2016 APCBEES BALI CONFERENCE ABSTRACT

June 25-27, 2016

Patra Jasa Bali Resort & Villas

Bali, Indonesia

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2016 APCBEES Bali Conference Introductions

Welcome to CBEES 2016 conferences in Bali, Indonesia. The objective of the Bali conference is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Water Technology, Bioinformatics, Biomedical Science, Nutrition and Food Sciences, Clean Energy Technologies.

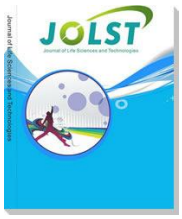
2016 2nd International Conference on Water Technology (ICWT 2016)

Paper publishing and index: The Volume of Journal of IPCBEE (ISSN: 2010-4618), which will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase (Elsevier), Chemical Abstracts Services (CAS), CABI, CNKI, EBSCO, WorldCat, Google Scholar, Ulrich's Periodicals Directory, Crossref, and Engineering & Technology Digital Library.

Conference website and email: http://www.icwt.org/; icwt@cbees.net

2016 5th International Conference on Bioinformatics and Biomedical Science (ICBBS 2016)

Papers for ICBBS 2016 will be published in one of the following journals:



Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672) as one volume, and will be included in the Engineering & Technology Digital Library, and indexed by Ulrich's Periodicals Directory, Google Scholar and Electronic Journals Digital Library, and sent to be reviewed by Ei Compendex and ISI Proceedings.

International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221), which will be included in the Engineering & Technology Digital Library, and indexed by Embase (Under elsevier), ProQuest, Google Scholar, Chemical Abstracts Services (CAS), Indian Science, ICMJE(International Committee Medical Journal Editors), HINARI(World Health Organization), and NYU(Health Sciences Library).

Conference website and email: http://www.icbbs.org/; icbbs@cbees.org

2016 5th International Conference on Nutrition and Food Sciences (ICNFS 2016)

Paper publishing and index: The Volume of Journal of IPCBEE (ISSN: 2010-4618), which will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase (Elsevier), Chemical Abstracts Services (CAS), CABI, CNKI, EBSCO, WorldCat, Google Scholar, Ulrich's Periodicals Directory, Crossref, and Engineering & Technology Digital Library.

Conference website and email: http://www.icnfs.org/; icnfs@cbees.org

2016 2nd Journal Conference on Clean Energy Technologies (JCCET 2016 2nd)

Paper publishing and index: Journal of Clean Energy Technologies (JOCET ISSN: 1793-821X). which will be indexed by EI(INSPEC, IET), Engineering & Technology Digital Library, ProQuest, Crossref, Electronic Journals Library, DOAJ, and CAS

Conference website and email: http://www.jocet.org/jccet/2nd/; jccet02@iacsitp.com

Presentation Instructions

Instructions for Oral Presentations

Devices Provided by the Conference Organizer:

Laptop Computer (MS Windows Operating System with MS PowerPoint and Adobe Acrobat Reader)
Digital Projectors and Screen
Laser Sticks

Materials Provided by the Presenters:

PowerPoint or PDF Files (Files should be copied to the Conference laptop at the beginning of each Session.)

Duration of each Presentation (Tentatively):

Regular Oral Presentation: about **12** Minutes of Presentation and **3** Minutes of Question and Answer
Keynote Speech: about **30** Minutes of Presentation and **5** Minutes of Question and Answer

Instructions for Poster Presentation

Materials Provided by the Conference Organizer:

The place to put poster

Materials Provided by the Presenters:

Home-made Posters
Maximum poster size is A1
Load Capacity: Holds up to 0.5 kg

Best Presentation Award

One Best Oral Presentation will be selected from each presentation session, and the Certificate for Best Oral Presentation will be awarded at the end of each session on June 26, 2016.

Dress code

Please wear formal clothes or national representative of clothing.

Keynote Speaker Introductions

Keynote Speaker I

Prof. Orawan Siriratpiriya

The Environmental Research Institute of Chulaongkorn University, Thailand

PRESENT POSITION

Expert in Environmental Impact Assessment (License) of Chulalongkorn University (1991-present).

EDUCATION

1990 Cert. in Environmental Management Specialized in Risk Assessment and Analysis, UNEP/Tufts University, USA.

1989 D.Sc. (Soil Management-Waste Disposal/Utilization) The Agricultural University of Norway, NORWAY.

1984 Research Dip. in Environmental Science, The Agricultural University of Norway, NORWAY.

1979 M.Sc. (Environmental Science-Soil) Kasetsart University, Bangkok, THAILAND

1976 B.Ed. (Chemistry-Biology) Chulalongkorn University, Bangkok, THAILAND

Topic: "Sustainable Use and Zero Waste for Water Resources"

Orawan Siriratpiriya

The Aquatic Resources Research Institute
Chulalongkorn University, Bangkok 10330, Thailand

The demand for water in both quantity and quality kept rising. As water is life, it is a need to have equitable manner that work in harmony with nature and respect to environmental quality of an immutable hydrological cycle. Environmental sustainability is complex needed integrated approach, coherence, innovation, and balance under space and time scale. Zero waste is a philosophy signified waste as a resource lead to developing technologies about turning the materials recovered from water used or waste water treatment system into new products provided similar environmental quality and/or benefits. The concept of using used water or recycled water to produce new products not only virtually eliminating the need for water consumption from natural resources but also need acceptance and interest of consumer to used and purchase. One of the best management practices (BMPs) in Thailand as a case study was presented by using agro-processing waste and by-product to be reused in direction of zero waste through innovations to reduce the impact of green-house gas emissions as well as generate innovations to enhance bio-energy recovery and provision of clean freshwater resources in entry point for sustainable use and zero waste for water resources.

Keynote Speaker II

Prof. Tjokorda Gde Tirta Nindhia

Engineering Faculty, Udayana University, Bali, Indonesia

Prof. Tjokorda Gde Tirta Nindhia was born in Denpasar, Bali, Indonesia on January 16th, 1972. Received Doctor Degree in Mechanical Engineering from Gadjah Mada University (UGM) Yogyakarta, Indonesia on August 2003, with major field of study was Material Engineering.

He participated in various international research collaboration such as with Muroran Institute of Technology Japan (2004), Toyohashi University of Technology Japan (2006), Leoben Mining University Austria (2008-2009), Technical University of Vienna Austria (2010) and Recently with Institute Chemical Technology of Prague Czech Republic (2012-now). His current job is as Full Professor in the field of Material Engineering at Department of Mechanical Engineering, Engineering Faculty, Udayana University, Jimbaran, Bali, Indonesia. His research interest covering subjects such as, biomaterial, waste recycle, failure analyses, ceramic, metallurgy, composite, renewable energy, and environmental friendly manufacturing.

Topic: “Indonesian Wild Silkworm Cocoon as Biomaterial”

Prof. Tjokorda Gde Tirta Nindhia

Engineering Faculty, Udayana University

Silks are superior material in mechanically, biocompatible and degradable therefore offer a wide range of properties. The mechanical properties of silks fiber in terms of energy absorbed before failure exceed all other natural polymers and synthetic materials, even high-performance fibers of Kevlar . Silk from the species of *Bombyx mori* is well known for its biocompatibility as biomaterial. The domesticated *Bombyx mori silk* has been used commercially as sutures in biomedical. Silk then have more attention as biomaterial since many researcher recently was demonstrated that silk is suitable for 3-D scaffolding material. As a scaffold, the cell growth and spread along the fiber, and the next is covered all the surface of the fiber and then spread to fill the gap to form structure of the tissue. It was also reported that the human cell was adhere, grow and spread on three dimensional silk fibroin produced from cocoons of Bombyx *mori*. The researches for utilization of silkworm cocoon as biomaterial as above mentioned until know just put attention on one species of silkworm cocoon that is form the species of *Bombyx mori*. Other type of silkworm cocoon especially from the wild that is not domesticated yet should be explored in other to find more suitable silk material for the better or even more superior biocompatibility. It is the purpose of this research to observe the Indonesian source of wild silkworm cocoons from the species of *Cricula trifenestrata* and *Attacus atlas* to be investigated its morphology, chemical elements composition, biocompatibility, and mechanical properties.

Keynote Speaker III

Prof. Helmut Zarbl

Rutgers, The State University of New Jersey, USA

Prof. Helmut Zarbl has more than 32 years of research experience focused on understanding molecular mechanisms of toxicity, mutagenesis, carcinogenesis, toxicogenomics, as well as epigenetic and genetic mechanisms of disease susceptibility and chemoprevention. He received his Ph.D. in Biochemistry from McGill University in 1983, followed by a postdoctoral fellowship in the laboratory of Dr. Mariano Barbacid at the National Cancer Institute (NIH). He subsequently did a postdoctoral research with Dr. Paul Jolicoeur at the Clinical Research Institute of Montreal. He began his academic career at the Massachusetts Institute of Technology (MIT), in 1987, where he rose to the rank of Associate Professor and became the Deputy Director of their Environmental Health Sciences Center. In 1994, he joined the Fred Hutchinson Cancer Research Center (FHCRC) in Seattle, WA, where he established, designed, staffed and directed the FHCRC's Genomics facility. He also served as the Director of Core Laboratories operated by the FHCRC Division of Public Health Sciences (PHS). He founded and served as the Director of the NIEHS Sponsored University of Washington/FHCRC Toxicogenomics Research Consortium, serving as the Director of the National Steering committee for two years.

