2016 APCBEES SAN FRANCISCO CONFERENCE ABSTRACT

October 26-28, 2016

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San Francisco, USA

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2016 APCBEES San Francisco Conference Introductions

Welcome to CBEES 2016 conference in San Francisco, USA. The objective of the San Francisco 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 Biology, Environment, Chemistry and Agriculture.

2016 2nd International Conference on Advances in Bioscience and Bioengineering (ICABB 2016)
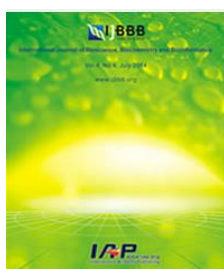
Paper publishing and index: International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) , which will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, WorldCat, Google Scholar, Cross ref., ProQuest and sent to be reviewed by EI Compendex and ISI Proceedings.

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

2016 7th International Conference on Biology, Environment and Chemistry (ICBEC 2016)
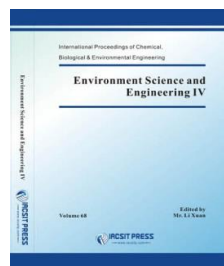
Paper publishing and index: International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE), and all the papers published in IPCBEE will be indexed by EBSCO, Chemical Abstracts Services (CAS), CABI, CNKI, WorldCat, Google Scholar, Ulrich's Periodicals Directory, Crossref, and Engineering & Technology Digital Library.

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

2016 4th International Conference on Sustainable Environment and Agriculture (ICSEA 2016)

Papers will be published in one of the following journals:

Journal of Environmental Science and Development (IJESD, ISSN:2010-0264), which will be included in the Engineering & Technology Digital Library, and indexed by WorldCat, Google Scholar, Cross ref, ProQuest , CABI.

Journal of Advanced Agricultural Technologies (JOAAT ISSN: 2301-3737). which will be included in Ulrich's Periodicals Directory, Google Scholar, Engineering & Technology Digital Library, Crossref and Electronic Journals Digital Library.

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

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 **25** 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 October 27, 2016.

Dress code

Please wear formal clothes or national representative of clothing.

Keynote Speaker Introductions

Keynote Speaker I

Prof. Helmut Zarbl

Rutgers, The State University of New Jersey, USA

Dr. 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.

In 2007 Dr. Zarbl joined the Department of Environmental and Occupational Medicine at Robert Wood Johnson Medical School at Rutgers, where he assumed the Directorship of the NIEHS funded Center for Environmental Exposures and Disease. He also served as the Associate Director for Public Health Sciences at the Rutgers Cancer Institute of New Jersey from 2008-2013. He is currently Professor of Environmental and Occupational Health in the Rutgers School of Public Health. He serves on national and international grant review panels, as well as scientific advisory boards to numerous university, non-profit and government agencies. He is a member of the USA National Academies, NRC Standing Committee on Emerging Science for Environmental Health Decisions.

Dr. Zarbl is also the founding President of GeneAsses, Inc., a joint university and industry partnership whose mission is to translate research on differential susceptibility to environmental carcinogenesis into new diagnostic and prognostic tests, and therapies.

Topic: "Perinatal Exposure to Low Dose Dietary Zeranol Induces Adverse Transgenerational Effects on Sexual Development, Fecundity and Susceptibility to Mammary Carcinogenesis "

Christal Lewis, Michael Gallo, Jason Richardson, Mingzhu Fang, Brian Estrella,　Ashley Green, Kenneth Reuhl and Helmut Zarbl

The Rutgers-NIEHS Center for Environmental Exposure and Disease. Environmental and Occupational Health Sciences Institute and the Cancer Institute of New Jersey. Schools of Medicine and Public Heath, Rutgers, The State University of New Jersey. Piscataway, NJ, USA 08854

Abstract. Zeranol (Zer) is a semi-synthetic derivative of zearalenone (Zea), a potent mycoestrogen produced by Fusarium fungi that contaminate grain. Both Zer and Zea have estrogenic activity comparable to that of estradiol and diethylstilbestrol (DES), a potent synthetic estrogen that was used between 1940 and 1970 to prevent miscarriages. DES was withdrawn from the market when epidemiology demonstrated that daughters of pregnant mothers who took the drug had a ~40-fold increase in the incidence of a rare clear cell adenocarcinoma of the vagina and cervix. Follow-up studies indicated that DES also induced transgenerational effects, increasing the risk of clear cell adenocarcinoma, breast cancer and a variety of reproductive abnormalities in children and grandchildren of mothers who took the drug during pregnancy. After DES was also banned from use in livestock, Zeranol was developed as its major replacement in promoting weight gain and improving meat quality. Although Zer has been deliberately given to the cattle in the U.S.A., Canada and most South American countries for more than 40 years, its use is banned in the European Union and many Asian countries. Previous studies in animals demonstrated that both Zer and Zea are efficiently absorbed from the gut, are not bound to serum globulins and are readily transported cross the placenta to the fetus. However, unlike estrogens, these mycoestrogens are not bound by Carcinoembryonic Antigen (CEA) and hence increase estogenic exposure *in utero*. Exposure to high doses of zeranol (>10 mg/kg/day) has significant effects on reproduction and sexual development in animals. Acute, high dose exposures of humans from occupational sources or contaminated food are associated with precocious puberty in girls and breast irritation in boys. Our studies were the first to examine the effects of *perinatal* exposure to zeranol at doses that approximate the Allowable Daily Intake (ADI) of 1.25 μg/kg/day set by the US Food and Drug Administration. Our results showed that exposure of pregnant Fisher F344 rat to 0.625 μg zeranol /kg/day beginning on gestational day 7 through lactation had significant detrimental effects on sexual development, fecundity, and susceptibility to mammary carcinogenesis in F1 progeny. Moreover, breeding of F1 progeny demonstrated that adverse effects were transmitted to the F2 and F3 progeny as either dominant or recessive epigenetic traits. These results indicate that developmental exposure to zeranol induces significant transgenerational effects on reproduction, sexual development and carcinogenesis though epigenetic reprogramming of hormonal responses.

Keyword: Endocrine disrupting chemicals, zeranol, zearalenone, transgenerational effects, sexual development, reproduction, carcinogenesis, diethylstilbesterol, epigenetic inheritance

Disclosure Statement: None of the authors have any conflicts of financial interest to declare.

Keynote Speaker II

Prof. Khaled M. Bali

University of California, San Diego, USA

Prof. K. M. Bali is an Irrigation/Water Management Advisor and County Director at the University of California Desert Research and Extension Center in Holtville, California. He holds a Ph.D. Degree (1992) in Soil Science (soil physics) and MS Degree (1987) in Water Science (Irrigation and Drainage) from the University of California at Davis. He holds a Bachelor of Science Degree (1984) in soils and irrigation from the University of Jordan, Amman.

His main fields of scientific interest include water resources and management, water quality, irrigation systems, automation of surface irrigation, evapotranspiration, salinity, water quality, and reuse of wastewater for irrigation.

Dr. Bali a member of many professional societies as American Geophysical Union and United States Committee on Irrigation and Drainage. He is a U.S. Fulbright Scholar and served on a number of National and International Scientific Committees.

Topic: "To be added"

Keynote Speaker III

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: "Effects of Chitosan and Nanoparticles on Human Pancreatic Cancer Cells are Enhanced in Combination Treatments with the Chemotherapeutic Drug Adriamycin"

Wenjuan Gao [1], James C.K. Lai [2], Alok Bhushan [3], and Solomon W. Leung [1]

[1] Department of Civil & Environmental Engineering, College of Science & Engineering, Idaho State University, Pocatello, ID, USA
[2] Department of Biomedical and Pharmaceutical Sciences, College of Pharmacy, Division of Health Sciences, Idaho State University, Pocatello, ID, USA
[3] Department of Pharmaceutical Sciences, Jefferson College of Pharmacy, Thomas Jefferson University, Philadelphia, PA, USA

Abstract. Chitosan has increasingly gained popularity in biomedical applications. Experimental results demonstrated that chitosan exhibited anti-microbial activities through its interaction(s) with microbial cell surface. We hypothesized that the properties of chitosan can be exploited to inhibit cancer cell proliferation and growth. In this study, we investigated the effects of chitosan, chitosan in combination with nanoparticles (namely, nanogold and nanosilver particles), and chitosan in combinations with nanoparticles and/or three chemotherapeutic drugs (namely, Adriamycin, Methotrexate, and Cisplatin) on human pancreatic cancer PANC-1 cells. We found that chitosan, chitosan in combination with nanoparticles, and the three chemotherapeutic drugs exerted different inhibitory effects on the survival/proliferation of PANC-1 cells. The inhibitory effects of the drugs on the survival/proliferation of PANC-1 cells were greater when employed in combination with chitosan and nanoparticles. Western blot analysis revealed treatment with chitosan, chitosan in combination with nanosilver particles, and chitosan in combination with Adriamycin and nanosilver particles exerted differential effects on the expression of AKT, p-AKT, ERK, and p-ERK proteins (important cell survival/proliferation signals) in PANC-1 cells. In summary, these results suggested that chitosan and nanoparticles may have chemotherapeutic potential in the design of new and/or improved treatments for pancreatic cancer.

Keywords: chitosan, nanoparticles, chemotherapeutic drugs, pancreatic cancer.

Conference Committee Introduction

Conference General Co-Chairs

Prof. Khaled M. Bali, University of California, San Diego, USA

Prof. Solomon W. Leung,Idaho State University

Prof. Helmut Zarbl Rutgers, The State University of New Jersey, USA

Technical Program Chairs

Prof. Eric Strauss Michigan State University School of Planning, Design and Construction, USA

Prof. Ali Meawad Ahmed, Faculty of Vet. Med., for Environmental Affairs and Community Services,Suez Canal University, Egypt

Organizing Chair

Ms. Yang Dan, Asia-Pacific Chemical, Biological & Environmental Engineering Society, Hong Kong

Publication Chair

Ms. Eve Lee, Asia-Pacific Chemical, Biological & Environmental Engineering Society, Hong Kong

Technical Committee

Prof. Pasquale Mormile, Institute of Applied Sciences and Intelligent Systems "E. Caianiello" (ISASI) of CNR, Pozzuoli (Na), Italy

Prof. Alexander Polyako Sevastopol National Technical University, Sevastopol, Russia

Prof. Yanjun Guo Southwest University, China

Prof. John David Shiats University, India

Prof. G. P. Shivashankara, Department Of Civil Engineering, PES College of Engineering, Visvesvaraya Technological University, Karnataka, India

Prof. Subhash Chandra Kaushik, Indian Institute of Technology Delhi, India

Prof. Jerry B. Superales, J. H. Cerilles State College, Philippines

Prof. Justina U. Mgbada Enugu State University of Science and Technology, Enugu Nigeria

Prof. Zakaria Fouad Fawzy Hassan, National Research Centre, Egypt

Prof. Shaikhamar Patel, MVP Samaj's Arts, Science and Commerce College, Ozar, Nashik (M.S), India

Prof. Xingjun Tian, NanJing University, China

Associate Prof. Nakkeeran E Department of Biotechnology, Sri Venkateswara College of Engineering, India

Associate Prof. Ahsan Abdullah, King Abdulaziz Uinversity, Saudi Arabia

Associate Prof. Ahmed A. Alothman, King Saud University, Riyadh, Saudi Arabia

Associate Prof. John David, SHIATS University, India

Assoc. Prof. Jagbir Singh, Department of Geography, Swami Shraddhanand College, University of Delhi, India

Assoc. Prof. Najat Marraiki, King Saud University, Saudi Arabia

Dr. V. P. Ramani, Anand Agricultural University, Anand, India

Dr. Ayse Ozcan, Giresun University,Turkey

Dr. Mohamed A. Fennir Faculty of Agriculture, Univeristy of Tripoli, Libya

Dr. Mohammad Valipour, Lecturer, Payame Noor University, Tehran, Iran

Dr. Pratap Vyankatrao Naikwade, Assistant Professor, Department of Botany, ASP College Devrukh, Dist. Ratnagiri, Maharashtra (Affiliated to Mumbai University), India

Dr. Momen Ahmad Orabi Physics Department, Faculty of Science, Cairo University, Egypt

Dr. Vuletic Ivan, Peking University, China

Dr. Adel Ali Saeed Al-Gheethi, High Institute of Health Science, Sana'a, Yemen

Dr. Adelaja O. Osibote Cape Peninsula University of Technology, South Africa

Dr. Amir Hajiali, Engineering in Earth Science/Environmentalist and Researcher, USA

Good news! To join in APCBEES member is free now. Please check the information on the website: http://www.cbees.org/membership/ if you are interested. Any question regarding to membership, please feel free to contact membership@cbees.org.

