖြစ် လည်းကောင်း၊ “ပညာရှင်” အဖြစ် လည်းကောင်း တာဝန်ယူဆောင် ရွက်ခြင်း၊ မြန်မာနိုင်ငံအမျိုးသားခြပ်မဲ့ယဉ်ကျေးမှုအမွေ အနှစ် စိစစ်ရေး ပညာရှင်အဖွဲ့တွင် “အဖွဲ့ဝင်”အဖြစ် တာဝန်ယူ ဆောင်ရွက်ခြင်း၊ ဧရာဝတီတိုင်းဒေသကြီး၏ယဉ်ကျေးမှုအမွေအနှစ်များ ထိန်းသိမ်း ကာကွယ်ခြင်းနှင့် သုတေသနပြုခြင်း တို့ကို ဆောင်ရွက်လျက်ရှိပါသည်။

# ဒြပ်မဲ့ယဉ်ကျေးမှုနှင့် ဧရာဝတီတိုင်းဒေသကြီးအတွင်းရှိ ဒြပ်မဲ့ယဉ်ကျေးမှုအမွေအနှစ်များ

ဝင်းနိုင်ဦး

ကထိက၊ မြန်မာစာဌာန၊ ပုသိမ်တက္ကသိုလ်

စာတမ်းအကျဉ်း

ကမ္ဘာမြေပေါ်တွင် လူသားမျိုးနွယ်များ ပေါ်ပေါက်လာကတည်းကပင် မိမိတို့လူသားများ သည် မတူညီသော သဘာဝပတ်ဝန်းကျင်ကို ပြန်လည်တုံ့ပြန်ရင်ဆိုင်ရင်း မတူကွဲပြားသော ယဉ်ကျေးမှု များကို တည်ဆောက်လာခဲ့ကြသည်။ ယင်းတို့မှာ ရိုးရာလက်မှုပညာများ၊ ယုံကြည်ကိုးကွယ်မှုများ၊ လူသားတို့၏ မွေးဖွားလာချိန်မှစ၍ သေဆုံးချိန်အထိ သဘာဝတရားများကို တုံ့ပြန်ရင်ဆိုင်နိုင်ရန် မိမိတို့ ဘိုးဘွားအစဉ်အဆက် ဆက်ခံကျင့်သုံးခဲ့ကြသော နှုတ်ပြောအစဉ်အလာများ၊ ဖျော်ဖြေတင်ဆက် မှုအနုပညာများ၊ လူမှုရေးအလေ့အထများ၊ ပူဇော်ပသမှုများ၊ ရိုးရာပွဲတော်များ၊ သဘာဝနှင့် စကြဝဠာဆိုင်ရာ အယူအဆများ၊ လက်မှုပညာများ ဖြစ်ကြသည်။ UNESCO အဖွဲ့ကြီးက ယင်းတို့ကို ဒြပ်မဲ့ ယဉ်ကျေးမှု Intangible Cultural Heritage ဟု ၂၀၀၃ ကွန်ဗင်းရှင်းတွင် သတ်မှတ်ခေါ်ဆို ခဲ့ကြသည်။ ၂၀၀၃ ကွန်ဗင်းရှင်းအရ ဒြပ်မဲ့ယဉ်ကျေးမှုဆိုသည်မှာ လူ့အဖွဲ့အစည်း၊ အုပ်စု၊ ပုဂ္ဂိုလ် တစ်ဦးဦးက ယင်းတို့၏ အမွေအနှစ်အဖြစ် လက်ခံထားကြသည့် အစဉ်အလာအလေ့အထများ၊ ဖော်ပြ ချက်များ၊ အသိပညာများ၊ ကိုယ်စားပြုများ၊ စွမ်းရည်များနှင့် ယဉ်ကျေးမှုနေရာများကို ဆိုလိုသည်။ မြန်မာနိုင်ငံအပါအဝင် ကမ္ဘာ့နိုင်ငံအသီးသီးက မိမိတို့နိုင်ငံအတွင်းရှိ ဒြပ်မဲ့ယဉ်ကျေးမှု အမွေအနှစ်များကို ထိန်းသိမ်းစောင့်ရှောက်ခြင်း၊ ပြန်လည်ဖော်ထုတ်ခြင်း၊ နိုင်ငံတကာအဆင့် သတ်မှတ်နိုင်ရန် တင်သွင်းခြင်းများ ပြုလုပ်လျက်ရှိသည်။ သို့ဖြစ်၍ ဧရာဝတီတိုင်းဒေသကြီး အတွင်းရှိ ဒြပ်မဲ့ ယဉ်ကျေးမှု အမွေအနှစ်များကို အထက်ပါစံနှုန်းသတ်မှတ်ချက်များနှင့်အညီ လေ့လာတင်ပြထားပါသည်။ ဧရာဝတီတိုင်းဒေသကြီး အတွက်သာမက နိုင်ငံတော်အတွက်လည်း ဒြပ်မဲ့ယဉ်ကျေးမှု အမွေအနှစ် ထိန်းသိမ်းရေးတွင် ပါဝင်အကျိုးပြုနိုင်သော သုတေသနစာတမ်းတစ်စောင်အဖြစ် အားထုတ် တင်ပြထားပါသည်။