Topic: "Dietary Methylselenocysteine Prevents Mammary Carcinogenesis by Recoupling the Expression DNA Damage and Response Genes to the Circadian Clock"

Helmut Zarbl[1-5,*], Wei-Ren Guo[1], Yongil Park[6], Hwan-Goo Kang[6] and Mingzhu Fang[1-5]

[1]Department of Environmental and Occupational Health, [2]Environmental and Occupational Health Sciences Institute, [3]School of Public Health, [4]NIEHS Center for Environmental Exposures and Disease, and [5]Cancer Institute of New Jersey, Rutgers, The State University of New Jersey, Piscataway, NJ 08854, USA; [6]Veterinary Drugs & Biologics Division, Animal and Plant Quarantine Agency, An-Yang, Republic of Korea.

*Environmental and Occupational Health Sciences Institute, Rutgers University, 170 Frelinghuysen Road, Room 414, Piscataway, NJ, USA, 08854. Email: zarbl@eohsi.rutgers.edu; Tel. 1-848-445-2354

Numerous population-based studies have shown that workers who are chronically engaged in work shift that require being awake at night are at increased risk for chronic diseases including obesity, cardiovascular disease and breast, prostate, and colon cancers. Accumulating evidence indicates that frequent exposure to light-at-night due to shift work or jet lag disrupts the body's circadian rhythm or biological clock. Circadian rhythm regulates numerous biological and physiological processes, ranging from gene expression to sleep behavior, in a precise and sustained rhythm. The circadian clock is a biochemical oscillator present in essentially all organisms and cell types, and is tuned to a periodicity of ~24 hours, the length of a day on our planet. The clocks functioning in individual cells must be synchronized to the same phase to coordinate biological functions. In mammals, biological clocks are synchronized by the activity of a central pacemaker, the suprachiasmatic nucleus (SCN). The SCN synchronizes peripheral clocks through hormonal (e.g., melatonin and glucocorticoids) and neuronal pathways in response to external cues, particularly light entering the eye, body temperature and nutrient intake. The biological clock therefore plays a central role in adjusting biological functions in response to environmental signals and stressors.

The role of a normal circadian rhythm in preventing carcinogenesis is also supported by animal studies indicating that disruption of the biological clock by exposure to constant light, light-at-night, pinealectomy or jet-lag protocols (repeated disruption of circadian rhythm) increases the incidence of spontaneous and carcinogen-induced tumors. Based on the weight of evidence from epidemiology and animals studies data, the International Agency for Research on Cancer classified disruption of circadian rhythm by shift-work as a probable human carcinogen (Type 2A). Studies show that up to 30% of the workforce is employed in occupations (e.g., healthcare workers, flight crews, janitorial staff, firefighters, police, soldiers, factory workers) that require chronic rotating shift-work associated with exposure to light-at-night. In addition, exposure to increasing amount of light-at-night due to urban light pollution, television, computer monitors, smartphones and other electronics continues to extend the daily period of light exposure. Strategies able to mitigate the deleterious effects of light-at-night have significant potential for improving public health.

While engineering controls to reduce light exposure can be effective in reducing circadian disruption at home, they are not practical in the work environment. Oral supplementation with the hormone melatonin may help reduce the effects of jet-lag or shift-work by promoting a normal sleep patterns, but induction of sleep in shift workers is not always a viable option. One potential way to overcome the deleterious effects of circadian disruption is to restore peripheral clocks without impacting the central pacemaker. We

previously reported that dietary methylselenocysteine (MSC) inhibits N-methyl-N-nitrosourea (NMU)-induced mammary tumorigenesis by resetting circadian gene expression, but has no impact on the central pacemaker or serum melatonin levels. A carcinogenic dose of NMU disrupted intracellular oscillations in the ratio of NAD+/NADH, thereby reducing the circadian regulation of NAD-dependent activity of the SIRT1 histone deacetylase. By contrast, dietary MSC restored NAD+/NADH oscillations and increased SIRT1 activity in the mammary glands of NMU-treated rats. MSC-induced SIRT1 activity was correlated with decreased acetylation of chromatin proteins on circadian gene promoters. Changes in SIRT1 activity were temporally correlated with loss or restoration of rhythmic Per2 mRNA expression in NMU-treated or MSC-rescued rat mammary glands, respectively. To study the underlying mechanism, we developed a circadian reporter system in human mammary epithelial cells expressing a luciferase reporter gene driven by the promoter of human PERIOD 2 (PER2), a core circadian gene. This *in vitro* model recapitulated the effects of carcinogens and SIRT1-specific inhibitors and MSC on circadian regulation. These results indicate that enhancement of NAD+-dependent SIRT1 activity contributes to the chemopreventive efficacy of MSC by restoring and enhancing epigenetic control of circadian gene expression.

Our more recent studies indicate that circadian rhythm plays a key role in the normal cellular response to environmental toxicants and stressors. The circadian clock is tightly coupled to the expression of DNA damage and response (DDRR) genes. In the Copenhagen (Cop) rat strain, which is highly resistant to mammary carcinogenesis, exposure to carcinogen actually advances the phase and increases the expression of core circadian genes and DDRR genes. By contrast, the same exposure ablates circadian expression of Period 2 and DDRR genes in the susceptible Fischer 344 (F344) rat strain. The resulting reduction in DNA repair capacity creates a pro-mutagenic state. Our studies further suggest that failure of theF344 rat to mount a normal circadian response to stressors is due to reduced levels of intracellular NAD+/NADH and NAD+-dependent SIRT 1 histone deacetylase activity. Preliminary finding indicate reduced of NAD+ -dependent SIRT1 activity in the susceptible Fischer 344 rat strain is at least in part due to depletion of NAD+ by increased fatty acids synthesis and oxidative stress resulting from obesity. MSC mediates its chemopreventive effects in the susceptible F344 rat by increasing NAD+/NADH towards the normal levels seen in mammary epithelial cells of the COP strain. This restores SIRT1 activity and recouples DDRR gene expression to circadian control and prevents carcinogenesis in the F344 rat. Interestingly, exposure of the resistant Cop rat to a jet-lag protocol reduces NAD+-dependent SIRT1 activity and uncouples DDRR gene expression from circadian rhythm. Thus chronic jet-lag creates a pro-mutagenic state even in the genetically resistant Cop rat. Together these studies suggest that circadian rhythm plays a central role in integrating organismal and cellular responses to environmental toxicants and stressors, and that its disruption by host or environmental factors increases the risk of chronic diseases by altering normal protective responses to stressors.

Keynote Speaker IV

Prof. Solomon W. Leung

Environmental Engineering Civil and Environmental Engineering Department, Idaho State University

EDUCATION

Post-Doctoral Research Fellow
Department of Civil Engineering, Feb 1989 to Aug 1989,
University of Nevada-Reno, Reno, Nevada

Ph.D Civil & Environmental Engineering, May 1989,
University of Iowa, Iowa City, Iowa

(Thesis title: Chemistry and Kinetics of Chloramine Decomposition: Nitrite Reactions, and the Formation of an Unidentified Product)

M.S. Chemical Engineering, 1982, University of Iowa, Iowa City, Iowa
(Thesis title: Solute Redistribution during Normal Freezing)

B.A. Chemistry, 1978, University of Iowa, Iowa City, Iowa

RESEARCH INTERESTS

- Physicochemical treatment processes, particularly chemical oxidations applied to the treatment of soils, water and wastewater, and disinfection and by-products generated in water and wastewater;
- Environmental risk assessment and toxicology and nanotoxicity;
- Nanotechnology, biosensor, and novel applications with nanotechnology;
- Tissue engineering, biosignaling, and cancer therapy.

Topic: "In Situ Arsenic Removal in Groundwater for Rural Communities by Iron Sorption and Arsenic Immobilization"

Solomon W. Leung

Civil and Environmental Engineering Department, Box 8060, Idaho State University, Pocatello, Idaho, USA 83201

Arsenic in drinking water is a worldwide problem that is not limited to just developing countries. Rural communities, including U.S., where sophisticated treatment systems are not available, residents often consume water with arsenic concentrations higher than 10 ppb (0.01 mg/l), and most of the water sources with arsenic problem are groundwater.

In this study, we propose an innovative "treat-and-pump" method (in situ iron precipitation and arsenic immobilization) that is a simple, inexpensive, and readily available technology that may be used to mitigate arsenic in groundwater. The process includes three major steps: (1) Hydrous ferric oxide (HFO) is precipitated in groundwater aquifer by injection of ferric ion and NaOH into a well; (2) Arsenic in groundwater is adsorbed onto HFO and thus be immobilized in place. The sorption will significantly reduce dissolved arsenic concentration in groundwater and "clean" water will be produced thereafter; (3). Arsenic is remobilized when HFO reaches maximum sorption capacity for arsenic species by either aquifer acidification or alkalization. When arsenic is released into the water phase again, the arsenic rich groundwater will then be pumped out and arsenic will be removed from the groundwater aquifer permanently. The arsenic laden water can be pumped into an evaporation pond to precipitate out the arsenic that can be collected later for disposal or as an industrial feedstock.

Keywords: Hydrous ferric oxide, HFO, arsenic, removal, sorption, desorption, immobilization.