Brief Schedule for Conference

Day 1	**October 26, 2016 (Wednesday) Venue: Lobby** Arrival Registration 10:00~17:00 (Committee Meeting 14:00~16:00)

Day 2	**October 27, 2016 (Thursday) 8:30~18:20 Venue: Peninsula Ballroom** Arrival Registration, Keynote Speech, and Conference Presentation

Morning Conference
Venue: Peninsula Ballroom
Opening Remarks   8:30~8:35
Keynote Speech I   8:35~9:05 Topic: "Perinatal Exposure to Low Dose Dietary Zeranol Induces Adverse Transgenerational Effects on Sexual Development, Fecundity and Susceptibility to Mammary Carcinogenesis " (Prof. Helmut Zarbl, Rutgers, The State University of New Jersey, USA)
Keynote Speech II   9:05~9:35 Topic: "to be added" (Prof. Khaled M. Bali, University of California, San Diego, USA)
Coffee Break & Photo Taking   9:35~10:00
Keynote Speech III   10:00~10:30 Topic: "Effects of Chitosan and Nanoparticles on Human Pancreatic Cancer Cells are Enhanced in Combination Treatments with the Chemotherapeutic Drug Adriamycin" (Prof. Solomon W. Leung, Environmental Engineering Civil and Environmental Engineering Department, Idaho State University)
Session 1（part. 1） 10:30~12:00 6 presentations-Topic: "Environmental protection and assessment"

Lunch 12:00~13:00	**Venue: West Bay Fireplace Room**

Afternoon Conference	
Session 1 (part. 2): 13:00~15:45 **Venue: Peninsula I & II** 11 presentations-Topic: "Environmental protection and assessment"	**Session 2:** 13:00~15:45 **Venue: Peninsula III & IV** 11 presentations-Topic: "Agriculture and food science"
Coffee Break 15:45~16:05	
Session 3: 16:05~17:50 **Venue: Peninsula I & II** 7 presentations-Topic: "Biological and chemical technology"	**Session 4:** 16:05~18:20 **Venue: Peninsula III & IV** 9 presentations-Topic: "Sustainable development"
Poster session 8:30~18:20	**Venue: Peninsula Ballroom**
Dinner 18:30	**Venue: West Bay Fireplace Room**

Day 3	**October 28, 2016 (Friday)** 8:00~17:00 One Day Visit & Tour

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

Detailed Schedule for Conference

October 26, 2016 (Wednesday)

Venue: Lobby

10:00~17:00	**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 October 27, 2016.

Morning, October 27, 2016 (Thursday)

Venue: Peninsula Ballroom

8:30~8:35	**Opening Remarks** Prof. Khaled M. Bali University of California, San Diego, USA
8:35~9:05	**Keynote Speech I** Prof. Helmut Zarbl Rutgers, The State University of New Jersey, USA Topic: "Perinatal Exposure to Low Dose Dietary Zeranol Induces Adverse Transgenerational Effects on Sexual Development, Fecundity and Susceptibility to Mammary Carcinogenesis"
9:05~9:35	**Keynote Speech II** Prof. Khaled M. Bali University of California, San Diego, USA Topic: "to be added"
9:35~10:00	**Coffee Break & Photo Taking**
10:00~10:30	**Keynote Speech III** Prof. Solomon W. Leung Environmental Engineering Civil and Environmental Engineering Department, Idaho State University Topic: "Effects of Chitosan and Nanoparticles on Human Pancreatic Cancer Cells are Enhanced in Combination Treatments with the Chemotherapeutic Drug Adriamycin"
10:30~12:00	**Session 1（part.1）** 6 presentations-Topic: "Environmental protection and assessment"

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.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

A0017 Presentation 1 (10:30~10:45)

Toward a Whole Perspective of the Research on Water Supplement of Rivers Based on Ecological Network Analysis

Ke Li, Zhifeng Yang, and Xinan Yin

Beijing Normal University, China

Abstract—To address the issue of water supplement of water-deficient rivers is important for rivers' ecological protection and basin water resource management.Relevant researches delved into the water compensation of rivers focusing on a single river system with desired sustainable objectives.Too little research resolve this issue from a whole sustainable perspective of the entire water use system. Ecological network analysis(ENA) is a system-oriented method to reveal integrity attributes of a system and identify the complicated system interactions.In this paper, this approach is introduced to develop insights into the water supplement of water-lacking rivers from a globe angle of sustainability of water use system.We investigate the meaning and quantitative index of network efficiency and resilience,which are two essential but complementary attributes for an ecosystem's long-term sustainability.According to optimize the water quantity and water quality in water use processes,we propose an optimal network model for analyzing the balance state of water use system.A regulative model of water use system is built as the basis for water supplement scenario analysis.A index (D),which incorporates the values of ascendency(A) and overhead$(\emptyset)$ of the optimal model and regulative model,is adopted to assess the sustainability of water use network under each water supplement scenario.We apply this methodology to Baiyangdian basin to illustrate the balanced network structure of water use system and achieve the best water supplement scheme.The results obtained indicate that the optimal

balanced network structure for water use system of Baiyangdian basin has ascendency values ranging from 0.5419 to 0.5782.Turning out 20% of water storage capacity of Baiyangdian to water-deficient rivers can not only guarantee the ecological health of rivers,but also improve the sustainability of water use system.This research serves as a meaningful start to explore ecological network analysis as a way to guide water supplement of rivers from the perspective of sustainability of water use system.It is useful for water resource regulation and management.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

A1012 Presentation 2 (10:45~11:00)

Single and Multi-Component Adsorption Studies of Heavy Metal Ions and Dyes Over Commercial Activated Carbon

Vidhyadevi Thangaraj and A. Kannan

IIT Madras, India

Abstract—Common effluents are typically composed of toxic substances of varying nature and this multicomponent characteristic must be taken into account in the design of a versatile adsorption treatment system. Single and Multi-component adsorption equilibria of Ni (II), Cu (II) and Acid Orange 7 (AO) onto Commercial ActivatedCarbon (CAC) was investigated. The chemical, structural and textural characteristics of adsorbent before and after adsorption were determined by BET, SEM and EDX analysis. Experimental parameters affecting the adsorption process such as pH, adsorbent dosage, initial adsorbate concentration, contact time and temperature were studied.Experimental data of single component adsorption system were fitted with Langmuir, Freundlich and Sips isotherms models. The maximum adsorption capacity (q_{max}) of Langmuir model was in the order AO > Cu (II) > Ni (II). Thermodynamic parameters such as ΔG^o, ΔH^o and ΔS^o have been evaluated. The adsorption kinetics of Ni (II), Cu (II) and AO are tracked well by the pseudo-second order model. In Multi-component adsorption system, adsorption one component is suppressed by the presence of other components. The modified Langmuir multi-component and the IAST-Freundlich multi-component models predicted the competitive adsorption adequately.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

A1009 Presentation 3 (11:00~11:15)

Early Warning Information Flow in Mount Merapi Area, Indonesia

Leslie Jamie Cobar, Djoko Legono, and Kuniaki Miyamoto

University of Tsukuba, Japan

Abstract—Indonesia's Mount Merapi is one of the most active and dangerous volcanoes in the world. Its eruption in 2010, the largest after the 20th century – and succeeding 2011 debris flow or *lahar* events, killed 389 persons and injured and displaced many more. One way to mitigate a disaster's impacts on its potential victims is to provide the public with reliable information through early warning. Warning information must reach down to the community levels. Usually however, information being passed down are inadequate or absent. For Merapi's early warning, the routes of information from monitoring and forecasting agencies down to the citizens were studied in 2006, yet the contents of information itself were not understood. Therefore, this study reinvestigates Merapi's early warning information flow from the source down to the citizens. Interviews were conducted among monitoring and forecasting and disaster management agencies to collect the data received and from which agency, data sent and to which agency, and the method of delivery. The sender-data-receiver as the basic unit of information transfer was introduced for the construction of information flow networks. Pairwise comparison questionnaires were also submitted to disaster management agencies to identify the opinions on the ideal contents of early warning information. In terms of information flow networks, it was necessary to construct individual networks for eruption and lahar per local government district due to the complexity in each structure. Among the districts, inconsistencies in relation to information network structures, roles of agencies, decision-making for evacuation, and monitoring sources were found. Information transfer redundancies and bottlenecks were also revealed. For the pairwise comparison, respondents had a preference on the early warning information on guidance during disasters over the disaster phenomena itself, which could imply that there is limitation on their knowledge on the nature of disasters. These results could offer a newpoint of view on Merapi's early warning information delivery for disasters.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0001 Presentation 4 (11:15~11:30)

Ecological Health Assessment of Urban Ecosystem of Tianjin City

Binglong Wang, Yanpeng Cai, and Linyu Xu

Beijing Normal University, China

Abstract—Urban ecological health assessment is the basis of making city planning, construction and management policy. Five elements were selected to build up an evaluation system, including vigor, organizational structure, resilience, and ecosystem service function and population health. Fuzzy comprehensive evaluation were employed to analyze and evaluate the healthy state of Tianjin urban ecosystem over 2008 to 2012 based on the method of mean-squared deviation to determine index weight. Results showed that the healthy status of Tianjin ecosystem was in sub-health level. The favorable factors affecting urban ecosystem healthy state of Tianjin included vigor, resilience and population healthy, while unfavorable factors included organizational structure and ecosystem service function. Main stress factors to healthy development are per capita water consumption, the amount of pesticide per hectare of arable land, per capital road area, urban population density and proportion of high-education people.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0004 Presentation 5 (11:30~11:45)

The Performance of Electro-Fenton Oxidation in the Removal of Pesticides from Wastewater Using Stainless Steel Electrodes

Mohamed Gar Alalm

Mansoura University, Egypt

Abstract—This study aims to investigate the effectiveness of the electro-Fenton process for the removal of a pesticide, namely chlorpyrifos, from wastewater. The electro-chemical reactor involved stainless steel electrodes and compressed air pump. Several operational parameters such as pH, current intensity (I), Fe^{2+} dose, and initial concentration of chlorpyrifos were investigated. Complete degradation was attained at initial chlorpyrifos concentration of 30 mg/L. While, at initial concentration of 240 mg/L the removal of chlorpyrifos was 72%. The optimum current intensity and Fe^{2+} dose were 300 mA and 20 mg/L respectively. The degradation of chlorpyrifos was favored at pH 3.0. The degradation of chlorpyrifos by electro-Fenton followed pseudo- first order pattern with good correlation.