သော့ချက်ဝေါဟာရများ။ ။ ဒြပ်မဲ့၊ ယဉ်ကျေးမှု၊ အမွေအနှစ်၊ ရိုးရာအစဉ်အလာ၊ နှုတ်ပြော၊ အစဉ်အလာ

## Presenter



Daw Lay Lay Than

Daw Lay Lay Than started working as a tutor in English Department, Mandalay University in 1993. She has served the department in her different roles as Tutor, Assistant Lecturer, Lecturer in Universities such as Mandalay University, Patheingyi University and Maubun University. Now, she is currently serving as a lecturer at the Department of English, Patheingyi University. She has 26 years on her government service record. Her field of study that she is interested in is applied linguistics. This is the second time she has presented her research article in this paper reading section of Patheingyi University.

# **An Evaluation of New Language Leader Coursebook 2 Based on Bloom's Revised Taxonomy**

Lay Lay Than

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## **Abstract**

In educational process, especially in teaching-learning process, a textbook can be a guide for teachers and learners. It must include materials which can fulfill learners' needs and enhance their critical thinking skills. This research aims at evaluating the cognitive levels of items from vocabulary, reading and writing sections of New Language Leader Coursebook 2, prescribed text for the Second Year English Specialization students. The items are analyzed by using the checklist based on Bloom's Revised Taxonomy (2001). The checklist contains six levels: remembering, understanding, applying, analyzing, evaluating and creating. The objectives of this research are to categorize the cognitive levels of the items, and to find out why they are emphasized in the coursebook and whether they can practically enhance the learners' critical thinking skills. It is expected that Higher Order Thinking Skills will be emphasized in some items of reading and writing sections more than in those of vocabulary section as it is intended to give input to the learners

**Keywords:** Bloom's Revised Taxonomy, cognitive levels, coursebook

## Presenter



Daw Khin Thet Lwin

The author is geographer currently working in Geography Department as a Lecturer in Patheingyi University. Being interested in Geography field, she joined her study in University in the field of Geography after passing matriculation exam and received B.A (Geography) degree in 1992 and M.A (Geography) degree in 1998. Currently, she is attending Ph. D in Geography. She has 23 years services in her carrier that she started since 1997.

# Geographic Analysis on Summer Paddy Cultivation in Myaungmya Township

Khin Thet Lwin

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## Abstract

The paper tries to present summer paddy cultivation in Myaungmya Township. Myaungmya Township ranked second in summer paddy cultivated area among 26 townships in Ayeyarwady Region. Existing physical conditions such as low land, high rainfall, existing streams and rivers, fertile meadow soils support the paddy cultivation. Summer paddy is successful and it gives higher yield than monsoon paddy owing to fertile soils, higher temperature and irrigation water availability. Farmers use much chemical inputs in summer paddy because of less risk. The objectives of the paper are to find spatial variation of summer paddy cultivated area, to present varieties of summer paddy, to explore strength, weakness, threat and opportunities of summer paddy cultivation and to predict future prospect of summer paddy cultivation. Primary and secondary data were applied and SWOT (Strength, weakness, opportunities and threat) analysis was used to present summer paddy cultivation of Myaungmya Township. Opportunities for summer paddy cultivation are mechanization, adequate water availability, strong market demand, high yield varieties and quality seed availability. Environmental deterioration, health problem and insufficient loan are found as threat in summer paddy cultivation. In the future, it is needed to increase the paddy cultivated area and production to meet the needs for increasing population. Therefore, it is necessary to extend cultivated area and reduce negative impacts of paddy cultivation. It is needed to do further research on soil conservation, market price, farming practices, etc. Thus the conclusion, summer paddy cultivation is more suitable than monsoon paddy cultivation in Myaungmya Township.