Brief Schedule for Conferences

<table>
<tr><td>Day 1</td><td colspan="2">Afternoon, June 25, 2016 (Saturday) Venue: Lobby
Arrival Registration 13:30~17:00
(Committee Meeting 14:00~16:00)</td></tr>
<tr><td rowspan="9">Day 2</td><td colspan="2">June 26, 2016 (Sunday) 8:50~17:30
Venue: Gianyar Room & Klungkung Room
Arrival Registration, Keynote Speech, and Conference Presentation</td></tr>
<tr><td colspan="2">Morning Conference</td></tr>
<tr><td colspan="2">Venue: Gianyar Room
Opening Remarks 8:50~8:55
(Prof. Tjokorda Gde Tirta Nindhia, Engineering Faculty, Udayana University, Bali, Indonesia)
Keynote Speech I 8:55~9:30
Topic: “Sustainable Use and Zero Waste for Water Resources”
(Prof. Orawan Siriratpiriya, Environmental Research Institute of Chulaongkorn University, Thailand)
Keynote Speech II 9:30~10:05
Topic: “Indonesian Wild Silkworm Cocoon as Biomaterial”
(Prof. Tjokorda Gde Tirta Nindhia, Engineering Faculty, Udayana University, Bali, Indonesia)
Coffee Break & Photo Taking 10:05~10:40
Keynote Speech III 10:40~11:15
Topic: “Dietary Methylselenocysteine Prevents Mammary Carcinogenesis by Recoupling the Expression DNA Damage and Response Genes to the Circadian Clock”
(Prof. Helmut Zarbl, Rutgers, The State University of New Jersey, USA)
Keynote Speech IV 11:15~11:50
Topic: “In Situ Arsenic Removal in Groundwater for Rural Communities by Iron Sorption and Arsenic Immobilization”
(Prof. Solomon W. Leung, Environmental Engineering Civil and Environmental Engineering Department, Idaho State University)</td></tr>
<tr><td colspan="2">Lunch 12:00~13:00 Venue: The Coffee Shop</td></tr>
<tr><td colspan="2">Afternoon Conferences</td></tr>
<tr><td>Session 1: 13:00~15:00
Venue: Gianyar Room
8 presentations-Topic: “Food Science & Biochemistry”</td><td>Session 2: 13:00~15:00
Venue: Klungkung Room
8 presentations-Topic: “Biomedicine”</td></tr>
<tr><td colspan="2">Coffee Break 15:00~15:30</td></tr>
<tr><td>Session 3: 15:30~17:30
Venue: Gianyar Room
8 presentations-Topic: “Environment”</td><td>Session 4: 15:30~17:30
Venue: Klungkung Room
8 presentations-Topic: “Bioinformatics & Medical”</td></tr>
<tr><td colspan="2">Dinner 17:40 Venue: The Coffee Shop</td></tr>
<tr><td>Day 3</td><td colspan="2">June 27, 2016 (Monday) 9:00~17:00
One Day Visit & Tour</td></tr>
</table>

Tips: Please arrive at the conference room 10 minutes before the session begins to upload PPT into the laptop.

Detailed Schedule for Conferences

Afternoon, June 25, 2016 (Saturday)

Venue: Lobby

13:30~17:00	**Arrival and Registration** **(Committee Meeting 14:00~16:00)**

Note: (1) The registration can also be done at any time during the conference.
(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.
(3) One Best Oral Presentation will be selected from each oral presentation session, and the Certificate for Best Oral Presentation will be awarded at the end of each session on June 26, 2016.

Morning, June 26, 2016 (Sunday)

Venue: Gianyar Room

8:50~8:55		**Opening Remarks** Prof. Tjokorda Gde Tirta Nindhia Engineering Faculty, Udayana University, Bali, Indonesia
8:55~9:30		**Keynote Speech I** Prof. Orawan Siriratpiriya Environmental Research Institute of Chulaongkorn University, Thailand Topic: "Sustainable Use and Zero Waste for Water Resources"
9:30~10:05		**Keynote Speech II** Prof. Tjokorda Gde Tirta Nindhia Engineering Faculty, Udayana University, Bali, Indonesia Topic: "Indonesian Wild Silkworm Cocoon as Biomaterial"
10:05~10:40		**Coffee Break & Photo Taking**
10:40~11:15		**Keynote Speech III** Prof. Helmut Zarbl Rutgers, The State University of New Jersey, USA Topic: "Dietary Methylselenocysteine Prevents Mammary Carcinogenesis by Recoupling the Expression DNA Damage and Response Genes to the Circadian Clock"
11:15~11:50		**Keynote Speech IV** Prof. Solomon W. Leung Environmental Engineering Civil and Environmental Engineering Department, Idaho State University Topic: "In Situ Arsenic Removal in Groundwater for Rural Communities by Iron Sorption and Arsenic Immobilization"

Lunch	
12:00-13:00	**The Coffee Shop**

Session 1

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0002 Presentation 1 (13:00~13:15)

Measurement of Antioxidant Activity and Structural Elucidation of Chemical Constituents from *Aglaia oligophylla* Miq.

Yunie Yeap Soon Yu, Nur Kartinee Kassim, Khalid Hamid Musa, and Aminah Abdullah

Universiti Putra Malaysia

Abstract—Aglaia oligophylla Miq. is a shrub of approximately 25 meters tall under the *Meliaceae* family which possess distinct pharmacological properties including insecticides, anti-inflammatory and anticancer. The purpose of this study is to evaluate the antioxidant capacity of the trunks and stem of *Aglaia oligophylla* plant extracts and to isolate their chemical constituents. The antioxidant activity was evaluated as the reducing antioxidant capacity includes of cupric reducing antioxidant capacity (CUPRAC) and ferric reducing antioxidant power (FRAP) assays. In CUPRAC assay, ethyl acetate extract of the trunks part exhibited the strongest reducing capacity with the value of 1543 mg Trolox equivalent (TE)/g and for the stem part, methanol extract showed the strongest reducing antioxidant capacity with the value of 1059 mg TE/g. In FRAP assay, the methanol extracts of both trunks and stem of the plant showed the strongest reducing power with the values of 1269 mg TE/g and 1084 mg TE/g respectively. Repeated column chromatographic separation on chloroform extract of the trunks part afforded one triterpenes which was suggested to be stigmasterol (**1**) whilst the separation on methanol extract of the trunks obtained a triterpene, *β*-sitosterol (**2**). In the stem of *A. oligophylla*, the column chromatographic separation on petroleum ether extract afforded a new triterpene, namely oligophyllic acid (**3**) while the separation on chloroform and ethyl acetate extracts gave compound **2**. All the chemical constituents were elucidated by comparison with literature review reported previously. Based on the value of CUPRAC and FRAP antioxidant assays of the plant extracts, *A. oligophylla*, shows great potential for the possibility of discovery and development of health promoting supplement from the extracts and chemical constituents.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0005 Presentation 2 (13:15~13:30)

Biochemical Properties of Emir Grape Polyphenol Oxidase as Affected by Harvest Year

M. Ümit Ünal and Aysun Şener

University of Cukurova, Turkey

Abstract—Effect of harvest year on biochemical properties of polyphenol oxidase (PPO) from Narince grapes was studied in 2006 and 2007.The optimum pH of the enzyme in both years were found to be 5.49 whereas optimum temperature for enzyme activity was 30 ℃ in the year 2006 and 35 ℃ in the year 2007. The apparent substrate specificities were established from V_{max}/K_m as: caffeic acid > 4-methylcatechol >catechol >pyrogallol for two enzymes in both years. There were marked differences between the two enzymes in terms of thermal stability. The effects of inhibitors varied in a dose dependent manner and according to the harvest year.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0007 Presentation 3 (13:30~13:45)

The Levels of Serum Thyroid Hormone in Sturgeon Populations

Jiangqi Qu, Chengxia Jia, Pan Liu, Mu Yang, and Qingjing Zhang

Beijing Fisheries Research Institute

Abstract—Thyroid hormone (TH) play an important role in the growth and development of animals, and regulate the protein metabolism, structure and function of the growth and development of the central nervous system. It also has a direct impact on the quantity and quality of animal population. Sturgeon is rich in nutritional value, and the thyroid hormone function is crucial to the fish growth. However, there is less information about the thyroid hormone concentrations in sturgeon bodies. The aims of this study were to evaluate the serum levels of thyroid-stimulating hormone (TSH), triiodothyronine (T_3), thyroxine (T_4), Free triiodothyronine (FT_3) and Free thyroxine (FT_4) in three sturgeon populations that were reared in cages. Our results showed that there are differences among the sturgeon populations. The serum T_3 levels of Amur sturgeon was significantly lower than both populations of Siberian sturgeon and Russian sturgeon. The serum levels of FT_3, FT_4 and T_4 were significantly different between Siberian sturgeon and Amur sturgeon, but no obvious different with Russian sturgeon. Correlation analysis showed that the serum T_3 and FT_3, T_4 and FT_4 had a positive correlation in sturgeon populations, but did not find the serum hormone levels associated with growth traits data. Our results also found that serum T_3 and FT_4, FT_4 and FT_3 exist highly relevant in both Russian sturgeon and Amur sturgeon. It is suggested that the sturgeon thyroid endocrine system is relatively complex.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: “Food Science & Biochemistry”

Session Chair: Prof. Helmut Zarbl

S0008 Presentation 4 (13:45~14:00)