Morning, October 27, 2016 (Thursday)

Time: 10:30~12:00

Venue: Peninsula Ballroom

Session 1 (part. 1): 6 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0006 Presentation 6 (11:45~12:00)

Crisis Evaluation and Warning Method of Water Ecosystem Based on Catastrophe Theory

Yangyang Li, Xuan Wang, and Guannan Cui

Beijing Normal University, China

Abstract—By way of the cusp catastrophe model based on catastrophe theory, the river ecosystem controlled by two main control variables namely water quantity and water quality was analyzed in Beijing City. A water ecological crisis evaluation and warning method with water quantity as the main factor was proposed to analyze the change law of water ecosystem state in Beijing City. And an integrated crisis indicator B was introduced to evaluate the ecosystem stability. The river length reaching the water quality standard was used to represent the water quality instead of a single index as in existing research. The present method provided an integrated evaluation. According to the variation law of the integrated crisis indicator, the water crisis would be early warned. The results indicated the water ecosystem of Beijing City was stable (the integrated crisis indicator B>0), but some fluctuations still existed. The water quality factor has little change which meant the stability mainly depended on water quantity. That is, the water-ecosystem of Beijing City belonged to water-quantity-type water crisis. Reference to statistical law got by previous research, its river ecosystem state went bad, and was needed to be restored by taking some effective measures.

Lunch	
12:00-13:00	West Bay Fireplace Room

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

A0021 Presentation 1 (13:00~13:15)

Toward a Framework to Quantify Parameter Uncertainty in Reservoir Operation to Sustain Environmental Flows

Shan He, Zhifeng Yang, and Xin'an Yin

Beijing Normal University, China

Abstract—Parameter uncertainty in reservoir operation model greatly affects the model robustness and has been considered in conventional reservoir operation models focusing on improving human benefits. In recent decades, increasing concerns have been put into environmental flow (e-flow) requirements in reservoir operation model to support riverine ecosystems downstream from a reservoir. However, few researches about parameter uncertainty analysis in reservoir operating rules have taken the e-flow requirements into consideration. In this study, a model framework is proposed for performing parameter uncertainty analysis using Bayesian theorem in eco-friendly reservoir operation model to sustain environmental flows and the flow regime alternation is considered as well. The reservoir operation model is developed to evaluate releases downstream from a reservoir, as well considering both e-flow requirements and hydropower generation to sustain the harmonious development between ecological environment (minimization the natural flow regime alterations of a river) and human development (maximization the hydropower generation). To calculate effectively, Markov Chain Monte Carlo (MCMC) sampling approach was used to quantify parameter uncertainty during the reservoir simulation process. The parameters of reservoir operating rules are treated as random variables. The Metropolis-Hastings (MH) algorithm of MCMC was applied to obtain the posterior probability densityfunction of the parameters for parameter estimation and uncertainty quantification. At the same time, this paper also considers how to improve the acceptance rate of MH in MCMC, while there has constraint in the algorithm. We put this model framework intoa case study of Nuozhadu hydropower station of Lancang River in southern China to test its effectiveness through setting up three different minimumhydropower generation production targets. The results demonstrated that the lower the hydropower generationproduction targets was, the wider the joint distributions of parameters. This model

framework was helpful to clearly recognize that parameter uncertainty has a great impact on reservoir operation. The comparison between model with and without presence of e-flows showed that the variation range of water level of model without e-flows are wider than that of model incorporating e-flows.

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

A1010 Presentation 2 (13:15~13:30)

Impacts of Ash Pond on Groundwater Quality in and Around a Thermal Power Plant Located in The District of Dhenkanal, Odisha and Assessment of Leachability of Heavy Metals fromTHE Ash Pond as Evident Through TCLP (Toxicity Characteristics Leaching Procedure) Test.

Rudra Pratap Pradhan and Sanjat Kumar Sahu

P.G. Dept. of Environmental Sciences, Sambalpur University, India

Abstract—The impact of the ash pond on the groundwater quality of the bore wells surrounding the ash pond in the vicinity of GMR Kamalanga Energy Limited near Dhenkanal in Odisha was concerned in the present study. The power plant is having a huge ash pond with area around 112 acres. Six number of Observation bore wells have been set up around the ash pond area for monitoring of groundwater for major cations, anions and trace elements covered under IS 10500 (Specifications for Drinking water quality Standards). Two water samples were collected from the bore well of up gradient & down gradient of ash dyke. After analysis, a graphical trend was prepared between the water qualities at up gradient location and water qualities at down gradient location against their respective standards prescribed in IS 10500 for drinking water quality, which indicates that the concentrations of most of the pollutants at down gradient are higher than up gradient. Since the ash pond area is quite big, ground water quality monitoring at these two points cannot adequately justify regarding any leaching of contaminants from ash disposal area. Therefore four more ground water samples were collected from bore well of surrounding villages viz. Durgapur, Manapur, Barasahi and Budhapanka around the ash pond area for onward testing in the laboratory to confirm any impact of ash pond on groundwater quality of surrounding area. After analysis of the said samples, a graphical trend was prepared for the present water quality against their respective standards prescribed in IS 10500 for drinking water quality to ensure the portability of water. In some samples, the concentrations of some parameters like Chloride, Fluoride, TDS, Alkalinity, Magnesium, Iron, Manganese, Selenium and Lead exceeded their BIS limit. Further to confirm any leaching of heavy metals to surrounding ground water, a TCLP (Toxicity Characteristic Leaching Procedure) test was conducted for ash samples of up and

down gradient location of ash dyke where it was found that in the leachate Zinc has the most concentration, whereas, Mercury has the least, but all are within their norms prescribed by CPCB (Central Pollution Control Board), India.

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0018 Presentation 3 (13:30~13:45)

Influence of Environmental Parameters on Groundwater Contamination in Rajasthan, India

Nikhil Gakkhar, M. S. Soni, and Sanjeev Jakhar

Ministry of New and Renewable Energy, India

Abstract—Water is one of the most abundant resources on earth, covering three-fourths of the planet's surface. However, about 97% of the earth's water is salt water in the oceans, and only 3% is fresh water. The water from lakes, rivers and ground are majorly used for drinking purpose. Rajasthan being the largest state of India, which lies in the north western part of the country, is overly exploited state for groundwater. The current study identifies the major source of contamination, i.e. fluoride content, nitrate content and salinity which is also reflected by the electrical conductivity of the water. Various factors which influences the contamination like waste water generation, chemical pollution discharge into the environment, hazardous waste, groundwater depth below ground and rainfall are identified. All the district of the state is classified into four regions and statistical investigation is carried out on the same. The statistical correlation is made to check the fluctuation level among various variables. Further to validate the correlation, *t*-test and analysis of variance has been carried out to get a regression model and check the level of significance. The results show the direct correlation between fluoride content with hazardous pollution discharge into the environment specifically in the northern part of the state. The negative correlation of salinity with rainfall, which is also obtained as key result, implies that the salinity decreases with increase in rainfall in the region. The correlation of variables for the southern and eastern part of the state shows the high correlation of nitrate contamination with water sources as it is easily soluble in water. In the end, analysis of variance approach validates the significance of these parameters on groundwater contamination. The results may be used to reduce the toxic waste in the ground water by keeping a strong check on the identified polluting source.

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0031 Presentation 4 (13:45~14:00)

Spatio-Temporal Trend Analysis of Phosphorus, pH and EC in Soil Before and After Flood Disaster

Ather Ashraf and Sadaf Rani

Punjab University, Pakistan

Abstract—Nutrients are necessary for plant growth. Plants take nutrients from soil. Nutrients that consumed in large quantity are known as macronutrients. Some major macronutrients are Nitrogen, Potassium and Phosphorus. All the nutrients are absorbed by plants in the form of cations or Anions. Soil texture is also very important. Soil characteristics such as water holding capacity, soil temperature, cation exchange capacity, soil fertility and crop productivity are dependent on it. Phosphorus is second important element of soil. It is an essential component for many physiological processes related to proper energy utilization in plants. Crops mainly take phosphorus from soil. Phosphorus intake depends upon soil pH. It is only uptakes by plants if its soil pH value is 6 to 7.5. Thus an analysis of soil nutrient is very important. This research focuses on trend of Phosphorus in soil of district Rahim Yar Khan of Pakistan. We study the area before and after the 2010 flood and identified the changes in the soil. The 2010 flood is one of the massive flood in the Pakistan history and results in many changes. This research also identifies the area where pH is suitable for crop to uptake phosphorus and also identifies suitable area related to Phosphorus, pH and EC of soil before and after the 2010 flood.

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0032 Presentation 5 (14:00~14:15)

Parameter Uncertainty Analysis of SWMM Based on the Method of GLUE

Meishui Li, Xiaohua Yang, Boyang Sun, Lei Chen, and Zhenyao Shen

Beijing Normal University, China

Abstract—Uncertainty analysis of hydrological models has attracted more and more attention for researchers nowadays. In this study, the Generalized Likelihood Uncertainty Estimation (GLUE) was applied to quantify the parameters uncertainty of Storm Water Management Model (SWMM) based on a case in Beijing, China. The results showed that the two parameters of the ratio of impervious surface (PctImperv) and the roughness of conduits (Manning) were the most identifiable parameters which have a great effect on the performance of SWMM modeling. The optimal ranges can be obtained by the method of calibration for the two parameters. The study demonstrated that the model established was rather reliable to simulate the process of the rainfall runoff in this area and the method of GLUE is a powerful tool to analyze the parameter uncertainty for SWMM.

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Venue: Peninsula I & II

Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G2002 Presentation 6 (14:15~14:30)

A Case Study of DAF Pilot Plant for Application of Water Treatment Plant (WTP)

Woosik Jung, Ju-Suk An, Ji Young Park, and **Hyun Je Oh**

Korea Institute of Civil Engineering and Building Technology, South Korea

Abstract—In recent years there have been large increases in the hydraulic loading rates used to design dissolved air flotation (DAF) facilities for drinking water applications. High rate DAF processes are now available at loading rates of 20 to 40 $m^3/m^2 \cdot h$. The objective of the present work is to develop commercialization technology on physical process for algae removal in water treatment plant. During the service period of 2016.05 to 20163 06, DAF pilot plants (500 ton/day) process has shown a constantly sound performance for the treatment of raw water, yielding a significantly low level of turbidity (DAF treated water, 0.21~1.56 NTU). The simultaneous removal of inorganic and algae particles is frequently required during the rainy season in Korea. Although the DAF process has been successfully applied to the treatment of algae-laden water with low turbidity, it has been reported that inorganic particles caused by rainfall could highly affect flotation efficiency. A case study was carried out to evaluate the dissolved air flotation (DAF) pilot plants (500 ton/day) process installed in the YC-WTP. The DAF process revealed a sound performance for the treatment of turbid water (turbidity= 5.8~12.1 NTU) caused by source water (YC Lake) for the YC-WTP. This study evaluated several integration of a DAF combining with granular activated carbon (GAC). In order to select the best position of the GAC process, pilot plants experiments were performed using several water samples, such as raw water, coagulated water and DAF treated water collected from YC-WPT.