**Keywords:** summer paddy, strength, weakness, threat and opportunities, varieties



## Presenter



U Myo Thet Lwin

The author was born in Patheingyi of Ayeyawady Region and matriculated in Patheingyi in 1998. He obtained B.A (Hons:) degree in 2004 and M.A degree in 2006 both with History Specialization in Patheingyi University. He has worked at Paper and Pulp Sheet Mill as a workshop supervisor at Tharbaung Township from 2010 to 2014. From 2015 to now on, he has been working in teaching in History Department, under the Ministry of Education. Currently, he is working in Patheingyi University as Assistant Lecturer.

# Turning Round Ceremony of Nigrodha Buddha Image in Pathein

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## Abstract

This paper aims to highlight Turning Round Ceremony of Nigrodha Buddha Image in Pathein. Every country and every region have its respective religious ceremony, there are many different ceremonies. In Myanmar, Turning Round Ceremony of Nigrodha Buddha Image is a special religious ceremony among the religious ceremonies of Myanmar. According to Gotama Buddha preached his own events, Buddhist scripture and life stories, Turning Round Ceremony of Nigrodha Buddha Image is annually held as a respective religious ceremony in Pathein. During Nigrodha Buddha Image goes together the arahat images around Pathein city, the merchants also go round along with Nigrodha Buddha Image and the arahant images in Pathein . From 1881 to present day, Turning Round Ceremony of Nigrodha Buddha Image has been held in December(the month of Nat-taw) in Pathein. I expressed Nigrodha Buddha Image's miracles. Many citizens who live in their wards of Pathein , paid homage various kinds of flowers and offered food to Nigrodha Buddha Image about one month before Turning Round Ceremony of Nigrodha Buddha Image. This research not only make the future generations know history of Nigrodha Buddha Image, they are also a source of much broader knowledge. Therefore, it is very important to keep the tradition of Turning Round Ceremony of Nigrodha Buddha Image in Pathein.

**Keywords:** Nigrodha Buddha Image, Buddhist Scripture, Pathein city.

## Presenter



Daw Thet Thet Myint

The author was born at Gyobingauk Township, Bago Region (West). From 1971-1982, she passed her BEHS in Gyobingauk. She achieved her BA (Philosophy) degree in 1986 and MA (Philosophy) degree in 1995 from University of Yangon. She was appointed as a Tutor at Pyay University in 1995 and promoted to Assistant Lecturer in 2003 then to Lecturer in 2010. Currently, she is working as an Associate Professor in Philosophy Department at Patheingyi University.

# **A Study of the Important Role of Doubt in Search of Certainty**

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## **Abstract**

This research paper aims to discuss the view which uses the method of doubt in the pursuit of truth. The problem is why doubt is important in the pursuit of truth? This research paper attempts to show that some western philosophers use doubting as a method when they prove which are thought to be true and Kalama Sutta is a Sutta which describes how to choose true ideals by being critically thought. In this research paper, descriptive and evaluative methods will be used and the principle is reciprocity. This research paper will contribute towards the persons who love wisdom and truth. It can also analyze what is to be held and what is to be avoided throughout their lives.

**Keywords:** doubt, Sutta, wisdom, truth

## Presenter



Dr. Ei Ei Chaw

The author was born in Naypyidaw and graduated with Psychology specialization. She received her PhD degree of Psychology in 2016 from Mandalay University. Her PhD Thesis entitled "Examining the Role of Gender and Socio-Economic state in Emotional Intelligence of some Myanmar Early Adolescents. Currently, she is working as an Associate Professor at Psychology Department in Patheingyi University.