Low Socioeconomic Status among Adolescent Schoolgirls with Stunting

Sitti Patimah, Andi Imam Arundana, Ida Royani, and Abdul Razak Thaha

School of Public Health Universitas Muslim Indonesia

Abstract—In the accelerating decline of maternal mortality, health and nutritional status of adolescent schoolgirls should get more concern by all stakeholders due to adolescence could break intergenerational cycle of poor nutrition in the future. Social and economic aspects are one of the important determinants that influence health and nutritional status adolescent schoolgirls. This study aimed to assess the influence of social-economic factor in the incidence of stunting in adolescent schoolgirls using a cross sectional study design. Subject of the study were 601 of 10th grade girl students in five high schools in Maros district. To determine the stunting in adolescent schoolgirl used height-for-age indices (<-2 SD HAZ-score). SPSS version 18 was used to analyze the data. The prevalence of stunting was 23.6%, found more in subjects who had siblings ≥ 2 persons (91.5%), a large family more than 4 people (73.2%), low income family (69.1%), and low education fathers (62.4%) as well as lower education mothers (68.3%). However, only the number of siblings was significantly associated with the incidence of stunting in girls based on the chi-square test (p= 0.008). It was concluded that adolescent schoolgirls who were stunted from lower socioeconomic groups. Therefore, socioeconomic empowerment of the family should be an important point to address the problem of chronic malnutrition in adolescent schoolgirls.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0009 Presentation 5 (14:00~14:15)

Inulin-Enriched Low Fat Milk Improved Lipid Profile in Indonesian Hypercholesterolemic Adults

Fidelia, Lina Antono, Astri Kurniati, and Susana

Nutrifood Research Center, PT. Nutrifood Indonesia

Abstract—Hypercholesterolemia is known as the major risk factor contributing to cardiovascular disease and the prevalence is relatively high in Indonesia. Inulin is one of the soluble fiber with promising effect to improve lipid profile. However, the effects of inulin-enriched products have not yet been confirmed in Indonesian hypercholesterolemic population. OBJECTIVE: To study the effect of inulin-enriched low fat milk to the lipid profile of Indonesian hypercholesterolemic adults. MATERIAL AND METHOD: Thirty-three subjects were given instruction to drink low fat milk with total inulin of 6g/day for 6 weeks. Body composition and lipid profiles were measured before and after intervention. RESULTS: 6 weeks of inulin-enriched low fat milk administration resulted in a significant decrease of total cholesterol (TC, -11 mg/dl, $p<0.05$), low-density lipoprotein (LDL, -10.5 mg/dl, $p<0.05$), high-density lipoprotein (HDL, -2.21 mg/dl, $p<0.05$), and significant increase of skeletal muscle mass (SMM, 200g, $p=0.008$). Changes in TC and LDL were found to be significantly correlated with its baseline ($p<0.05$). CONCLUSION: Inulin-enriched low fat milk effectively improved lipid profile and increased SMM in Indonesian hypercholesterolemic subjects. The degree of reduction was found to be correlated with the baseline of TC and LDL.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0014 Presentation 6 (14:15~14:30)

Formation and Cumulation of CO_2 in the Bottles of the Fermented Milk Drinks

Bojana Danilović, Lorenzo Cocola, Massimo Fedel, Luca Poletto, and **Dragiša Savić**

Faculty of Technology in Leskovac, University of Niš
Associate National Research Council (CNR) – Institute for Photonics and Nanotechnologies Padova (IFN Padova), Italy

Abstract—As in majority of food during storage, the development of CO_2 in headspace of yogurt is mainly the result of contamination and yeast growth. Thitherto, the monitoring of the changes of CO_2 concentration in the yogurt package's atmosphere can be an indicator of the product quality and safety. The aim of this paper is to determine the accumulation of the CO_2 in the headspace of bottles of fermented milk products: yogurt ''Vedro 2.8% milk fat'' and fermented milk drink with probiotics ''FidoBe 0.5% milk fat'', both produced in ''Niška mlekara'', AD Niš, Serbia. To examine these phenomena, the products were incubated at 30^{o}C and contaminated with yeast at the levels of 1 and 5 CFU/ml. The strain of yeast used for the contamination was isolated from the spoiled yogurt. During the incubation, the CO_2 measurements were continuously performed with a device specially constructed for this purpose. The instrument was based on Tunable Diode Laser Absorption Spectroscopy with a Wavelength Modulation Spectroscopy technique. The number of lactic acid bacteria and the number of yeasts were monitored, too. Also the pH value was measured.

The content of CO_2 in the headspace of contaminated (initial yeast concentration -1 CFU/ml) bottles of yogurt ''Vedro'' slightly increased from the start value to cca 5,0% at the 30th hour of incubation reaching yeast level of cca 4 logCFU/ml. After that, the CO_2 content and the number of yeasts increased faster until the 40th h and reached the values of cca. 16% and 6 logCFU/ml, respectively.

During the incubation of the contaminated bottles of fermented milk drink ''FidoBe'', the CO_2 level slightly increased from the initial cca 1% to cca 5% during 36 h in bottles contaminated with 1 CFU/ml, and after 30 h in the bottles contaminated with 5 CFU/ml. Hereupon, the increase of CO_2 content was faster reaching 20% after 40h in experiment with the initial 5 CFU/ml yeasts, and after 48h in experiment with the initial 1 CFU/ml of yeast. During the incubation, the yeast level increased until the final level of 6.0 logCFU/ml.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S0016 Presentation 7 (14:30~14:45)

NUCHIFIVE (Nutrition Application for Children Under Five Years)

Intan Ayu Ningkiswari, Bintang Mareeta Dewi, and Feri Andriani

Universitas Airlangga Surabaya

Abstract—The use of internet in smartphone has increased considerably and brings a great matter about internet addiction in recent years, including in Indonesia. On the other side, problems of malnutrition among children under five years in Indonesia are constantly high. The aim of this research is to prevent malnutrition among children under five years. This research uses literature review as the research design.

Application that contains information about food nutrients for children under five as well as information about complementary feeding and feeding time alarm for children under five will make mothers easier to arrange their child's menu according to their child's age. The aims of this application are to give reminder for mothers to feed their child on time and help them give nutritious food according to their child's age and need..

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Gianyar Room

Session 1: 8 presentations-Topic: "Food Science & Biochemistry"

Session Chair: Prof. Helmut Zarbl

S2003 Presentation 8 (14:45~15:00)

Development of Gluten-Free Pasta (Sevaiya) Using Grape Pomace and Assessing its Quality and Acceptability

Hiral Savla and **Veena Yardi**

College of Home Science, Nirmala Niketan

Abstract—An increasing number of people is suffering from celiac disease world over including India which results in avoidance of gluten containing i.e. mainly wheat based products. In order to prevent nutritional problems resulting from that an urgent need was felt to develop suitable alternatives and enhance nutritional value of gluten free products which are likely to be deficient in fibre and micronutrients. The present study, therefore, aimed to develop gluten free pasta (GFP) using Grape Pomace (GP), solid remains of grape after extracting juice and to assess its quality and acceptability. Two variations of Indian Pasta-*sevaiya* were developed. Variation 1 and Variation 2 were made using rice flour and rice flour with Bengal gram flour respectively. Both were evaluated for sensory properties. The product made with rice flour had a higher score for acceptability and was selected for further study. Green and purple grape pomace was incorporated in the selected pasta. On the basis of higher acceptability score Pasta with Green Grape Pomace was used for further study. It was evaluated for the sensory properties, gluten content, nutritional properties, presence of flavonoids, microbial quality and shelf life in comparison with Gluten Free Pasta without addition of grape pomace. Pasta with and without Green pomace had comparable score for sensory evaluation. Nutritionally and microbiologically pasta with grape pomace showed better results. In conclusion, it can be said that Grape pomace, a waste by-product can be a good source of value addition for the gluten free products like pastas.

Session 2

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

S1004 Presentation 1 (13:00~13:15)

Health Promoting Potentials of Selected South African Indigenous Leafy Vegetables

George G, Ganjifrockwalla F, and Gqaza BM

Walter Sisulu University

Abstract—Six dietary leafy vegetables commonly consumed by the rural Eastern Cape communities of South Africa were analysed for their antioxidant activity and phenolic content. The indigenous leafy vegetables (ILVs) were *Amaranthus hybridus, Solanum nigram, Bidens pilosa, Urtica urens, Ribes uva crispa and Taraxacum officianale*. Aqueous and methanol extracts were tested for free radical scavenging and antioxidant activity using 2,2 azinobis-(3-ethylbenzthiazoline-6-sulphonic acid (ABTS) assay and expressed as trolox equvivalents. Total phenolic content was determined using the Folin-Ciocalteu assay with gallic acid as the standard and expressed as gallic acid equivalents. The antioxidant activity of the indigenous leafy vegetables for aqueous extracts ranged from 1.28 – 11.45 mmol/100g and the range observed for methanol extracts were 7.85 – 17.2 mmol/100g). The total phenolic content of the water extracts were 226.7 – 651.7mg/100g. The phenol content in the methanol extracts were in the range of 187.8 – 764.9 mg/100g gallic acid equivalent (GAE)/100g. Total antioxidant activity correlated well with total phenolic content of the methanol extract (R^2 – 0.875). Results suggest that the indigenous leafy vegetables tested in the study have the potential to provide antioxidant properties and may offer effective protection from free radical injury implicated in metabolic stress, chronic and degenerative diseases if included in the diet.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S0002 Presentation 2 (13:15~13:30)

Precise Measurements of Short-term Memory Function about Periodic Motions

Kyota Aoki, Yuki Yamada, and **Hisanori Hotta**

Utsunomiya University, Japan

Abstract—There are peg-board test and tap synchronization test as a method for measuring the motion control function. These tests measure only the result of motion, and do not the process. By measuring the whole process from the beginning to the end of a test, it is possible to obtain more detailed data. In evaluating the short-term memory function of a person's motion, the through measurement of a motion processes enables to measure the precise performance of the memory function. This paper proposes a new method to measure the performance of a short-term memory function about periodic motion of both hands. The new proposed method uses the visual synchronization task. In the task, the method requests a subject to flip the palms of both hands synchronizing the displayed motion and continue to flip after the displayed motion disappeared. The method measures the poses of both perms through the task. From the measurements in the process of this task, the method evaluates the short-term memory function of the subject. This paper proposes the task, its' measuring method, implementation and experiments. The new task and the measuring method enable to measure the precise movements easily and shortly. The proposed method is safe, because there is no need to attach the device to a subject nor to make gross motions. This paper presents the experiments and the evaluation of the short-term memory function of the movements from objective measurement of cooperative movement in both hands.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S0006 Presentation 3 (13:30~13:45)