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Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G3003 Presentation 7 (14:30~14:45)

Research Status in China and Abroad and Development Trend Analysis of City Rainfall Runoff Pollution Load

Boyang Sun, Xiaohua Yang, and Meishui Li

Beijing Normal University, China

Abstract—With the rapid development of urbanization and substantial increase of impervious surface area, compared with the natural area, urban rainfall runoff characteristics have undergone great changes, including changes of runoff hydrological processes and increase of pollution load, which has brought greatly negative impact on urban flood and waterlogging control, water environment protection and water resources utilization. This article analyzes the migration action and regulation of bioretention system. Briefly describes the method of controlling water pollution load and its hydrodynamic principle.

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Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0025 Presentation 8 (14:45~15:00)

Circular Defect as Potential Pathway in Polyethylene Forming Part of a Geo-composite Lining System

Emmanuel Emem-Obong Agbenyeku, Edison Muzenda, and Mandla Innocent Msibi

University of Johannesburg, South Africa

Abstract—Geo-composite barriers under leachate leakage through circular defects in a geomembrane were tested in a small-scale laboratory model. A soil barrier-24 mm thick, polyethylene plastic-2mm thick with centered 5 mm hole simulated the circular defected geomembrane and a 225 mm thick buffering profile (BP) completed the experimental setup. A Modular Consolidometer-Percolation Column Hybrid model of 160 mm diameter is coupled to a hydraulic pressure frame capable of applying up to 1000 kPa pressure to the liner. Leakages through barrier-BP system were evaluated for tests under pressure of up to 150 kPa. Measured leakage rates for good geomembrane/soil interface contact conditions were found to be valid whereas that of a perfect contact condition was unachievable in this study. However, outcomes show notable reduction in leakage rates with increased pressure, p, on the geomembrane. This is plausibly due to reduced barrier system transmissivity, θ, and densification of the barrier. Concentrations of dreaded Organic matter in the BP after percolation tests confirmed leakage through the defected polyethylene-soil liner and showed poor buffering abilities of three natural soils investigated in this study to migrating organics.

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Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0027 Presentation 9 (15:00~15:15)

Engineered Geo-composite Liner: An Empirical Look at Contaminant Travel through a Circular Punctured Defect in a Lining System

Emmanuel Emem-Obong Agbenyeku, Edison Muzenda, and Mandla Innocent Msibi

University of Johannesburg, South Africa

Abstract—Small-scale laboratory tests on the effect of contaminant travel in geo-composite liners through circular punctured geomembrane were conducted in a modeled device. The influence of pressure on contaminant flow rate, contaminant transport and the buffering ability of natural soil profile were investigated. Flow through the geo-composite liner-buffering profile (BP) system was measured for tests with the punctured geomembrane under loads of up to 150 kPa. Results and analysis showed significant reduction in flow rate with increased pressure on the system. This reduction is attributed to the reduced barrier system transmissivity, θ and soil liner compressibility. The flow rate data for tests with geomembrane in this study were compared with predicted values using equations from Forchheimer (1930) and Giroud et al., (1989). The comparison showed inapplicability to this study and in practice if perfect contact conditions at the geomembrane/soil interface are assumed. However, equations from Giroud (1997) for good contact conditions gave reasonable flow rate predictions through punctured geomembrane of geo-composite liners.

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Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0009 Presentation 10 (15:15~15:30)

Groundwater Quality Evaluation by Physicochemical Characterization and Water Quality Index for Nanded Tehsil, Maharashtra, India

Vasant Wagh, Dipak Panaskar, Shrikant Mukate, Yogesh Lolage, and Aniket Muley

Swami Ramanand Teerth Marathwada University, India

Abstract—Groundwater is an essential natural resource constituent of our life support system, where, it is used for drinking and irrigation purpose. An attempt has been made to recognize the hydro chemical characteristics of groundwater to develop water quality index model (WQI) in Nanded Tehsil. A total of 50 representative groundwater samples were collected from dug/bore wells during post-monsoon 2012 and analyzed for major cations and anions. The groundwater quality were assessed by different physicochemical parameters such as pH, electrical conductivity (EC), total dissolved solids (TDS), total hardness (TH), calcium (Ca^{2+}), magnesium (Mg^{2+}), sodium (Na^+), potassium (K^+), carbonate (CO_3^-), bicarbonate (HCO_3^-), chloride (Cl^-), nitrate (NO_3^-), sulphate (SO_4^-) and phosphate (PO_4^-). The Hydrochemical results were compared with Indian standards (BIS) which illustrate that TDS (16%), TH (22%), Ca (2%), Cl (2%) and Na (12%) samples exceeds the permissible limits. Water quality index (WQI) used to classify water quality as excellent, good, poor, and unsuitable categories. WQI shows that 34% samples are excellent, 60% samples are good and 6% unsuitable for drinking purpose. The groundwater samples 12, 40 and 44, fall in an industrialized and urbanized area shows unsuitable type of water for drinking. Through clutching hydro chemical investigation, GIS based IDW technique was used to signify the spatial variation of WQI in Nanded Tehsil.

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Session 1 (part. 2): 11 presentations- Topic: "Environmental protection and assessment"

Session Chair: Prof. Solomon W. Leung

G0014 Presentation 11 (15:30~15:45)

River Health Assessment Based on Entropy-Set Pair Analysis in Dalian City, China

Nan Zhang, Chunhui Li, Yanpeng Cai, and Xuan Wang

Beijing Normal University, China

Abstract—Rivers play a key role in both ecosystems and society. Regional development, especially urbanization has result in river system recession. Thus it is of great significance to evaluate and maintain the health of the river ecosystem for regional sustainable development. The evaluation of river ecological health is a complex problem for the ambiguous characteristics of river health and the incompatibility between the various elements of river. In this study, the health status of the six main rivers in Dalian city was assessed using entropy-set pair analysis method. The results indicated that that the river health state of S4, S9, S15 and S16 are the most sever. The sample site of S2, S3, S18 and S19 are the best in these sample sites.

Session 2

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula III & IV

Session 2: 11 presentations-Topic: "Agriculture and food science"

Session Chair: Prof. Khaled M. Bali

A0006 Presentation 1 (13:00~13:15)

Wheat Performance Evaluation at Drought Environment

Zhaleh Firouzi and Adel Siosemardeh

University Of Kurdistan, Iran

Abstract—In this research, we studied the performance of a wide variety of wheat ecotypes in arid and semiarid environments region of Iran. To evaluate the performance of the wheat we studied variables including changes in dry weight of stem, leaves, spike and dry matter remobilization from these organs as well as grain yield and harvest index. We evaluated the responses of sink and source to several treatment methodologies. The performance of the photosynthesis transport mechanism before and after treatments for two core categories in wheat genotypes were studied. To further evaluate performance we analyzed the water-soluble and alcohol-soluble carbohydrate volume in the stem with two methodologies. The results showed significant relationships between increasing severity of drought stress and a decrease in grain yield for various genotypes and an increase in sink limitation. Moreover, dry matter remobilization also decreased to a greater extent. Additionally, the results show that in an arid environment drought stress causes the transportation mechanism to malfunction. Outcomes show that under drought stress grain yield will be more confined and therefore the soluble carbohydrate will reside and accumulate in the stem and transpiration to spikes will be slowed down dramatically.

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Session 2: 11 presentations-Topic: "Agriculture and food science"

Session Chair: Prof. Khaled M. Bali

A0008 Presentation 2 (13:15~13:30)

Self-Perceived Incentives and Disincentives of Untreated Waste Water Irrigation in Vegetables in Peri-Urban Areas of Pakistan

Muhammad Luqman, Rahman Shoukat, Xu Shiwei, Yu Wen, and Muhammad Yaseen

Agricultural Information Institute of CAAS, Beijing, China

Abstract—With the increase in human population in developing countries including Pakistan and shortage of canal irrigation water, people used to think about other alternate irrigation sources particularly in peri-urban areas, where most of the farming activities are depend upon waste water. Pakistan is also included in the list of those where untreated waste water application on vegetables is very common. Based on the theoretical debate on its advantages and disadvantages, the present study was designed to know about the incentives and disincentives of untreated wastewater application in vegetables. The study was conducted in the Punjab province. Quantitative data were collected through reliable and validated research instrument (interview schedule) and analyzed through SPSS. It was concluded from the results that majority of the respondents (55.8%) had education only upto eight (08) years of schooling. About 69.2% of the respondents were small land holders and considered as tenant. Majority of the majority of the vegetable growers in the research area used to grow vegetables from more than 10 years. Shortage of can irrigation water, power/energy crises in Pakistan, and high cost of fresh water through tube well were the main reasons behind application of untreated waste water for vegetable farming. Out of different incentives of waste water application in vegetables, high yield was on the top with maximum mean ($\bar{x}$=4.13). Health problems were the main disincentives of wastewater application in vegetable due to its high mean ($\bar{x}$=4.42) out of others. Overall mean of all the disincentives ($\bar{x}$=4.61) is high compared to overall mean of all the incentives ($\bar{x}$=4.13). It was recommended that water treatment facilities should be provided by the government on subsidized rates as small scale vegetable growers didn't have enough financial and physical capitals.

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Session Chair: Prof. Khaled M. Bali

A0009 Presentation 3 (13:30~13:45)

Potential of Fermented Sweet Corn Stover as a Substitute for Corncob in Mushroom (Flammulina Velutipes) Substrate

Sayaka Kurata and Katsuki Koh

Shinshu University, Nagano, Japan

Abstract—In the present study, with a final goal of using spent mushroom substrates as roughage for cattle, mushroom cultivation experiment has been conducted on Flammulina velutipes using fermented sweet corn stover (FS) cut at the length of 13 mm and 30 mm as a substrate material (FS13 and FS30, respectively), and productivity and eating quality of fruiting bodies were evaluated. A total of nine substrates were prepared: control (composed mainly of ground corncob and rice bran), four FS13 groups (24, 48, 73 and 100% of rate of replacement with corncob, on dry matter basis) and four FS30 groups (the same replacement rates as in FS13 groups). The cultivation period increased in FS13 groups comparing with FS30 groups (P<0.05) and did with increasing replacement rate (P<0.01). Fruiting body yield was not affected by the length of FS, but increased gradually with increasing replacement rate, although decreased values were found when the rate was reached to 100%. Eating quality of the fruiting bodies was affected neither by length of FS nor by replacement rate. In conclusion, corncob can be replaced up to 73% with FS without showing any negative effect on productivity of F. velutipes.

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Session Chair: Prof. Khaled M. Bali

A0010 Presentation 4 (13:45~14:00)

The Cultivation of Flammulina Velutipes by Using Sunflower Residues as Mushroom Substrate

Manisa Sangkaew and Katsuki Koh

Shinshu University, Japan

*Abstract—*The present study was conducted to evaluate the feasibility of using sunflower residues, such as stalk (SS) and meal (SM), in substitution for the conventional materials, such as corn cob and rice bran, in the substrate for Enokitake mushroom Flammulina velutipes. A total of 9 substrates were prepared according to a 3 by 3 factorial design, where 3 rates (0, 50 and 100%) of replacement of rice bran with SM and 3 rates (0, 50 and 100%) of replacement of corn cob with SS were combined. The combination of 0% SM and 0% SS was used as a control group. The results revealed that the cultivation period, fruiting body yield and biological efficiency were affected by SS and SM significantly. The cultivation period in the SM50-SS0 group was much the same as that in the control group, but those in other groups were extended. Fruiting body yield and biological efficiency (BE) were greatest in SM50-SS0 group and smallest in SM100-SS100 significantly ($P<0.05$), and no statistical differences was found among other groups. The eating quality of fruiting bodies was affected neither by SM nor by SS significantly, but a significant interaction was found in umami intensity, umami preference, sweetness intensity and overall impression. In conclusion, the results revealed SM could replace rice bran up to 50% without negative effects on F. velutipes productivity, and suggested that a limited part of corn cob can be replaced with SS.