# The Construction of the Bar-On Emotional Quotient Inventory

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## Abstract

The present study reports the results of an attempt to modify Bar-On EQ-i scale to suit Myanmar cultural setting. the BarOn EQ-i is a self- report rating scale design to measure emotional intelligence in individuals. Bar-On further explained that the questionnaires as useful in assessing the emotion, personal and social dimensions of emotional intelligence through its six scales-total emotional intelligence, interpersonal stress(21 items), intrapersonal stress(40 items), adaptability(22 items), stress management(14 items) and general mood(36 items). These emotional, personal, and interpersonal attributes ultimately determine one's ability to cope with environment demands and pressers. The BarOn EQ-i uses 5-Point Likert -style formats in which respondents are asked to rate 133 items from "Very Seldom True of Me" to "Very Often True of Me." According to the results, most of the items were significant at .05 or .01 or .001 level. But items no. 3, 5, 53, 57, 58, 66, 83, 97, 101, 115, 132 and 133 were not significant at .05 levels. Those items that are not significant were omitted. the Bar-On Emotional Quotient Inventory, the coefficient alphas were found to be as follow: Intrapersonal Scale, .60; Interpersonal Scale, .61; Stress Management .64; Adaptability, .57, General Mood, .62and total Emotional Intelligence, .81. The result indicates that the Myanmar version of the Bar-On Emotional Quotient Inventory is a reliable test. So, this scale is ready to use for Myanmar population.

**Keywords:** Emotional Intelligence, Intrapersonal Scale, Interpersonal Scale, Stress Management, Adaptability, General Mood



## Presenter



Dr. Aye Hla Mon

The author was born in Thandwe, Rakhine State. She started working at Department of Law, University of Yangon in 2005 and received her PhD Degree on Maritime Law in 2011. Her area of research is on the Law of the Sea. At present, she is working as the Associate Professor at the Department of Law in Patheingyi University.

# **Jurisdiction of the Coastal State over its Maritime Zones under UNCLOS**

Aye Hla Mon\*, Thida Myint\*, Ohn Mar Khin\*, Tin Soe Soe Than\*,  
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## **Abstract**

Jurisdiction concerns the power of the State under international law to govern persons and property by its municipal law. Coastal States exercise particular jurisdictional functions in maritime zones which comprise the internal waters, territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf, as regulated by the United Nations Convention on the Law of the Sea 1982 (UNCLOS), which entered into force in 1994. The United Nations Convention on the Law of the Sea (UNCLOS) 1982 is considered one of the most comprehensive instruments of international law relating to sea affairs. According to the United Nations Convention on the Law of the Sea (UNCLOS), the Coastal State has jurisdiction over its maritime zones. This research is based on the different types of jurisdiction that a coastal State exercise in its maritime zones which each have a different legal status.

**Keywords:** Jurisdiction, Coastal State, Maritime Zones

## Presenter



Dr. Marlar Oo

Dr. Marlar Oo has been working as an Associate Professor at Patheingyi University since 2019. She moved from University of Distance Education. In 2005, she started working as a Tutor at the University of Maubin. She received her Ph. D degree in 2014 from Yangon University.

# **The Origin of Donation of Buddhist Monasteries as Described in the Buddhist Scriptures**

Marlar Oo

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## **Abstract**

This paper describes “The Origin of Donation of Buddhist Monasteries as Described in the Buddhist Scriptures”. The objects of this research are the life of a monk who has just emerged in the member of Buddhist Order. The solution to the problem is that monasteries play an essential role in the lives of Buddhist monks as houses, one of the three basic amenities of humans (food, clothing and shelter), do in that of lay people. Recognizing their importance, the Buddha, therefore, allowed his Order to receive the donation of Buddhist. In my attempt to do this I shall make a comprehensive literary survey to describe and identify the source or sources. Referring to the Scriptures, this paper traces the different interpretations of those terms, explains what Buddhist monasteries should be like and what benefits one can have from donating a monastery. Finally, it is found in the Buddhist literature that the merits accrued from the donation of a monastery are plentiful, ranging from the birth in celestial abodes to the attainment of nirvana, the ultimate goal of every Buddhist.

**Keywords:** generosity, donation, merit, nirvana.

## Presenter



Dr. Yin Yin Myint

Dr. Yin Yin Myint is currently working as an Associate Professor in Department of Chemistry at Patheingyi University. She got her Ph. D degree in 2007 from University of Yangon. Her field of research that she interested in is Natural Products Chemistry. She was awarded the International Scholar Exchange Fellowship (ISEF 2010-2011), one year research program, from the Korea Foundation for Advanced Studies. The fellow's research title is "Isolation and Identification of some Bioactive Secondary Metabolites from Selected Fungi". She has done her research at Natural Products and Metabolomic Laboratory, College of Life Science and Biotechnology, Korea University.