An Android-Based Pregnancy Predicting System

Dony Novaliendry, Yang Cheng-Hong, and Li-Yeh Chuang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—Pregnancy is one of the valuable moments waited for by every married couple. Many people consider that without having a child, a marriage is not complete yet. On the other hand, a nine-month pregnancy is not an easy matter to go through, especially the first pregnancy. Many changes happen to a mother during her pregnancy term. Lack of knowledge and information will always become a problem for a mother-to-be. Utilizing the progressive development of sciences and also communication technology will enable us to readily collect any information during pregnancy. This article describes the android-based pregnancy predicting software. By this software, the user, especially pregnant women, can collect any information concerning pregnancy age, childbirth estimation, pregnancy information, pregnancy methods and also some choices of Islamic names for the baby to be born.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S1003 Presentation 4 (13:45~14:00)

The Suitability and Efficacy of Perioperative Antibiotics in Relation with the Surgical Wound after Appendectomy

Eka Amelia, Bambang Arianto, and Anita Purnamayanti

University of Surabaya, Indonesia

Abstract—There is no research currently exist about the use of ceftriaxone as perioverative antibiotics for appendicitis patient in Haji General Hospital Surabaya, so its relationship with the surgical wound after appendectomy is remain unknown. This research is conducted to determine the suitability and efficacy of ceftriaxone, also to identify other factors that influence the surgical wound. This was an prospective cohort study of 25 patients (age ≥ 15 years old) between June – August 2015. The specimens culture demonstrated that 12 bacteria were E. coli, 1 ESBL-producing E. coli and 12 negative. Antibiotics susceptibility testing showed that 41,67% E. coli was susceptible to ceftriaxone. There was no significant relationship between suitability of postoperative antibiotics and surgical wound after appendectomy in non-perforated cases (p=0,505), while perforated case defined a significant relationship (p=0,011). The factors which significantly related with surgical wound were gender (p=0,014) and duration of surgery (p=0,017). Ceftriaxone was still effective as perioperative antibiotics. Postoperative antibiotics were only required for perforated appendicitis, whereas prophylactic antibiotic was known to be adequate in the case of non-perforated.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S1006 Presentation 5 (14:00~14:15)

Biocompatible Film Made from Silkworm Cocoon

Tjokorda Gde Tirta Nindhia, Zdenek Knejzlik, Tomas Ruml, Tjokorda Sari Nindhia, and I Wayan Surata

Udayana University, Indonesia

Abstract—A biocompatible film is needed to cover an open or wide wounds. In this research, biocompatible film is created from cocoon of silkworm *Bombyx mori*. The sericin and fibroin proteins of the cocoon were separated. Only fibroin protein of the cocoon was used for this purpose. The fibroin was ground mechanically in water. The resulting fibroin solution was dropped onto a glass surface and heated at 60^{o}C until solidify to become a film. The microstructure of the membrane was investigated by using optical microscope. The human osteosarcoma cell line (U2OS**)** was cultivated for 24 hours. It was found that the cells are able to attach and grow on the fibroin film of *Bombyx mori* during following 24 hours as documented by microscopic observation. This is an indication that the fibers may be used as degradable biomaterial.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: “Biomedicine”

Session Chair: Prof. Solomon W. Leung

BS-S1007 Presentation 6 (14:15~14:30)

Antibiotics Efficacy Analysis on Diabetic Foot Ulcer Inpatients

Irma Susanti, Bambang Arianto, and Anita Purnamayanti

University of Surabaya, Indonesia

Abstract—Introduction: Diabetic foot ulcer known as infection, ulceration or destruction of deep tissues associated with neurological abnormalities and various degrees of peripheral vascular diseases in lower limb. Treatment of diabetic foot ulcer required intensive empiric and definitive antibiotic therapies. Beside antibiotic, there are other factors that influence the diabetic foot ulcers healing. This study aims to determine the relationship between suitability and efficacy of antibiotics to wound improvement and other factors influence for wound improvement. *Methods***:** This prospective cohort study was perform in Haji General Hospital Surabaya since June until August 2015 on 17 diabetic foot ulcer inpatients age ≥20 years old. Suitability of empiric antibiotic was compared to hospital standard procedure and suitability of definitif antibiotic was compared to the result of microbial culture and sensitivity test of each patient. *Result*: The relationship between suitability of empiric antibiotics and other factors influence for wound improvement could not be analized by inferential statistic because of limited data variation.The relationship between suitability and efficacy of definitive antibiotics to wound improvement was not significant (13,1%, p=0,585). Other factors beside antibiotics which significantly associated with wound improvement was debridement in surgery room 66,2% (p=0,000). *Conclutions*: Suitability of antibiotics was not the most influence on the process of improvement in diabetic foot ulcer. The most important factor for wound improvement was debridement in operation room.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S2001 Presentation 7 (14:30~14:45)

In vitro Synergistic Effects of Snail Slime and Chitosan against Staphylococcus Aureus

Agnes Sri Harti, Estuningsih, Heni Nur Kusumawati, Siswiyanti, and Setyaningtyas

Kusuma Husada Surakarta School of Health Science, Indonesia

Abstract—Snail slime contains such active substances as isolates, heparan sulfate, and calcium. The isolate content is useful as antibacterials and analgesics, while calcium plays a role in hemostasis. Snail slime has antibacterial and antiinflammatory effects and therefore the proliferation phase will heal wounds immediately. Chitosan is a biopolymer with a wide range of biomedical and pharmaceutical applications. Chitosan fibers are used as threads in surgery and are easily absorbed by the human body so that they can be used as a bandage covering the wound and medication carrier. Chitosan can be biologically degradable, is non-toxic, nonimmunogenic and biocompatible with the body tissue of mammals. *Staphylococcus aureus* is a bacterium causing skin infection and pus formation in wound. This research aims at finding out the in vitro synergistic effects of snail slime and chitosan against *Staphylococcus aureus.* The research method involves isolation of snail slime, 2% chitosan synthesis, and in vitro effectiveness test using diffusion method. The research findings indicate that snail slime and 1.25% chitosan are proven to be effective bactericide against *Staphylococcus aureus.* The mixture of snail slime and 1.25% chitosan with ratio of 1 : 1 shows the synergistic effect as bactericide against *Staphylococcus aureus.* The research findings are expected to be applied in nursing, particularly wound treatment to prevent *Staphylococcus aureus* infection with natural and safe materials.

Afternoon, June 26, 2016 (Sunday)

Time: 13:00~15:00

Venue: Klungkung Room

Session 2: 8 presentations-Topic: "Biomedicine"

Session Chair: Prof. Solomon W. Leung

BS-S2002 Presentation 8 (14:45~15:00)

The Synergistic Effects of Areca Nut Extract and Chitosan toward Candida Albicans in Vitro

Rahajeng Putriningrum, Anis Nurhidayati, Tresia Umarianti, Kartika Dian Listyoningsih, and Wahyu Rima Agustin

Kusuma Husada Surakarta School of Health Science, Indonesia

Abstract—Areca nut (*Areca catechu L*.) as one of traditional medicines is bactericidal and fungicidal. The anti-fungal compounds of areca nut are saponins, phenolics, flavonoids, terpenoids, steroids and alkaloids. Chitosan is a biopolymer having fairly extensive benefits in biomedical and pharmaceutical fields, i.e. chitosan fibers can be used as surgical sutures, wound dressings, and drugs carriers. Chitosan is also biodegradable, non-toxic, non-immunogenic and biocompatible with the body tissue of mammals. Vulvovaginal candidiasis is a yeast infection caused by *Candida albicans*. This research aims to determine the synergistic effects of areca nut extract and chitosan toward *Candida albicans*. The research methods include the extraction of areca nut; the synthesis of chitosan 2% and the effectiveness test of in vitro using diffusion method. The result shows the synergistic effects of areca nut extract and chitosan toward *Candidia albicans.* The extracts of 5% of areca nut and 1.25% of chitosan are effective as fungicides against *Candidia albicans*. A mixture of 5% of areca nut and 1.25% of chitosan with the ratio of 1: 1 shows optimum effectiveness as fungicides against *Candida albicans*, whereas 1.25% of chitosan is a more effective fungicide than positive control. The results are expected to be applied in the field of obstetrics, especially in postpartum care for the prevention of candidiasis or *fluor albus* by using effective and safe natural ingredients.