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Session 2: 11 presentations-Topic: "Agriculture and food science"

Session Chair: Prof. Khaled M. Bali

A0022 Presentation 5 (14:00~14:15)

Autonomous Winter Wheat Variety Selection System

Felipe A. Guth, Shane Ward, and Kevin P. McDonnell

University College Dublin, Ireland

Abstract—Public and private organizations have been investing significant financial and human resources to develop crop varieties suitable for different commercial destinations, regional characteristics and agronomic factors. The high number of variables and consequent complex analysis are factors that make the task of selecting a specific crop variety, that best fulfill the particularities of a given farm, a challenging one. In this scenario, this work proposes a ranking/decision method to deal with the stochastic problem of select a winter wheat variety, taking into account the random factors that influence in the specific decision. The system evaluates the commercial destination, site-specific and agronomic importance of varieties treats, such as resistance to diseases and lodging, to output a list of best winter wheat varieties choices, for a particular situation. The system's accuracy has been verified by experts of crop science, where a number of random outcomes were tested against specialist opinion.

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Session Chair: Prof. Khaled M. Bali

A1007 Presentation 6 (14:15~14:30)

Classification of Olives Using FT-NIR Spectroscopy and Neural Networks

İ. Kavdır, M. Burak Büyükcan, and F. Kurtulmuş

Canakkale onsekiz mart university, agrricultural faculty, Department of agricultural machinery and technologies engineering, Turkey

Abstract—The table olive has a wide market in Mediterranean countries. Turkey is one of the leading countries in olive production. Visual defects on olives may reduce market prices considerably as in the case any agricultural crop. For maximum profit, table olives must comply with quality criterions determined by local and international organizations. The quality of raw olives also affects extracted oil quality. On the other hand, quality criterions for green olives were accepted as color and free of mechanical defects, wrinkling, surface blemishes and rotting.
In this study green (Ayvalik variety) olives were classified based on their surface feature properties such as defect free, with bruised defect and with fly defect using FT-NIR spectroscopy and neural networks.
Bruker multi-purpose analyzer (MPA) FT-NIR spectrometer (Bruker Optik, GmbH, Ettlingen Germany) was used for spectral measurements. The spectrometer was equipped with InGaAs detectors (TE-InGaAs internal for reflectance and RT-InGaAs external for transmittance) and a 20-watt high intensity tungsten–halogen NIR light source. Reflectance measurements were performed with a fiber optic probe (type IN 261) which covered the wavelengths between 780–2500 nm, while transmittance measurements were performed between 800 and 1725 nm. Thirty-two scans were acquired for each reflectance spectrum in about 15.32 s while 128 scans were obtained for transmittance in about 62 s. Resolution was 8 cm^{-1} for both spectral measurement modes. Instrument control was done using OPUS software (Bruker Optik, GmbH, Ettlingen Germany). Classifications were performed using Backpropagation Neural Network algorithm and Neural Network tool box in Matlab. Classifications were performed considering different scenarios; two quality conditions at once (good vs bruised, good vs fly defect) and three quality conditions at once (good, bruised and fly defect).
Two spectrometer readings were used in classification applications; reflectance and transmittance. In addition, normalization was performed to eliminate diameter differences among the olives and the classification applications were performed using normalized

(diameter corrected) spectrometer readings. Developed model discriminated good olives from bruised olives, from olives with fly defect and from the olive group including both bruised and fly defected olives with success rates respectively changing between 97 and 99%, 61 and 94% and between 58.67 and 92%.

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Session Chair: Prof. Khaled M. Bali

A0004 Presentation 7 (14:30~14:45)

Pesticide Burden in Women from Jaipur in Relation to Ethnicity, Religion and Addiction Habit

Mamta Sharma and Pradeep Bhatnagar

Govt. R.R. College (Government of Rajasthan), India

Abstract—Pesticides, human health and safety of environment is of global concern. Organochlorine pesticides (OCPs) have been used for several decades in development of agriculture and protection of public health. Their low degradation nature, accumulation in living beings, biomagnification and biological effects in natural exposure and animal experimentation led to the legislation of allowable concentrations. This legislation was intended to prevent the exposure of the general population to harmful levels of these xenobiotics. A monitoring study was therefore, conducted in Jaipur (India) in which the circulating blood of pregnant woman subjects was analyzed for pesticide residues viz- aldrin, isomers of HCH, metabolites of heptachlor and DDT by using gas liquid chromatography. Study revealed the effect of religion (dietary habits), ethnicity and addiction habits on the accumulatory pattern of pesticide residues in the blood of pregnant women.

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A0012 Presentation 8 (14:45~15:00)

Rural Household Food Security Status among Indigenous Leafy Vegetables Producers and Non Producers: Evidence from Coffee Bay, South Africa

A. Mayekiso, **A. Taruvinga**, and A. Mushunje

University of Fort Hare, South Africa

Abstract— Indigenous Leafy Vegetables (ILVs), despite having a clear potential to improve rural household food and nutritional security, the evidence base for this association still remains poor, missing, mixed and inconsistent. With the emerging interest of linking biodiversity to food security in the face of climate change, there is therefore a need to appraise the ILVs - food and nutrition security nexus. This paper employed descriptive statistics and household food security proxy indices on a sample of 238 randomly selected rural households (ILVs producers and non producers) to appraise the connection between ILVs and household food security. Results reveal significant improved household food security status of producers compared to non producers worth further probing with robust models (Propensity Score Matching) on wider geographical areas.

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A0028 Presentation 9 (15:00~15:15)

Characterization of Rice Root Nematodes (*Hirschmanniella oryzae* and *H. mucronata*) and Rapid Detection Development for *H. oryzae*

Cho Cho Htay, Wenkun Huang, Deliang Peng

Nematology Laboratory, Institute of Plant Protection, Chinese Academy of Agricultural Science, China

Abstract—Rice (*Oryza sativa* L.) is one of world's most widely consumed staple foods and plays an important role in the diet of more than half of the world's population. There are several limitation factors in rice production and plant-parasitic nematodes are considered as important harmful pathogens which can cause either direct or indirect damage to their host. Rice root nematodes (RRN) belonging to the genus *Hirschmanniella* are one of the most serious pests and commonly found in majority of rice growing regions.

In this study, a total of 24 rice root and soil samples infected with rice root nematodes (*Hirschmanniella* spp.) were examined by means of molecular and morphology. Sequencing of the ITS1-5.8S-ITS2-rDNA yielded the fragment size of ~788 bp (sequence homology 88-99% to *H. oryzae* in GenBank) in eighteen samples, ~750 bp (sequence homology 99% to *H. mucronata* in GenBank) in two samples, and both fragments in four samples indicating that two species of rice root nematodes are presented in those samples. For morphology and morphometirc confirmation, thirteen populations from five locations were selected according to the sequence variation in NCBI. The morphology and morphometric characterization of *H. mucronata* was largely similar to the original description of type specimens, but slightly differed by having wider maximum body diameter. In *H. oryzae*, comparison with the reported data indicated that the nematode in the present measurements have wider body width, higher 'a' value, longer pharyngeal glands and median bulb distance from anterior end, tail terminus with subterminal notch. These two species can be easily separated by their stylet length and body length. For detection and identification of *H. oryzae*, one out of sixty random 10-mer primers gave reproducible amplification patterns in RAPD assay and developed into sequence-characterized amplified region (SCAR) marker specific for target species, *H. oryzae*. The expected fragment size of 475 bp was observed in all *H. oryzae* isolates but not in other species.

In conclusion, the combination of morphology and molecular identification of rice root

nematodes will be more accurate way to avoid misinterpretation of the species and overestimation of genetic diversity. Better understanding and rapid diagnosis of this economically important pest of rice roots will help in selection of proper management.

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Session Chair: Prof. Khaled M. Bali

A2010 Presentation 10 (15:15~15:30)

Statistical Analysis of Crop Production Sustainability in India: A Micro Level Study

Varinderpal Kaur

Panjab University, India

Abstract—Punjab agriculture dominated by wheat-rice cropping cycle witnessed a quantum jump in agricultural production and productivity as the result of green revolution technology and contributed largely towards ensuring food security to India's growing population. But overtime, growth and production of crops in the state is on decline due to overexploitation of its natural resources. The state now faces the problem pertaining to sustainability of its agriculture. The present paper evaluates the extent of sustainability of crop production in Punjab. Sustainability has been measured using time trend analysis of Monteith (1990) and inferences of sustainability were drawn from contingency table. Further, geometric growth rates of total area and yields of all major crops were computed using methodology of Oyekale (2012). The results show that even though production of majority of the crops is sustainable but it will not be for very long. From 1966 to 2011, crops like Wheat (0.6%), Cotton (0.4%), Maize (2.1%), Oilseeds (1.9%), Pulses (3.6%), Bajra (4.2%), Barley (4%), Sugarcane (2.3%), Jowar (4.6%) were sustainably cultivated while rice (-1.4%) showed unsustainability. The findings suggest that for sustainability of crop production in Punjab, there is need for crop diversification and shift from input intensive agriculture to sustainable farming so as to conserve natural resources for future food security.

Afternoon, October 27, 2016 (Thursday)

Time: 13:00~15:45

Venue: Peninsula III & IV

Session 2: 11 presentations-Topic: "Agriculture and food science"

Session Chair: Prof. Khaled M. Bali

A0020 Presentation 11 (15:30~15:45)

Creating Viable Rural Entreprenuership for Women in Developing Countries, A Case of Uganda

Wamaani Hassan

Windle Trust International, Uganda

Abstract—Breaking the loose talk of unemployment, poverty-call it mind of hopelessness and self- imprisoned dependency notion lies in enhancing rural entrepreneurship as precursor to diagnosing and prescribing the increasing regrettable innuendoes that today besieges the feelings and perceptions of individuals (women).the future of under developed societies does not depend in the public sector led management but rather private-led sector management, which private-led sector should spin on is rural evolutionary entrepreneurship.

This paper argues that macro and micro challenges can only be addressed through the applicability of rural entrepreneurship. It points out the challenges enveloped there in and offer prescriptive and diagnostic measures of strengthening rural enterprises in the interest of balanced economic growth and development. In this paper, India and Bangladeshi are cited for practical comparative reasons to jump start our reflections into global thinking for local practical action.