# Analysis of Physicochemical Water Parameters and Purification of Seasonal Variation of Water Turbidity by Papaya Seeds

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## Abstract

This study concerned with the turbidities of four collected water samples which were treated with papaya seeds powdered, is one of natural coagulants. Protein content of papaya seeds was found to be 17.27 mg/g by Lowry's Method. Some physicochemical parameters; electrical conductivity, total hardness, and total alkalinity of collected water samples were seasonally analyzed by standard methods and water parameters data were consistent to the WHO standards. Turbidity, total dissolved solid (TDS) and pH of collected water samples and treated water samples by coagulant were sequentially analyzed using coagulation/flocculation process. Turbidity and TDS removing efficiency of all analyzed water samples were found to be 41.37- 75.63%, and 78.75 – 90.83% at pH range 6.49 -7.01 ( winter season), 44.04- 79.05% and 51.23- 90.38% at pH range 6.81- 7.25 (summer season), and 50.64- 76.02 and 77.30-90.78% at pH range 6.61-6.92 (rainy season) using coagulant dosages 0.2 g, 0.4 g and 0.6 g of seeds powdered. Papaya seeds powdered have high efficiency in removing turbidity, total dissolved solid and pH of all collected water samples.

**Keywords:** natural coagulants, papaya seeds, Lowry's method, physicochemical Parameters, turbidity



## Presenter



Dr. Khin Mar Lar Lwin

Dr. Khin Mar Lar Lwin was born in Patheingyi, Ayeyarwady Region. She received B.Sc (Hons) degree from University of Yangon in 1996 and M.Sc degree in 2000 and M.Res degree in 2001 from Patheingyi University. She received Ph.D from University of Yangon in 2004. She was first appointed as a demonstrator in Physics at Patheingyi University in 1997. She has worked at Sittway University, Banmaw University and Maubun University. She is currently an Associate Professor at Patheingyi University.

# **GSM Based Real Time Vehicle Theft Security System**

Khin Mar Lar Lwin

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Myanmar*

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## **Abstract**

At present days, the number of vehicles increases and vehicle thefts are also increasing in large numbers. The vehicle theft security system is designed and constructed to overcome the theft of vehicles. Whenever the system is ready, a text message is sent to the owner of the vehicle. When the motion is detected with mercury tilt sensor or ball switch sensor, the GSM module will generate repeating phone calls to the owner of vehicle. Vehicle electronic control system ensures the best guarantee to protect the vehicle (motorcycle or car) from different kinds of theft cases. This system consists of a microcontroller (ATMEGA328P), a 16MHz crystal oscillator, a liquid crystal display (LCD), mercury tilt sensor, a GSM module, a SIM card and two Li-ion batteries. The whole circuit construction is made on a specially designed printed circuit board. The program for the microcontroller is created by using Arduino IDE software. The circuit is very useful and it can be applied in vehicles to alert the users as soon as the vehicle is stolen. Hence, it is expected that the rate at which vehicles are stolen should drop further if such a system is implemented.

**Keywords:** ATMEGA328P, GSM module, mercury tilt sensor, vehicle

## Presenter



Dr. Khin Pyone Hmwe

The author was born in Patheingyi, Myanmar. She got her Ph.D degree in 2006 at University of Yangon. She started working as a Tutor in Mathematics at Patheingyi University in 2002. She transferred to Dawei University in 2016. She has been promoted to Associate Professor and posted to Mawlamyine University in 2019. She has then been transferred to Patheingyi University in 2020. Her main interest of research field is Physical Applied Mathematics.

## Special Case of Generalized Plane Couette Flow

Khin Pyone Hmwe

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### Abstract

The steady laminar flows of viscous fluid between two parallel plates are presented. In special case, the upper plate is at rest and the lower plate being moved with uniform velocity in X direction. The velocity for the present flow is obtained by using the boundary conditions. The reverse flow makes some values of  $\alpha < -1$  occurring. The velocity profiles are illustrated as the figure. The shearing stress distribution in the flow, the skin friction at the plates and the coefficient of friction corresponding to the plates are also calculated.