15:00-15:30	**Coffee Break**

Session 3

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

CE051 Presentation 1 (15:30~15:45)

Design of Photovoltaic –Thermal (PV/T) for Building Integrated Photovoltaic Systems

Syafaruddin, Satriani Latief, and Wahyu H. Piarah

Department of Electrical Engineering, Universitas Hasanuddin, Makassar, Indonesia

Abstract—Photovoltaic systems are often installed in climates with considerable amount of snowfall and freezing rain in winter. It has been observed that the snow accumulation on a solar panel affects its performance and decreases the energy output. Snow on solar panels should be cleared as soon as possible to generate the maximum power. A low cost method of snow detection on solar panels found on field tests is proposed in this paper. The designed system is based on a low cost open-source Arduino Uno microcontroller that measures voltage and current output of a solar panel, and output of a LDR representing the irradiance. Arduino is also connected to a WIFI network and can send messages over the internet. Based on the sensors data, an algorithm is designed to accurately detect snow on solar panels and notify the owner via twitter about the current status. The designed low cost and very low power system has been tested in St. John's, Newfoundland, Canada (47°34'28.9"N 52°44'07.8"W) for three months of winter 2014. This paper presents details of the designed low cost alert system, algorithm and its performance results.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W0001 Presentation 2 (15:45~16:00)

Performance Efficiency and Design Criteria of a Peat System for Treating Septic Tank Effluents

Mohd Elmuntasir Ebrahim Ahmed and Abdallah Abusam

Kuwait Institute for Scientific Research, Kuwait

Abstract—The performances of vertically loaded peat biofilters treating septic tank effluent were studied at laboratory scale. The average removal rates were 28, 17, 49, 18, 39, and 27% for magnesium, zinc, iron, phosphate, nitrate, and biological oxygen demand (BOD) respectively. With such removal rates, the final effluent will satisfy Kuwait's Environment Protection Authority (EPA) standards for reuse in agricultural irrigation. An interesting observation on the removal of iron, manganese, zinc, and phosphate is that they follow a breakthrough curve, unlike BOD and chemical oxygen demand (COD). This phenomenon suggests that peat tend to adsorb these species and that peat filter design is limited by the breakthrough behavior displayed by these elements. The design parameters were extracted as: the maximum hydraulic surface loading rates of 2.183 $m^3/m^2/d$, maximum BOD loading per module 3.13 g/d or 0.218 $kg/m^2/d$, breakthrough time in days according to phosphate 10–20 days.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: “Environment”

Session Chair: Prof. Orawan Siriratpiriya

W0005 Presentation 3 (16:00~16:15)

The Pulse Electromagnetic Fields Effect on pH and Heavy Metal of Water

Novan Agung Mahardiono, **Hanif Fakhrurroja**, Veny Luvita, and Sudaryati Cahyaningsih

Technical Implementation Unit for Instrumentation development-Indonesia Institute of Sciences, Indonesia

Abstract—Currently, the mining areas such as on the islands of Bangka Belitung, still using water from the lake former quarry. Water is a raw material in obtaining the local drinking water supply. The lake water is processed by chemistry and biology before being distributed to the public. In fact the former mining lake water has a heavy metal content are still relatively high. In the area of Bangka Belitung who is the producer of tin, river and lake water is still contaminated by heavy metals that are harmful to living creatures. It can not be parsed directly by microorganisms naturally and even requires a relatively long time to process them. Processing by using electromagnetic resonance is one of the alternative processing to eliminate the heavy metals. Electromagnetic resonance or in this research is called EWT (Electromagnetic Water Treatment) that is a cylindrical pipe on the outside of the coil windings consists of eight electromagnetic field strength of 9.1 mT. The advantage of this method has the high efficiency, has no lead to new compounds and has cleaner technologies. The use of electromagnetic resonance technology can be seen from the pH value in the test with the former quarry lake water. The testing resulted in a pH value of 4.54 becomes 5.31 at a flow rate of 16.2 l / m with a volume of 20 liters. It is circulated through the EWT for 20 hours. EWT is also able to reduce heavy metals by 42-91% with the largest reduction to the lowest copper and lead.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W0007 Presentation 4 (16:15~16:30)

Adsorption of Humic Acid from Aqueous Solution onto PMMA Nanofiber: Kinetics Study

Muhammad Ali Zulfikar, Afdal Bahri, and Muhammad Nasir

Institut Teknologi Bandung, Indonesia

Abstract—The effect of concentration on humic acid (HA) adsorption using PMMA nanofiber has been studied. The experimental data were analyzed by pseudo-first-kinetic, pseudo-second-kinetic and particle diffusion models. From experiment it can be seen that the HA adsorption using PMMA nanofiber decreased with increasing its concentration. The adsorption kinetic data of HA on PMMA nanofiber was well described by a pseudo-second-order model, with the kinetic constants in the range of 0.039 - 0.079 g mg^{-1} min^{-1}. Concerning the mechanism, the results indicated that the intra-particle diffusion is not the rate limiting step in the HA adsorption process.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W0008 Presentation 5 (16:30~16:45)

Removal of 2-Bromophenol by Advanced Oxidation Process with *In-situ* Liquid Ferrate(VI)

Fajar Budi Laksono and Il-Kyu Kim

Pukyong National University, South Korea

Abstract—The concern over the risk of environmental exposure to brominated phenols has been increased and has led the researchers to focus their attention on the study of 2-bromophenol treatment. The study on 2-bromophenol (2-BP) removal using wet oxidation in-situ liquid ferrate(VI) has been conducted. The effects of molar ratio and temperature on the 2-bromophenol removal were investigated. In the various of molar ratio, increasing the molar ratio ([ferrate(VI)]/[2-BP]) enhanced the reaction rate of 2-BP removal. However, the reaction rate decreased when the molar ratio was more than 42.7. The optimal temperature has been observed at 25^{o}C. The activation energy of 2-bromophenol removal was 17.815 KJ/mol. The 2-bromophenol degradation occurred through an oxidative pathway which involves the formation of phenoxy radical and production of isobutyraldehyde as a non-aromatic degradation product.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W0009 Presentation 6 (16:45~17:00)

Multivariate Statistical Technique for the Evaluation of the Environmental factors and the Cyanobacteria Population in Nakdong River, South Korea

Kyeong-deok Park and **Il-kyu Kim**

Pukyong National University, South Korea

Abstract—In Nakdong River, the eutrophication cause by the cyanobacteria is occurred in summer. Some of cyanobacteria have the various toxic substance, the objectionable taste and troublesome odor. Therefore, using the sampling results (water temperature and the concentration of TN, TP, NO_3-N, NH_3-N, and PO_4-P), the hydrologic data (discharge), and the meteorological data (insolation and sunshine duration), multiple regression analysis was performed for each sampling site. Then, the accuracy of the regression equations was estimated to compare with the estimated values by the equation and the measured values and proved the relationship between the used data with the growth of cyanobacteria for each site. The results showed that the multiple regression equations of each sites seem that can explain the relationship of investigated variables and the cyanobacteria population. And, it seems the similar trends between upstream and downstream, and mainstream and tributaries. The upstream sites is considered that the phosphorus-family nutrients influence the growth of cyanobacteria. In contract, the nitrogen-family nutrient are estimated to effect in the downstream. In the tributary sites, the more variables were needed to approve the relationship with the cyanobacteria. However, the regression equations of the upstream sites showed a limit in the cyanobacteria described investigated variables. It seem to need more study for the new valid variable to use in the analysis.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W0010 Presentation 7 (17:00~17:15)

The Hydrogeology Volcanic Base on Volcanic Facies Groundwater Chemical Content and Stable Isotope Groundwater

Mohamad Sapari Dwi Hadian, Hendarmawan, Nana Sulaksana, and **Fikri Noor Azy**

Universitas Padjadjaran, Indonesia

Abstract—The geological research area are located at Salak Mountain West Java Indonesia, which are consisted of rock unit from the lower layer to top layer in the form of Laharic Breccia, Welded Tuff, pumiceous Tuff, Paleosoil, Tuff Lapillian, and Lava. The purpose of this study are: to determine the volcanic facies, groundwater facies, and groundwater regime. The results of hydrogeological data interpretation, groundwater chemical and isotopic groundwater showed that elevation of 700 masl above are belong to intermediate flow system category. While at an elevation of 500 masl is in the category of medium flow systems. It has results evidenced of subsequent analysis in which samples were taken from low elevation (499 -550 masl) in the form of ground water facies type Na+K, SO_4^{2-} ; Na+K, Cl- flows reflect long or far enough, while at intermediate elevations (600-720 masl) Mg, Cl- reflects the flow groundwater is relatively short, especially at elevations above 800 msl in the form of Mg, HCO_3 showed relatively shorter flow. Isotopic analysis shows that the catchment areas of recharge is the Ciburial water sources located in areas that have elevations between 800 m - 900 m above sea level, while for the water source has Babakanpari recharge area at an altitude of 700-800 m. The springs are located in a location with an altitude between 600-900 m above sea level with the modern age has 18O isotope content of between -6.9 ‰ to -7.58 ‰. The existence of circulation shown by 18O isotope content is reinforced with a low 14C activity or old age, which is about 7800 years old. Similarly, the source Babakanpari having age between 2000 - 6000 years have 18O isotope content of -7.0‰. Based on the results, for sustainability and availability of groundwater. Conservation analysis need to be done in the area within an altitude of 700 m and 800 m elevation above sea level with a buffer elevation in the region between 800 to 900 msl.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Gianyar Room

Session 3: 8 presentations-Topic: "Environment"

Session Chair: Prof. Orawan Siriratpiriya

W1003 Presentation 7 (17:15~17:30)

Hydrologic Alteration in Watershed Using Flow Duration Curve, Case Study Upper Citarum Watershed, Indonesia

Hadi Nurcahyo, Indratmo Soekarno, Iwan K. Hadihardaja, and Arief Rosyidie

Instititut Teknologi Bandung, Indonesia

Abstract—Watershed is the basic unit of landscape particularly to assess hydrological processes. Urbanization and agricultural activities influence landscapes that affect hydrological processes through water demand and uses of space in the watershed. Utilization of space and water by human activities in watershed can alter the composition of the water through increasing the runoff, reducing the flow into the ground and in some cases, move the ground water, into runoff.