15:45-16:05	Coffee Break

Session 3

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

A0029 Presentation 1 (16:05~16:20)

Physiological, Biochemical and Cytogenetic Changes in Soybean Seeds with Different Storage Conditions

Phyu Sin Thant, Adam B Puteh, Uma Rani Sinniah, Mohd Firdaus Bin Ismail

University Putra Malaysia

Abstract—Many physiological, biochemical and cytogenetic changes happen in seeds during seed ageing. Rapid seed deterioration due to storage environments makes it very difficult to maintain its viability. Changes occurring in seed during aging are very important with regard to quality and longevity of seed. This study was undertaken to investigate whether seed deterioration is associated with decrease in antioxidant systems, lipid peroxidation and chromosome aberration during ageing. The seeds of vegetative soybean cultivar Cikurai were harvested at harvest maturity and stored at cold room ($10\,°C$) or room temperature ($25\,°C$) for 3, 6 and 9 months. The seeds stored in cold room could appropriately maintain seed viability and vigor up to 9 months. Germination percentage of the seeds stored in cold room was higher compared with those stored in room temperature. In tetrazolium test, the seeds stored in cold room gave the best performance in respect of seed germinability percentage. Rapid germination reduction and a greater extent of electrical conductivity of seed leachate occurred in the seeds stored at room temperature. Germination index and germination speed decreased with prolonged aging periods. The activities of catalase and superoxide dismutase were inhibited by increasing periods of aging under both storage conditions. The content of malondialdehyde in soybean seed was increased with aging process but the seeds stored in warm temperature gave higher level compared with those stored in cold room. Thus, loss of seed viability was associated with a reduction in the activities of antioxidant enzymes and accumulation of lipid peroxidation. Soybean seeds stored at high temperature induced greater chromosomal damage. It can be concluded that storage conditions and durations are important factors for seed viability and vigor and it was associated with the increased in membrane lipid peroxidation and chromosomal aberrations.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

A0025 Presentation 2 (16:20~16:35)

Screening Loss of Function Mutations in fgr/badh2 Gene for Conferring Fragrance in Rice Varieties of Pakistan

Saddia Galani, Shagufta Sahar and Abid Azhar

KIBGE, University of Karachi, Pakistan

Abstract—Fragrance in rice is conferred by mutations resulting in loss of function of the fgr/badh2 gene product along with accumulation of 2-acetyl-1-pyrroline (2-AP). This fgr/bdh2 gene corresponds 8bp deletions and three single nucleotide polymorphisms (SNPs) in exon 7. Although, many varieties are reported to be fragrant without having these known mutations, suggesting the involvement of other genes/mutations in rice. It is need of the day to identify the multiple mutations sites in fgr/bdh2 gene for 2AP accumulation and characterize the fragrance in a wide range of genetic resources of rice available for this trait. In this study, loss of function mutations of badh2 genes were characterized in aromatic and non-aromatic rice varieties of Pakistan to resolve the ambiguities linked to the genetic basis of fragrance along with quantification of 2 AP through GC-MS. Genetic analysis revealed that many aromatic varieties exhibited 8-bp deletion and 3 SNPs with strong accumulation of 2-AP. However, amount of 2 AP is highly variable among those varieties indicating involvement of additional factors controlling the intensity of aroma. Moreover, badh2 gene was found to be intact in non-aromatic varieties with no AP accumulation. Thus, it is suggested that this mutation is not only responsible for the 2AP synthesis and accumulation but there are other genetic factors for controlling the development of 2 AP metabolism pathways which are needed to explore. Such investigations will be very important in developing molecular-assisted breeding of aromatic rice with multiple genetic sources of 2AP leading to development of more aromatic varieties.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

A1017 Presentation 3 (16:35~16:50)

Screening of Mungbean Genotypes for Drought Tolerance Using Different Water Potential Levels

Rajwinder Kaur, Jagmeet Kaur, and T.S. Bains

Punjab Agricultural University, India

Abstract—Drought is one of the limiting factors for better plant performance and higher yield. New variety selection is difficult due to the wide range of plant stress responses with overlapping functions between their components creating complex mechanisms of resistance. One of the pre-requisites for successful breeding for drought tolerance is availability of reliable methods for screening of desirable genotypes. Classical breeding may be complemented with laboratory methods creating models for simulation of water deficiency and drought conditions. Studies were conducted to find out the effect of reduced water potential treatments on germination and five seedling growth related characters viz., plumule length, radicle length, fresh and dry weight of plumule and radicle and vigour index in mungbean genotypes. In laboratory experiments, water deficiency was simulated by polyethylene glycol (PEG) of MW 6000 in the following concentrations viz., -0.4, -0.6 and -0.8 MPa for seed germination. A linear reduction in germination, shoot and root length, and their corresponding fresh and dry weight was observed for the genotypes as the concentration of PEG increased. The level of the negative effect of the osmoticum on developmental processes was genotype and the reduced water potential dependent. Amongst screened mungbean genotypes, genotype SML-837 recorded no germination at -0.8MPa and this would be critical level of water stress for mungbean whereas genotypes with higher germination index SML-1411 and SML-1136 were found to possess higher level of tolerance to drought.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

G0008 Presentation 4 (16:50~17:05)

Bacterial Diversity and Biogeochemical Analysis of Sediments in Eastern Mediterranean Sea

İlknur Tunçer and Nihayet Bizsel

Dokuz Eylul University, Turkey

Abstract—Phylogenetic diversity of isolated bacteria and biogeochemical variability of sediments in different regions of Eastern Mediterranean Sea were studied. Totally 185 strains isolated from this one of the most oligotrophic environments in the world were found as affiliated to the Firmicutes, Actinobacteria and Gammaproteobacteria. As determined by 16S rRNA gene sequence analysis, the Firmicutes with Bacillus the most frequent genus were dominant in each sediment samples of Eastern Mediterranean Sea. In addition to the isolates representing new taxa, the influence of environmental parameters was observed as the variability of bacterial community composition such that phylogenetic diversity was much higher in shallower regions, especially in North Aegean Sea as compared to deep basins of Eastern Mediterranean Sea. The present study provided highly diverse bacterial strains especially with probability of representing new taxa and also demonstrated the species-area relationships of isolated bacteria by giving biogeochemical patterns of Eastern Mediterranean Sea sediments.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

G0016 Presentation 5 (17:05~17:20)

A Low-Cost Support for Lipase Immobilization Produced from Sugarcane Bagasse

Nathalia Leite Ferraz, Viviane Da Silva Brito, Luma Caroline Santos Da Silva, Rodrigo De Oliveira Marcon, and **Debora Ayame Higuchi**

Federal Institute of Education, Science and Technology of Sao Paulo, Brazil

Abstract—The biotechnology field has been gaining attention in academia and industry worldwide. Much of this interest is due to the use of enzymes as biocatalysts, considering their advantages, such as high selectivity and specificity. However, despite the numerous advantages of using biocatalysts, the difficulty of reusing them when not immobilized and their high cost create barriers for their use in industry. In this context, enzymes are commonly immobilized on solid supports to increase their thermal and operational stability, in addition to the recovery rate. However, many materials currently used as support are non-biodegradable, synthetic, or even toxic, causing numerous negative effects to the environment, as well as giving unwanted properties to reaction products. Therefore, there is a need for alternative materials that can be used as support and that have features like: biodegradability, renewability, low cost, and high availability. From this perspective, this study developed a low-cost support for lipase immobilization produced from sugarcane bagasse. The immobilized enzymes on our support had their activity compared to free enzymes. The results of this research indicate that enzymes were appropriately immobilized. Furthermore, the support favored a higher activity when compared to free enzymes.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

B0005 Presentation 6 (17:20~17:35)

Optimization of Neural Network Architecture for Biomechanic Classification Tasks with Electromyogram Inputs

Alayna Kennedy and Rory Lewis

The Pennsylvania State University, United States

Abstract—Electromyogram signals (EMGs) contain valuable information that can be used in man-machine interfacing between human users and myoelectric prosthetic devices. However, EMG signals are complicated and prove difficult to analyze due to physiological noise and other issues. Computational intelligence and machine learning techniques, such as artificial neural networks (ANNs), serve as powerful tools for analyzing EMG signals and creating optimal myoelectric control schemes for prostheses. This research examines the performance of four different neural network architectures (feedforward, recurrent, counter propagation, and self-organizing map) that were tasked with classifying walking speed when given EMG inputs from 14 different leg muscles. Experiments conducted on the data set suggest that self-organizing map neural networks are capable of classifying walking speed with greater than 99% accuracy.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~17:50

Venue: Peninsula I & II

Session 3: 7 presentations-Topic: "Biological and chemical technology"

Session Chair: Prof. Helmut Zarbl

B3001 Presentation 7 (17:35~17:50)

Influence of Contrast Enhancement Methods in Brain Tumor Detection

Maher un Nisa

Department of Electrical Engineering COMSATS Institute of Information Technology, Pakistan

Abstract—In image processing, contrast enhancement is an important area as it improves the quality of an image. This paper presents different contrast enhancement techniques for brain tumor detection using MRI and assesses their performance on the basis of factors like tumor size, area and volume calculations. The proposed methodology was applied on datasets of different patients and the subsequent results were evaluated. The results facilitated in gauging overall performance of the tumor detection process. Statistical measures like Dice Similarity Coefficient, Jaccard Similarity Index and Structural Similarity Index are used to compute the accuracy of contrast enhancement techniques. After detecting tumor in 2-Dimensional (2D) slices, 3-Dimensional (3D) reconstruction was performed to anticipate type of tumor along with 5 year survival rate by looking at its shape in 3D. The work is expected to aid in the treatment of the disease in a better way.

Session 4

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

A3003 Presentation 1 (16:05~16:20)

Application of Sustainable Construction Materials for Urban Slum Houses

R V Ralegaonkar , H R Gavali, V V Sakhare, A Puppala, and P B Aswath

University of Texas, USA

Abstract—Meeting the demand for urban slum housing is one of the major challenges in front of government especially in developing countries like India. Traditionally, temporary and semi-permanent houses are being rebuilt by the government using commercially available products. The present paper briefs the application of sustainable construction materials to improve the energy efficiency of the permanent houses being built in Urban Slums. The concept is briefed with a case study over Nagpur, Maharashtra, India. Using locally available bio-fuel ash, cellular light weight (BFA-CLW) bricks were developed and recommended for the use as the masonry product. However, the traditional concrete roof is recommended to be treated with geofoam to improve thermal resistance. The proposed use of the materials (M1- BFA-CLW & roof treated with geofoam) is compared with the traditional practice of design (M2- Fly ash brick with concrete roof). The cooling demand over the year for the considered geographic location was analyzed in the simulation software using building information modeling principals. The study resulted that the model M1 is energy efficient, cost competitive and shall conserve 46% of operating energy annually (cooling demand) as compared with conventional model M2. The study concludes with a note that the proposed model is a viable and practical acceptable solution.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

A3008 Presentation 2 (16:20~16:35)

The Research on Improved PSO-LSSVM of Cleaner Production in the Industry of Vanadium Extraction from Stone Coal

Jia Li, Dongyun Du, and **Hengpeng Ye**

College of Resource and Environment, South-Central University for Nationalities, China

Abstract—Due to the rapid economic development and urbanization, the vanadium extraction industry is development fast, resulting in several environmental problems. Cleaner production (CP) is an important aspect for accessing the sustainable development of the industry. CP technologies alone did not solve the sustainability issues faced by the sector, the CP level is proved in the application extent and the management of the CP technology. This paper proposed Least Square Support Vector Machines (LSSVM) methods to the CP evaluation system that enables decision-makers to quantitatively evaluate the effectiveness. Particle Swarm Optimization (PSO) is introduced to solve the difficulties of parameters optimization in LSSVM. The final assessment results matched the actual process level, and classification verification accuracy reached 100%. Moreover, the PSO-LSSVM was verified to be reasonable and practical. The entire and detailed assessment results demonstrate that the model can solve problems caused by the small data sample and help managements visualize the CP level, establish strategies to achieve CP goals.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

A0027 Presentation 3 (16:35~16:50)

Develop a scenario for Da Nang as a Low Carbon City

Hoa Thai Nguyen

Ritsumeikan University, Japan

Abstract—The Vietnam Intended Nationally Determined Contributions (INDC) sets the target to reduce 8-25% of total emissions in 2030 compared to Business as Usual (2030BaU). Therefore, the study of developing a Low Carbon City (LCC) for Da Nang aims to respond the national target. Two scenarios are developed for the socio-economic vision of Da Nang by 2030, with the projection of energy consumption and carbon dioxide (CO_2) emission in energy-related categories such as Residential, Commercial, Transportation, and Industry. The study shows that with proposal of five actions including 32 projects, Da Nang can reduce 19% total CO_2 emission in countermeasure scenario (2030CM). This result is expected to be useful for researchers and policy-makers who are interested in developing the Climate Change Action Plan (CCAP) and to support the vision of building green growth for Da Nang city.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0007 Presentation 4 (16:50~17:05)