**Keywords:** Couette flow, reverse flow, shearing stress, skin friction

## Presenter



Dr. Win Win Maw

The author was born in 1968 in Yangon. As she is interested in Zoology, she joined Zoology in University and got her first degree in Yangon University. She was conferred the degrees of B.Sc.(honours) in 1992, M.Sc. in 1996 and Ph. D in 2005. She was appointed as a demonstrator at Zoology Department in Pyay University in 1998. In 2007, she has awarded UNESCO Post-Doctorate scholarship and she successfully completed her Post-Doctoral Training at Tel-Aviv University in Israel. Currently, she is working as an Associate Professor at Zoology Department in Pathein University.

# **Analyses of Gram-positive and Gram-negative Bacteria in Different Aquaculture Ponds at the Hatchery of Fisheries Department, Pathein**

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## **Abstract**

The present study deals with the bacteriological analysis of water which collected from six aquaculture ponds at the hatchery of Fisheries Department, Pathein from December, 2018 to October 2019. Totally 36 samples (3samples/pond/month) were collected in January and February and analyzed during the study period. Out of 36 water samples tested, 23 samples (63.88%) were detected the gram-positive bacteria whereas gram-negative bacteria in all tested samples (100%). As a total of encountered colonies, 115 colonies were observed in samples which composed of 23(20%) of gram-positive colonies and 92 (80%) of gram-negative colonies. Upon the examination of cell morphology characteristics, 23 numbers of rod-shaped (bacilli) gram-positive bacteria cells and 92 numbers of rod-shaped gram-negative bacteria cells were recorded. Colony morphology of isolated bacteria colonies varied on different agars *i.e* white or creamy color, circular and irregular shape, smooth or dry texture, umbonate or flat elevation and entire or undulate margin on nutrient agar; pink, deep pink and purple colour, mucoid or smooth texture, circular or irregular shape, umbonate elevation and entire or undulate margin on MacConkey agar; pale yellow, yellow, deep yellow and green colour, shiny or smooth texture, circular shape, umbonate or flat elevation and entire margin on TCBS agar.

**Keywords:** Gram-positive and Gram-negative bacteria, different aquaculture ponds and Pathein Hatchery of Fisheries Department



## Presenter



Dr. Sabai Thein

The author completed her degrees of B.Sc (2003), M.Sc (2005), M.Res (2006) and PhD (2011) based on Botany specialization at Yangon University. She achieved Ph.D scholarship (2009 to 2011) sponsored by Htoo Foundation. She also attained Postdoctoral Scholarship (2016-2018) based on Thousand Talents Program by China Government and researched at Fujian Agriculture and Forestry University. Within Postdoc research, a new finding was registered and got the Patent as ZL 2018115040071.

# Initial Scanning for Some Functional Genes of *Bacillus* sp. and *Lysinibacillus* sp. by Advance Genomic Technology

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## Abstract

In bacterial cells, the several metabolic pathway were be controlled by the respective genes. The simplify biochemical reactions can be forecasted some of the genes functions. On the contrary, the whole genome sequence results can express more accurate functional genes. In this research work, *Bacillus* sp. and *Lysinibacillus* sp. were analyzed their general gene functions and related gene. Gene number and gene total length for *Bacillus* sp. are (5,677 and 4,640,682 bp) and for *Lysinibacillus* sp. are (4,985 and 3,980,847 bp). Some genes have best hit in ABC-type phosphate transport system, permease component; ABC-type cobalamin/  $\text{Fe}^{3+}$ -siderophores transport system, ATPase component; Trk-type  $\text{K}^{+}$  transport system membrane component.

**Keywords:** gene functions, *Bacillus* sp., *Lysinibacillus* sp., whole genome sequence

## Presenter



U Hein Min Htet

The author is a Ph.D candidate attending in University of Yangon with Geology specialization. Currently, he is working at the Department of Geology in Patheingyi University as Assistant Lecturer. He completed his M.Sc Degree from Hinthada University in 2015 and M.Res Degree at Patheingyi University in 2017. He was recently selected as a research fellow of UNESCO/Keizo Obuchi Research Fellowships Programme in 2019. As his research interest is natural disaster and structural geology, he decided to study about flood risk assessment at Graduate School of Science and Technology, Kumamoto University, Japan within the fellowship period. He has already published 2 research papers in Universities Research Journal and presented at CWMD international Conference on 2019 in Japan.