Human affect hydrological processes due to: (i) the need of water for domestic and commercial activities whether to use ground water and surface water (ii) the need of space for living, activities, which implicate converting natural vegetation into built up area , which improved impervious area, lessen the soil's ability to infiltrate and absorb water, and thereby reduce groundwater recharge that affects the base flow.

The river is where the accumulation of runoff, waste water from urban activities which is also affected groundwater through seepage from the aquifer, thereby, any changes on watershed as human activity will be reflected in the character of stream flow.

The Research aims to study the characteristics of streamflow, in relation to hydrological alteration in watershed. Research conducted in upper Citarum watershed, Indonesia where the metropolitan of Bandung located. By using FDC (Flow Duration Curve) analysis, was able to know the changes pattern of stream flow especially in low-flow that can detect symptoms of a decrease in capacity of base flow due to changes in land use in the upstream area as well as an increasing a return flow due to the impact of the withdrawal of groundwater as result urban activities.

Session 4

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0007 Presentation 1 (15:30~15:45)

Comparative Analysis of NLS Sequence Suggests the Evolutionary Origin of Nuclear Matrix Metalloproteinase 7 during Cancer Evolution

Diyora Abdukhakimova and **Yingqiu Xie**

Nazarbayev University, Kazakhstan

Abstract—The exact mechanism of how various proteins translocate from the extracellular into the nucleus to initiate cancer evolution is not known. Specific sequence associated with such nuclear event, thus known as nuclear localization signal (NLS) was investigated. Matrix metalloproteinase (MMP) family proteins were found to possess NLS. Research shows over expression of the nuclear MMP(7) protein in different types of human cancer. It is claimed that animals have acquired better pathways to overcome tumor development, therefore it is vital to focus on cancer evolution. The aim of this paper is to investigate evolutionary origin of the NLS in MMP7 by analyzing different species. We found MMP NLS is much conserved but with variations and MMP7 NLS shows the partial consistence with Full-length protein in different species. Our data suggest that nuclear MMP may have undergone evolutionary deviation during natural selection for cancer development.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0011 Presentation 2 (15:45~16:00)

Rooted Tree Optimization Algorithm for Protein Folding Prediction

Cheng-Hong Yang, **Yu-Shiun Lin**, Li-Yeh Chuang, and Hsueh-Wei Chang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—Protein function depends on structural folding from the amino acid sequence. Correctly predicting the amino acid sequence is thus helpful for evaluating the protein structure and function. In 1995, a hydrophobic-polar model (HP model) was proposed to simplify the folding process. This model drastically simplifies the real folding space into a lattice and combines an optimization algorithm to predict the protein structure. Many optimization algorithms have been implemented with the HP model for protein structure prediction, but accuracy and speed still need to be improved. This study proposes a fairly new algorithm, namely the rooted tree optimization (RTO), to improve on current algorithm performance. RTO provide three ways to find optimal solution and with the HP model for protein structure prediction. The local search is designed to add to each iteration of RTO to improve performance of the triangular lattice model.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0012 Presentation 3 (16:00~16:15)

An Application of Expert System for Diagnosing Fever Caused by Viral Infection

Oktoria, Cheng-Hong Yang, and Li-Yeh Chuang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—A fever, also known as a high temperature, is not caused by an illness. It's usually a symptom of an underlying condition, most often an infection. In children with fever, accompanying symptoms such as lethargy, fussiness, poor appetite, sore throat, ear pain, vomiting and diarrhea. Some parents think they should not go to the hospital when children get fever, because they will be ridiculed. As a first-aid solution, An Application of expert system (AExS) can help parents to identify fever caused by viral infection. It implements forward chaining as the technique of searching through rule-base system. Some programming code were also written in PHP for making deduction of new fact from rules in the knowledge base. The web based expert system enables user to diagnose the children's disease anytime and anywhere, just by accessing the internet. It is very interesting and has created considerable importance system to diagnose fever caused by viral infection.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0013 Presentation 4 (16:15~16:30)

Ion Motion Optimization Algorithm Applied to CpG Island Prediction

Cheng-Hong Yang, **Ying-Jui Hao**, and Li-Yeh Chuang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—In a normal cell, CpG islands are usually unmethylated. When cell is changed by diseases, CpG islands are transformed into hypermethylation. Therefore, correctly predicting the locations of CpG islands provides important information in the biomedical. In this study, the ion motion optimization (IMO) algorithm was implemented to predict CpG islands called CpGIMO. A total of six contigs, chromosome 21 and chromosome 22 were test to compare the efficiency of IMO with other methods for CpG island identification. IMO algorithm resolves local optima entrapment through the force of anion and cation. The results showed that the performance of IMO algorithm is better than the other methods.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0014 Presentation 5 (16:30~16:45)

Breast Cancer Risk Prediction Using Ions Motion Optimization Algorithm

Cheng-Hong Yang, **Kuo-Chuan Wu**, and Li-Yeh Chuang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—Breast cancer is the most common female malignancy in the world and has recently increased markedly in Taiwan. In epidemiological studies, several high-penetrance breast cancer genes, such as BRCA1 and BRCA2, were discovered to increase breast cancer risk up to 20-fold. Recently, there are more than 70 single nucleotide polymorphisms (SNPs) identified that influence breast cancer risk in genome-wide association studies (GWAS). This study collects 554 samples of breast cancer and non-breast cancer data, and implements a wrapper algorithm of attribute selection using ions motion optimization (IMO) to identify the SNP-SNP interaction. The experimental results have shown our proposed method has reasonable power to identify SNPs interactions for multi-locus interaction associated with a common complex multifactorial disease.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S0015 Presentation 6 (16:45~17:00)

Identification of SNP-SNP Interaction Using Entropy-based Multifactor Dimensionality Reduction in Case-Control Studies

Cheng-Hong Yang, **Cheng-Han Wu**, and Li-Yeh Chuang

National Kaohsiung University of Applied Sciences, Taiwan

Abstract—Diseases susceptibility plays an important role in genome-wide association study (GWAS). There are complex relationships between genotypes and environment factors in diseases. Due to the nonlinear relationship, the identification methods are met a challenge to detect gene-gene interaction or gene-environment interactions. In this study, entropy-based multifactor dimensionality reduction (EMDR) was used for identification of the single nucleotide polymorphisms (SNPs) interaction effects. MDR method is able to identify the interaction by trying n-locus interaction brute force. The proposed method uses K-way entropy based information gain as the filter for preprocessing, and then picks the suggested percentage of n-locus SNP combinations. Entropy-based interaction was compared with the searching way of MDR based on the ranking of interaction gain value. The Gametes simulation datasets were used to test the top percentage chosen for MDR, and the real kidney data was used to proof the ability of EMDR.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S1002 Presentation 7 (17:00~17:15)

Functional Hotspot Discovery Using 3D Chromatin Configuration Reconstructions

Mark Segal

University of California San Francisco, USA

Abstract—Genomic spatial organization influences cellular function, notably gene regulation. Recent studies have assessed the three-dimensional (3D) co-localization of functional annotations (e.g. centromeres) using 3D genome reconstructions from Hi-C (genome-wide chromosome conformation capture) data; however, corresponding assessments for continuous functional genomic data (e.g. ChIP-seq peak height) are lacking. Here, we demonstrate that applying bump hunting via the patient rule induction method (PRIM) to ChIP-seq data superposed on a yeast 3D genome reconstruction can discover 'functional 3D hotspots', regions in 3-space for which the mean ChIP-seq peak height is significantly elevated. For the transcription factor Swi6, the top hotspot by P-value contains MSB2 and ERG11 – known Swi6 target genes on different chromosomes. We verify this finding in a number of ways. First, this top hotspot is relatively stable under PRIM across parameter settings. Second, this hotspot is among the top hotspots identified by an alternative algorithm, k-Nearest Neighbor regression. Third, the distance between MSB2 and ERG11 is smaller than expected (by resampling) in two other 3D reconstructions generated via different normalization and reconstruction algorithms. This analytic approach can discover functional 3D hotspots and potentially reveal novel regulatory interactions.

Afternoon, June 26, 2016 (Sunday)

Time: 15:30~17:30

Venue: Klungkung Room

Session 4: 8 presentations-Topic: "Bioinformatics & Medical"

Session Chair: Prof. Dr. Tjokorda Gde Tirta Nindhia

BS-S3001 Presentation 8 (17:15~17:30)

Lower Ratio of Collagen's Fibre Type III/Type I and Higher Tensile Strength of Healing in Injured Achilles Tendon in Rabbit Treated with Astaxanthin

Krisna Saputra I Komang Agus, Astawa I Putu, Mulyadi Ridia K G, and Nindhia Tjokorda Gde Tirta

Medical Faculty Udayana University, Indonesia

Abstract—Tendon injuries vary from minor to total tear that requires surgery. The mechanical disturbance is the most complication. Inflammatory process and formation of free radicals can worsen tendon healing. Astaxanthin can be used to help tendon healing. This study aims to prove ratio of collagen type III/type I was lower and the tensile strength was higher on the administration of astaxanthin. This study is an experimental research using post-test only control group design with rabbit as subject. A total of 32 research subjects which meet inclusion were randomly divided into treatment and control groups. The treatment group is the group that was given astaxanthin after Achilles tendon was sharply cut and sewn, while the control group was not given astaxanthin. Statistical analysis using independent t-test found significant difference between treatment and control groups. The ratio of collagen type III/type I of the rabbit Achilles tendon which receive treatment of astaxanthin is smaller than the untreated group $p = 0.000$ ($p < 0.05$). The tensile strength is greater in treatment group than the non-treated group with $p = 0.044$ ($p < 0.05$). The result showed that the ratio of collagen type III/type I was lower when treated with astaxanthin thus can help improve the tensile strength.