An Interval-Stochastic Programming Model for Distributed Photovoltaic Power Management under Uncertainty

Ronghua Xu and Yanpeng Cai

Beijing Normal University, China

Abstract—In this study, an interval-stochastic programming model was formed for identifying optimal distributed photovoltaic development planning with limited subsidies under uncertainties. The model was formulated through incorporating interval and stochastic into a general optimization framework. It can deal with uncertainties expressed as both probability distributions and intervals. A solution method was proposed to solve this problem. The proposed model was then applied to a hypothetical case of planning future capacity of distributed photovoltaic power generation in three regions of China where solar energy resources and proportion of electricity consumption were full of uncertainties. Interval solutions with different electricity generation patterns were obtained. The results could be used for generating decision alternatives for helping decision-makers to identify optimal capacity allocation scheme under limited subsidies, available rooftop and grid access constraints.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0015 **Presentation** 5 (17:05~17:20)

Impact of the Shale Gas Revolution on a Portfolio of Alternative Fuel Vehicles and Water Usage. Case Study on the Polish Market

Kamila Romejko and Masaru Nakano

KEIO University SDM, Japan

Abstract—Alternative Fuel Vehicles (AFVs) are slowly influencing the energy portfolio mix in many countries due to their increased popularity. Shale gas revolution has already changed the shape of the energy mix in the U.S. and it is also a promising option for other countries to diversify their energy portfolio. However, questions have been raised about the water security in the area of shale gas extraction. There have been no studies, which analyze the impact of shale gas revolution on AFV's portfolio and its implications. This study was conducted based on the integration of optimization model and life cycle assessment analysis. Numerical results suggest that shale gas revolution impacts the portfolio of AFVs substantially due to the significant decrease of gas price. Moreover, the data concerning the usage of water were provided as well. In conclusion, this paper demonstrates the impact of a feasible shale gas revolution on a portfolio of AFVs and water consumption, and it provides numerical findings for multiple stakeholders such as lawmakers, energy, and automotive companies.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0022 Presentation 6 (17:20~17:35)

Biochemical Methane Potential of OFMSW for City of Johannesburg

Ireen Maile, Edison Muzenda, and Charles Mbohwa

University of Johannesburg, South Africa

Abstract—The accumulation of Organic Fraction of Municipal Solid Waste (OFMSW) in landfills not only pose threat to the environment, it may also lead to potential health hazards. Anaerobic digestion stands a very good chance to mitigate this waste accumulation in landfills and has potential to create green jobs. BMP has been widely studied in anaerobic digestion for the production of sustainable energy. Bioprocess control Automatic Methane Potential Test System (AMPTS) II machine was used to set up the assays and run the tests. OFMSW was observed to have a low pH which affects the production process and biogas yield. Buffer solutions that were used in this study were calcium carbonate ($CaCO_3$) and sodium hydroxide (NaOH). It was observed that $CaCO_3$ not only stabilizes the pH but it also gives nutrients to the microbes and thus results in higher biogas yields. Inoculation also helped in stabilizing the process and improved the yield. The digester with $CaCO_3$ resulted in a higher methane yield than the others. Though $CaCO_3$ gave good results its use was discontinued as it has a negative impact on the environment. The BMP of OFMSW was found to be 200 ml CH_4 / g VS. The methane content was found to be on average 58%.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0023 Presentation 7 (17:35~17:50)

Biogas Production from Anaerobic Digestion of Fruit and Vegetable Waste from Johannesburg Market

Ireen Maile, Edison Muzenda, and Charles Mbohwa

University of Johannesburg, South Africa

Abstract—Biogas production from anaerobic digestion is a promising technology for sustainable energy development. Biochemical methane potential (BMP) tests are normally run to determine the possible methane that can be obtained from each biomass. The aim of this study is to determine the biochemical potential of fruits and vegetable wastes from the Johannesburg market. The biochemical methane potential tests were carried out using the bioprocess control Automatic Methane Potential Test System (AMPTS) II machine. The initial pH of the feedstock was low during the preparation of the feed since fruits and vegetable waste (FVW) are acidic and thus buffer solutions were used to increase the pH to 6.5-7.5. The BMP for the FVW was determined to be on average 300 ml CH_4 /g VS added with methane content between 50-60 % volume.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0024 Presentation 8 (17:50~18:05)

Optimization of Biogas Production through Anaerobic Digestion of Fruit and Vegetable Waste: A Review

Ireen Maile, Edison Muzenda, and Charles Mbohwa

University of Johannesburg, South Africa

Abstract—Anaerobic digestion is the biodegradation of the waste material with the aid of microbes which thrive in the absence of oxygen. Fruits and vegetable wastes (FVW) are a good substrate with potential to produce biomethane and are abundantly available. The optimization of biogas production from FVW was reviewed. A careful consideration when selecting the operating process parameters such as temperature, pH, hydraulic retention time (HRT), organic loading rate (OLR), inoculum to substrate ration (ISR) , particle size and nutrients. The following factors can improve the methane yield from FVW: co-digestion, pre-treatment and digester configuration.

Afternoon, October 27, 2016 (Thursday)

Time: 16:05~18:20

Venue: Peninsula III & IV

Session 4: 9 presentations-Topic: "Sustainable development"

Session Chair: Prof. Khaled M. Bali

G0026 Presentation 9 (18:05~18:20)

Transformation and Utilization of Agricultural Waste as Component of Green Concrete for Rural Housing and Development Schemes

Emmanuel Emem-Obong Agbenyeku, Edison Muzenda, and Mandla Innocent Msibi

University of Johannesburg, South Africa

Abstract—Several researchers have outlined cost saving and cement blending merits without compromising standards. As such, utilizing artificial pozzolana as supplementary cementitious materials (SCMs) in concrete engineering is well known. However, there is continual search for substitute materials. The use of Rice Husk Ash (RHA) as cementitious constituent in green concrete was studied. Its abundance paved way for the study to look into the compressive strength of the concrete type formed by partly substituting Ordinary Portland Cement (OPC) with RHA under short curing series. Analysis on RHA revealed significant properties of pozzolanic hardening. 60 cubes of 100 mm dimensions were cast with cement replacement by RHA ranging from 0-40% while adopting a 28 day targeted strength of 25 MPa as control. The cubes were cured at relative humidity (RH) of 95-100% and temperature (T) of 22-25^{0}C in a chamber for periods of 7, 14, 21 and 28 days. The outcomes displayed trends of strength gain, reduced density and compressive strength with increase in RHA. The 28 days density and strength of the normal concrete was 2465 kg/m^3 and 28.57 MPa while the 10% RHA sample (i.e. best substitute matrix) had 2398 kg/m^3 and 25.97 MPa respectively. The strength of 10% RHA/OPC concrete (25.97 MPa) was slightly higher than the adopted strength (25 MPa) at 28 days. This signifies its suitability as concrete constituents and can be a major cost reduction factor in rural shelter projects where less structural complexities are required. Hence, it can be employed in the construction of simple foundations and concrete composites.

Poster Session

October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom

Poster session: 6 presentations

A1011 Poster 1

Nematicidal Effect of Olive Pomace on the *Meloidogyne Incognita*

Yasemin Kavdir, Ugur Gozel, and Nurettin Sahiner

Canakkale Onsekiz Mart University, Agrricultural Faculty, Department of Soil Science and Plant Nutrition, Turkey

Abstract—In Turkey, as in many countries, nematicides are used very intensively against root-knot nematodes in vegetable fields. Uncorrect use of nematicides are very harmful to human health and the environment. Thus, alternative control methods have great importance on nematode control.

In this study different rates of ground olive pomaces were added to soil and their effects on root-knot nematode (*Meloidogyne incognita*) populations, as well as tomato growth were determined. During the experiment, some soil physical and chemical properties of soils, tomato root and shoot growths and nematode populations have been determined. Olive pomaces were mixed with sandy loam soil at the rates of 0, 5,10,15,20 g kg-1. All pots were arranged in a completely randomized block design on a bench and replicated four times in controlled atmosphere room. Tomato seedlings (*Solanum lycopersicum* L. troy variety) were grown in sterilized soil then they were transplanted to pots. Inoculation was done by pouring the 20 ml suspension including 1000 M. incognita juvenile pot-1 into 3 cm deep hole made around the base of the plant root. Number of galls per root, root lengths, root areas, plant and root dry weights were determined 60 days after the treatment.

The results showed that *Meloidogyne incognita* populations in root galling were significantly decreased when olive pomaces were added to soil at all rates. Applications of olive pomace increased root lengths and surface areas compared to control (no-nematode, no-amandements) and no-amandements with nematode treatments. Lower rates of olive pomace significantly increased tomato growth. This research was supported by TUBİTAK Grant Number 214O422.
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October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom

Poster session: 6 presentations

B0007 Poster 2

The Influence of Cultivation Environment on the Biosynthesis of Different Organic Acid by *A. succinogenes* NJ113

Zhen Wang, Kequan Chen, and Pingkai Ouyang

Nanjing Tech University, China

Abstract—*A. succinogenes* has industrial potential and it has unique metabolic traits that could contribute to a broader understanding of bacterial metabolism and its diversity. Since *Actinobacillus succinogenes*, a facultatively anaerobic microorganism, was found, a wide variety of interesting metabolic features has been identified. *A. succinogenes* was isolated originally from bovine rumen and is considered one of the most promising organisms for the industrial-scale production of succinic acid. In this study, *Actinobacillus succinogenes* NJ113 is capable of microaerobic fermentation, which offers the possibility of a novel type of pyruvic acid production. This study describes the influence of cultivation modes, dissolved oxygen environment and pH buffers on the biosynthesis of different organic acid by *A. succinogenes* NJ113. This study is the first to illustrate the advantage of using *Actinobacillus succinogenes* NJ113 with no genetic modification under microaerobic conditions for the production of pyruvic acid, and the final titer of pyruvic acid production is 37 g L^{-1}.

October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom

Poster session: 6 presentations

B0008 Poster 3

Optimization of Lysine Cyclodeaminase Heterologous Expression and Immobilization for Enhanced L-pipecolic Acid Biosynthesis

Sha Tao, Hanxiao Ying, and Kequan Chen

Nanjing Tech University, China

Abstract—Lysine cyclodeaminases, catalyze the bioconversion of L-lysine to L-pipeolic acid, play important roles in the asymmetric synthesis of pipecolate derivatives. In the present study, the heterologous expression of lysine cyclodeaminase from Streptomyces hygroscopicus were performed. As a result, large amounts of soluble proteins could obtained with a supplement of 0.1 mM IPTG at 20 ℃ after induced for 6 hours. Furthermore, the purified LCD was immobilized on the surface of the carbon nanotubes and applied in the production of L-pipecolic acid. By optimizing the pH, temperature, metal ions concentration and NAD+ concentration, a dramatic increase (77.1%) in L-pipecolic acid concentration and yield was observed. Particularly, an average L-pipecolic acid concentration of 7.55 g/L was achieved with a productivity of 0.31 g/(L h) after 10 cycles of enzyme recycling, which was only 23.6% lower when compared with that obtained in the initial process. Thus, this study suggests that immobilization lysine cyclodeaminase biocatalyst may be an alternative choice for efficient and cost-friendly L-pipecolic acid production.