# Flood Risk Mapping of the Thabaung Township, Ayeyarwady Region, Myanmar

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## Abstract

Flood risk mapping is an important component for appropriate land use planning in flood prone areas. In Myanmar, flood is one of the most common natural disasters which occur in every year. Thabaung Township was notably suffered flood hazards in 2015 and 2016. The research work was tried to logically integrate geomorphic and hydrological aspects with flood hazard intensity and population, land use/land cover and questionnaire attributes with the magnitude of vulnerability. Both are necessary for formulating risk intensity classes which will assist in identifying priority areas for effective planning and safety measures. This study combines the present map information, expert questionnaires, and overlaying analyses in GIS, aiming to clarify the potential risk analysis. The result clearly indicates the areas that are flat, low lying active flood plain and near to the active channels and are mostly risks prone due to high probability of occurrences of flood hazard and concentration of population, agricultural expansion and inadequate resilience capacity to minimize the hazardous situations which incorporates almost entire eastern and middle parts of the Thabaung Township. In this study, with the methodology proposed, the integration of AHP and GIS can provide an assessment of the flood risk in the certain area.

**Keywords:** Flood risk mapping, GIS, AHP

## Presenter



Daw Soe Thaw Thaw Tun

The author was born in Pantanaw Township, Ayeyarwady Region in 1990. She passed her matriculation with four distinctions from BEHS 1, Pantanaw in 2006. As she is interested to study in Marine Science, she joined Marine Science in Patheingyi University in 2009 for her first degree B.Sc (Hons.) after she finished her matriculation. She continued her M.Sc degree in Marine Science in Patheingyi University in 2013. She was appointed as a demonstrator in the Department of Marine Science, Patheingyi University in 2015 and became an assistant lecturer in 2019. Currently, she is attending her Ph.D in Mawlamyine University from 2017. Her main area of research interest is fishery biology. She has presented a paper of related to fishery biology in the 9<sup>th</sup> International Fisheries Symposium 2019 in Malaysia. She is currently working as an Assistant Lecturer in the Department of Marine Science, Patheingyi University.

# Estimation of Population Parameters of Indian Oil Sardine, *Sardinella longiceps* (Valenciennes, 1847) from Nga-Yoke-Kaung Bay

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## Abstract

Estimation of population parameters of Indian Oil Sardine, *Sardinella longiceps* (Valenciennes, 1847) from Nga-Yoke-Kaung Bay was conducted within the period of 2019 and 2020. A total of 650 fish samples ranging in length from 11.3cm to 19.2 cm were used to measure the estimation of population parameters. Total length and body weight of the fishes were measured in fish landing sites. The length-weight relationship with both sexes was calculated according to the equation ( $W=aL^b$ ) source from Pauly, 1983 and the values showed as  $W=0.0231*L^{2.6582}$  and  $r=0.94$  where  $W$ =weight of fish in grams,  $L$ =total length of fish in cm and  $r$  = the value of coefficient of correlation. The value of  $r$  is an indicator to show the range of relation between the length and weight of the targeted species. The result of  $r$  value of *Sardinella longiceps* was very close to 1 and it can be assumed that the length-weight relationship of the species is positively correlated and highly significant. The growth parameters and motility parameters were also then be calculated by using ELEFAN method based on length frequency data with the help of FiSATII software package in order to estimate the exploitation rate ( $E$ ) of the fish species. The growth parameter was estimated as length at age  $t$  ( $L_t$ ) by using the von Bertalanffy growth equation  $L_t = L_\infty (1 - e^{-K(t-t_0)})$ . The mortality parameter such as total mortality rate ( $Z$ ), natural mortality rate ( $M$ ) and fishing mortality rate ( $F$ ) were estimated by using length converted catch curve analysis. By calculating from the equation  $E = F/Z$ , the result of exploitation rate  $E$  was 0.45 which in turn estimated that the stock of Indian Oil Sardine fishes in the study area is under stress but not reachable to overexploitation level.

**Keywords:** growth parameter, Indian Oil Sardine, length-weight relationship, mortality parameter, Nga-Yoke-Kaung Bay, *Sardinella longiceps*