Dinner	
17:40	**The Coffee Shop**

One Day Visit & Tour

June 27, 2016 (Monday) 9:00-17:00

(Tip: We will depart on time, please arrive at the Lobby before 9 a.m.)

1. Visit Turtle conservation at Serangan Island 09:00 - 11:00

The Turtle Conservation and Education Center (TCEC) opened by the governor of Bali, Mr Dewa Barata (20 January 2006) on Serangan island of Bali. TCEC is developed as part of the comprehensive strategy to eradicate illegal turtle trading on the island. Established on a land of 2.4 ha, the TCEC is trying to support the community of Serangan to find the alternatives beside illegal turtle business. The centre harnesses the potential of education, tourism, conservation and research, with a liberal sprinkling of business, to give endangered turtles one more chance on Serangan.

The four fundamental aspects to the centre include putting a definitive end to turtle trade, by encouraging the public not to consume turtle products (religious use or otherwise), and to generally support turtle conservation; providing turtles for rituals - without their killing - and monitoring turtle size and numbers, so that their use can be strictly controlled and regulated; offering employment opportunities for locals from Serangan; and finally, acting as a watchdog for turtle trade - in Serangan in particular and Bali in general.

2. Visit Udayana University (University hospital, Institute of peace and Democracy

(Photo session in front of Rectorat Building) 11:00-12:00

In the beginning of the 1960s, the people of Bali aspired to have a Tertiary Institution on the island. In order to realize this aspiration, on May 12th 1961, several figures from the educational sector, government, and community leaders conducted a conference led by Prof.Dr. Purbatjaraka,and assisted by Prof. Dr. Ida Bagus Mantra as secretary.

The conference discussed the steps required for the preparation of the establishment of a tertiary institution in Bali. An agreement was also reached for the formation of a committee led by dr. Anak Agung Made Djelantik, Head of the Board of Health in Bali, with a team of eight members.

Subsequently, the committee formed an institution named the Tertiary Education Institution of Bali, chaired by Ir. Ida Bagus Oka (Coordinator of Public Works Boards in the Southeast Islands Region); vice chaired by Dr. I Gusti Ngurah Gede Ngurah, assisted by two secretaries, Prof. Dr. Ida Bagus Mantra, and Drh. G.D. Teken Temadja. This institution succeeded in forming the Preparatory Committee for the establishment of Udayana University Bali on January 15th, 1962.

By a decision of the Directorate General of Higher Education, Ministry of Education and Culture of Indonesia, Udayana University (UNUD) was officially founded in August 17, 1962. Initially Unud consisted of four

faculties: Letters, Medicine, Veterinary Sciences and Animal Husbandry and Education and Teacher Training. The Faculty of Letters was actually established on 29th September 1958, however, the time it was a subsidiary of the Faculty of Letters of Airlangga University in Surabaya (East Java). This Faculty was thenintegrated into Udayana University in 1962. Although it was founded on August 17, the anniversary date of Udayana University is not August 17, but was choosen to be on September 29 to commemorate the date of establishment of the Faculty of Letters in 1958. Unud has develop rapidly, in 2015 the university has 13 faculties, 25 master programs and 10 doctoral programs.

Udayana University today's is listed as one of the 50"Promising Universities of Indonesia" published by the Ministry of Education of Republic Indonesia, out of nearly 2.500 higher education institutions around the country. The university has a strong position as one of the leading university particularly in the Eastern Indonesian Territory.

3. Lunch at Garuda Wisnu Kencana

Mandala Garuda Wisnu Kencana, or **Garuda Wisnu Kencana** (GWK), is a cultural park covering approximation 60 ha area located in Ungasan, Badung Regency, or about 10–15 minutes driving from Bali Ngurah Rai International Airport. It is devoted to the Hindu God Vishnu, and his mount, Garuda, the mythical bird who become his companion.

Currently, the statue of Vishnu is 23 metres (75.5 ft) high, although the original plan was for a 120-metre (390 ft) gold-plated Vishnu riding Garuda on top of an 11-storey entertainment complex. Garuda wing span will be 64 metres (210.0 ft) across. The idea was not without controversy, and religious authorities on the island complained that its massive size might disrupt the spiritual balance of the island, and that its commercial nature was inappropriate, but some groups agree with the project, because it will make new tourist attraction over barren land.

In 2013 Nyoman Nuarta and PT Alam Sutera Realty Tbk (IDX:ASRI) joined to build villas and apartments in the GWK area in exchange for Rp150 billion ($14.4 million). Nuarta plans to spend Rp20 billion to make another bust and to move the existing bust to another site 300 meters from the original site. It plans to spend additional Rp29 billion to make the new statue of stainless steel instead of galvanized steel as proposed previous design.

4. Tour to Uluwatu Temple

Uluwatu Temple (Indonesian: ***Pura (Luhur) Uluwatu***) is a Balinese sea temple (*pura segara*) in Uluwatu (Kuta South, Badung). The temple is regarded as one of the *sad kahyangan* and is dedicated to Sang Hyang Widhi Wasa in his manifestation as Rudra.

The temple (*pura* in Balinese) is built at the edge (*ulu*) of a 70 meter high cliff or rock (*watu*) projecting into the sea. In folklore, this rock is said to be part of Dewi Danu's petrified barque.

Though a small temple was claimed to have existed earlier, the structure was significantly expanded by a Javanese sage, Empu Kuturan in the 11th Century. Another sage from East Java, Dang Hyang Nirartha is credited for constructing the padmasana shrines and it is said that he attained moksha here, an event called *ngeluhur* ("to go up") locally. This has resulted in the temple's epithet *Luhur*.

5. Dinner (farewell party) at Muaya Beach Jimbaran

Conference Venue

Patra Jasa Bali Resort & Villas

http://www.thepatrabali.com/

Address: Jl.Ir. H Juanda, South Kuta Beach, Kuta 80361 | Bali-Indonesia

Located along the white sands on South Kuta Beach, Patra Jasa Bali provides modern Balinese-style rooms. Including 2 dining options, it features a full-service spa, large lagoon pool and seaside pool. Free Wi-Fi is provided.
Patra Jasa Bali Resort & Villas provides free parking and a free shuttle service to Kuta Square, just over a kilometer away. It is a 5-minute drive from Ngurah Rai International Airport.
Featuring classic interiors with solid wood furnishings, the spacious rooms have private balconies overlooking tropical greenery. They include a cable TV, safe and tea/coffee-making facilities.
For leisure, staff can arrange numerous activities such as water polo and cooking lessons. The resort also has a kid's club and a convenience store.
Overlooking the pool, Teratai Coffee Shop provides hearty buffet breakfasts and all-day dining.

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Tips:

1. Please mention that you are the participant of APCBEES when you book the accommodation, then you can get a discounted price (USD 70/room/night including breakfast for 2) from the hotel
2. The Location of the conference Hotel is in walking distance from the airport.

APCBEES Forthcoming Conferences

http://www.cbees.org/events/

CONFERENCE INFORMATION		PUBLICATION
September 24-26, 2016, Toronto, Canada		
ICBEE 2016	2016 8th International Conference on Chemical, Biological and Environmental Engineering (ICBEE 2016) http://www.icbee.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE, ISSN: 2010-4618)
October 26-28, 2016, San Francisco, USA		
ICBEC 2016	2016 7th International Conference on Biology, Environment and Chemistry (ICBEC 2016) http://www.icbec.org/	Volume of International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE, ISSN: 2010-4618)
November 12-14, 2016, Taipei, Taiwan		
ICBBE 2016	2016 3rd International Conference on Biomedical and Bioinformatics Engineering (ICBBE 2016) http://www.icbbe.com/	International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) or International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221)
December 25-27, 2016 Kyoto, Japan		
ICFAS 2016	2016 4th International Conference on Food and Agricultural Sciences (ICFAS 2016) http://www.icfas.org/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737)
January 21-23, 2017, Bangkok, Thailand		
ICBBB 2017	2017 7th International Conference on Bioscience, Biochemistry and Bioinformatics (ICBBB 2017) http://www.icbbb.org/	International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) or International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221) or International Journal of Life Sciences Biotechnology and Pharma Research (IJLBPR, ISSN:2250-3137)

February 25-27, 2017, Hanoi, Vietnam		
ICFES 2017	2017 3rd International Conference on Food and Environmental Sciences (ICFES 2017) http://www.icfes.org/	International Journal of Food Engineering (IJFE, ISSN: 2301-3664) or Volume of International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE, ISSN: 2010-4618)

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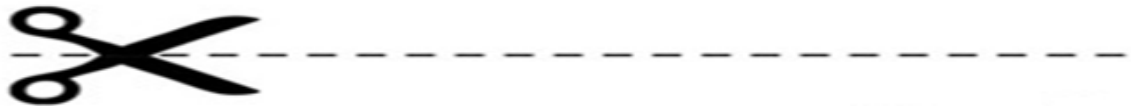
Note



Feedback Information

(Please fill this form and return it to conference specialist during the conference days.)

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Did the conference fulfill your reason for attending?	Yes– Absolutely □ Yes- But not to my full extent □ No□ (If "No", please tell us the main reason)
Would you please list the top 3 to 5 universities in your city?	
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Any Other Suggestions/Comments	

Thank you for taking time to participate in this conference evaluation. Your comments will enable us to execute future conferences better and tailor them to your needs!