October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom

Poster session: 6 presentations

B0009 Poster 4

An Efficient Chitinase from Chitinbacter sp. GC72 and its Application in Chitin Degradation for N-acetyl-D-Glucosamine Production

Alei Zhang, Kequan Chen, and Guoguang Wei

Nanjing Tech University, China

Abstract—In this study，an efficient chitinase from Chitinibacter sp.GC72 was investigated for N-acetyl-D-glucosamine production from chitin degradation .The optimal degradation efficiency for chitin powder was at a pH of 7 and 37 ℃. The metal ions Ca2+ and agitation promoted the hydrolysis ability of chitin significantly. Chitin powder above 100 mesh number was benefit for chitin hydrolysis, whereas 30-70 mesh numbers had no significant effect. In addition, different treatment of chitin powder by ultra-micro grinding, ultrasonic, high pressure homogenization and microwave were investigated for chitin degradation. The result shown that high pressure homogenization could improve hydrolysis ability for chitin, which led to 19.6g N-acetyl-D-glucosamine production from 20g chitin powder, and the hydrolysis time was decreased by 30h compared to crude chitin powder.

October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom

Poster session: 6 presentations

B0010 Poster 5

Enhanced the Performance of MFC in Pseudomonas Aeruginosa Expressing the NAD Synthase Gene

Jiao Feng

Nanjing Tech University, China

Abstract—Microbial fuel cell (MFC) is a promising device that generate electricity by oxidating variety of biomass by microorganisms. However, low electricity power output (EPT) is one of major bottlenecks in practical application of MFCs at this state. In this study, *nadE*, the NAD synthase encoding gene was manuplated to explore the effect of its overexpression on the EPT of *Pseudomonas aeruginosa*-inoculated MFC, which indicated that the maximum power density increased from 89.29 mW m^{-2} to 497.29 mW m^{-2} significantly, and the resistance of MFC decreased sharply from 1,597 Ω to 713 Ω. In addition, the results of cyclic voltammogram and HPLC suggested that pyocyanin in the MFC inoculated with *P. aeruginosa-nadE* was 2.166 µg/ml, which increased 2.47 folds compared with that of original strain. Our study evidenced overexpression of the *nadE* gene enabled *P. aeruginosa* to increase releasable intracellular electrons and alter NADH/NAD$^+$ which inbalanced the cellular redox status, thus regulated the synthesis of pyocyanin as electron shuttle. Overexpression of the *nadE* led to the higher electricity power putout in *P. aeruginosa*, resulting in improving the electrochemical characteristics of MFCs.

October 27, 2016 (Thursday)

Time: 8:30~18:20

Venue: Peninsula Ballroom
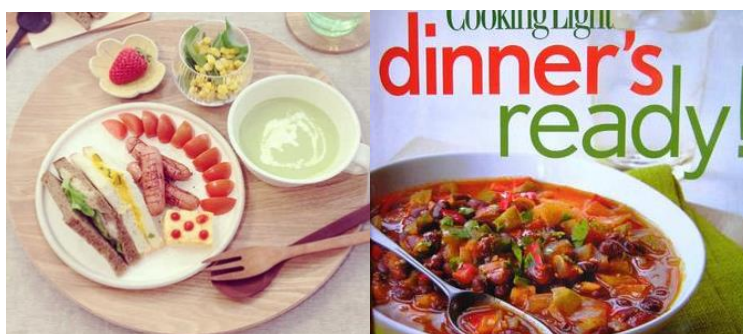
Poster session: 6 presentations

B3001 Poster 6

Influence of Contrast Enhancement Methods in Brain Tumor Detection

Maher un Nisa and Ahsan Khawaja

Comsats Institute of Information Technology, Pakistan

Abstract—In image processing, contrast enhancement is an important area as it improves the quality of an image. This paper presents different contrast enhancement techniques for brain tumor detection using MRI and assesses their performance on the basis of factors like tumor size, area and volume calculations. The proposed methodology was applied on datasets of different patients and the subsequent results were evaluated. The results facilitated in gauging overall performance of the tumor detection process. Statistical measures like Dice Similarity Coefficient, Jaccard Similarity Index and Structural Similarity Index are used to compute the accuracy of contrast enhancement techniques. After detecting tumor in 2-Dimensional (2D) slices, 3-Dimensional (3D) reconstruction was performed to anticipate type of tumor along with 5 year survival rate by looking at its shape in 3D. The work is expected to aid in the treatment of the disease in a better way.

Dinner	
18:30	**West Bay Fireplace Room**

One Day Visit & Tour

October 28, 2016 (Friday) 8:00~17:00

(Tip: We will depart on time, please arrive at the Lobby before 8 a.m.)

1. Visit the University of California, Davis

The University of California, Davis (also referred to as UCD, UC Davis, or Davis), is a public research university and one of the 10 campuses of the University of California (UC) system. It is located in Davis, California, just west of Sacramento, and has the third-largest enrollment in the UC System after UCLA and UC Berkeley. The university has been labeled one of the "Public Ivies," a publicly funded university considered to provide a quality of education comparable to those of the Ivy League.

Welcome to the college town of Davis, one of the best-educated and brainiest cities in the country. The city of Davis and UC Davis campus have reputations for being among the safer college communities. Our students contribute to a community that is active, friendly and fun. Check it out!
Popular Places on Campus

Beyond the classroom and the labs, you will find that "going to college" means hanging out with friends, eating, studying, keeping fit and staying healthy, and, of course, having fun. Find where "college" really happens at UC Davis.

Mondavi Center for Performing Arts

—

Take advantage of one of California's finest performing arts centers. You attend your first performance for free and the rest are half-off.

Shields Library

—

Open the book to your academic success by making our main library your study home. Our librarians will help you find what you need for your research projects.

Arboretum

—

Explore 100 acres of flora and fauna in the UC Davis Arboretum, including a secret garden near the horse barn and redwood grove.

Unitrans MU Terminal

—

This bus terminal offers you a chance to practice your British accent on one of our double-decker buses or act like a double agent in the phone booth.

2. Have Lunch together.

3. Visit San Francisco

（Tip: The following places are for references, and the final schedule should be adjusted to the actual notice ）

The ground floor lobby *is adorned with a series of fresco murals by some 30 local artists, depicting life in 1930s San Francisco. They were nationally controversial when opened to the public. The artists and murals were funded by President Roosevelt's New Deal pilot art program, the Public Works of Art Project. The project was such a success, public buildings around the country were decorated with similar artwork. They remain a colorful, insightful look back to a difficult time, The Great Depression, in American history. Guided docent tours are available.*

Golden Gate

Once called "the bridge that couldn't be built," today it is one the seven wonders of the modern world. This magnificent span, perhaps San Francisco's most famous landmark, opened in 1937 after a four-year struggle against relentless winds, fog, rock and treacherous tides.

Palace of Fine Arts

Overlooking the Golden Gate is the Presidio, a former military post with beautiful architecture and a very scenic park setting. Within the Presidio is the gorgeous Palace of Fine Arts, built for the 1915 Panama-Pacific Exposition and reminiscent of Roman and Greek architecture.

Fisherman's Wharf.

More than 75 percent of San Francisco's visitors include Fisherman's Wharf on their itinerary. The Wharf's famous fishing fleet make for a terrific fish story, while souvenir shops in the waterfront marketplace and historic ships add to the atmosphere. Fishing boats, sea lions basking in the sun, seafood stalls and restaurants, steaming crab cauldrons, family entertainment and sourdough French bread bakeries.

Conference Venue

Crowne Plaza Hotel-San Francisco Airport

http://www.sfocp.com/
1177 Airport Blvd. Burlingame, CA 94010

The Crowne Plaza San Francisco Airport hotel delivers a unique mix of friendly California hospitality and modern lifestyle amenities for business and leisure travelers in the San Francisco Bay Area. Fly into SFO Airport and enjoy a vibrant, high-style hotel that creates an ambiance of peace, play, and productivity. As the gateway to the San Francisco Bay Area, our hotel delivers passionate service with a splash of the unexpected.

Located next to beautiful Bayside Park, with unbeatable views of the sparkling San Francisco Bay, our hotel in Burlingame, CA is just 1.5 miles south of San Francisco Airport. Our prime location allows guests to shop and dine in Burlingame, explore downtown San Francisco, catch a ride on the famous Cable Cars or visit any of the top attractions in San Francisco within minutes from our hotel.

Onsite Parking
Short Term Parking: $2 per hour (max 10 hours/day)
Overnight Parking: $20 per 24 hours for overnight guests

Shuttle & Public Transportation
We offer free shuttle service to and from the SFO Airport. You can also access BART via the airport's International Terminal. Get anywhere in the Bay Area quickly!

Directions to our Hotel
San Francisco International Airport (SFO)
Distance: 1.0 MI/1.61 KM SOUTH to Hotel
Complimentary Shuttle Available
Driving: Enter Hwy 101 S to Broadway Exit. Stay left under overpass and follow Airport Blvd sign. Turn right at Rollins road. Turn right at next light onto Broadway. Stay right to next stoplight. Turn right onto Old Bayshore Hwy. Stay straight to hotel entrance.

Complimentary Shuttle: Follow signs to Hotel Courtesy Shuttles, located on the Departures/Ticketing Level of each terminal. Shuttle pick-up is located in the center island of the Transportation Zone, in the area marked "Hotel Shuttle".

San Jose International (SJC)

Distance: 22.0 MI/35.41 KM NORTH EAST to Hotel

Take HWY 101 northbound. Take exit 419B for Broadway. Keep right at the fork, follow signs for Bayshore Blvd/Airport Blvd. Hotel on Right.

Oakland Airport (OAK)

Distance: 33.0 MI/53.11 KM SOUTH WEST to Hotel

Merge onto I-880 S via the ramp to San Jose. Take exit 27 for CA-92 E toward San Mateo Bridge/Jackson St. Merge onto CA-92 W Partial toll road. Take exit 13B onto US-101 N toward San Francisco. Exit Broadway. Keep right at fork. Hotel on the Right.

Train: Broadway/Caltrain Station

Distance: 1.0 MI/1.61 KM EAST to Hotel

Driving Directions: Turn left on Millbrae Ave for approximately 1 mile. Turn Right onto Airport Blvd. Continue for 1.5 miles to entrance of Crowne Plaza Hotel SFO.

Shuttle: The complimentary Burlingame Trolley is available for transportation from the Burlingame Caltrain Station to our hotel.

Subway: SFO BART Station

Distance: 1.0 MI/1.61 KM SOUTH to Hotel

Complimentary Shuttle Available

Take the Yellow Pittsburgh/Bay Point - SFO Line towards San Francisco International Airport. Exit at SFO and follow signs to Hotel Courtesy Shuttles, located on the Departures/Ticketing Level of the International Terminal.

Note

Feedback Information

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

Personal Information	
Conference Name and Paper ID	
Full Name	
E-mail Address	
Area of Research	
Affiliation	

Please indicate your overall satisfaction with this conference with "√"

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
Conference Content					
Presentation and Paper Value					
Registration Process					
Venue					
Food and Beverage					
Are You A Member of APCBEES	Yes ☐ No ☐ (If "No", you may apply membership from http://www.cbees.org/member.htm)				
Do You Willing to Receive APCBEES Future Conferences Information Via E-mail	Yes☐ No☐				
Where did you get the conference information?					
Would you please specify the main reason for attending this conference?					

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?	
Other Field of Interest	
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!