2 faculty members recognized for outstanding achievement in research and creative work

A faculty from Sciences Cluster and another faculty from the Arts and Humanities Cluster received recognitions for their contributions in research and creative work during the 2015 Gawad Dekana in celebration of the 5th anniversary of UP Cebu’s autonomy.

Prof. Kurt Junshean Espinosa of the Department of Computer Science of the Sciences Cluster was awarded with Outstanding Achievement in Research. Prof. Espinosa has 3 non-ISI peer-reviewed journals, 1 publication that is part of a book, 3 international proceedings, and 2 international presentations recorded by CVSC in 2014.

On the other hand, Prof. Charmaine Carreon received the Outstanding Achievement in Creative Work for her 2014 accomplishments that include 4 poems published in an ISI journal, 1 poem in an non-ISI, peer-reviewed journal, and 1 presented and completed creative work funded under Faculty Grant 2013.

The celebration was held at the Performing Arts Hall last September 24, 2015.
The politics of ethnic representation in Philippine bureaucracy
An ISI Publication of Dr. Weena Jade Gera

Abstract
The good governance argument for diversity in civil service is based on the notion that creating a bureaucracy that represents the diverse communities it serves strengthens government accountability and legitimacy. This paper argues that ethnic representation in national bureaucratic governance in the Philippines primarily constitutes a means for political reallocation of space, as it is embedded in the government's framework of asymmetric political autonomy. Mired in intersecting political and ethnic tensions (i.e. blurred ethnic distinctions/ethnic identity disputes and politico-ethnic conflicts), patrimonial forces could easily exploit the country's bureaucratic representation policies as spaces for patronage and as superficial tokens to mollify interethnic factions of their share of the national polity. Thus, instead of facilitating equitable voice in bureaucratic governance, such policy framework could only hold ordinary indigenous and minority ethnic communities captive in the elite-dominated interethnic struggle for representation.

The research paper was published in the ISI journal, Ethnic and Racial Studies: 1-20.
The response of plants growing in a landfill in the Philippines towards cadmium and chromium and its implications for future remediation of metal-contaminated soils

An ISI Publication of Dr. Patricia Anne Nazareno

Abstract

During several visits to the Cebu City landfill in the Philippines, plants were observed growing within the area, including on top of the garbage piles. Studying the response of these plants is important in assessing which can be used in remediating metal contaminated soils. This study aimed to determine whether the plants in the Cebu City landfill excluded or accumulated cadmium (Cd) and chromium (Cr) in the plant tissues. The floristic composition of the landfill was analyzed prior to the sample collection. The samples were acid-digested before the desired elements were measured using atomic absorption spectrophotometry (AAS). The Cd and Cr concentrations in the plant root-zone soil were also measured using AAS. The results indicated that the landfill substrate was generally acidic based on the results of the pH measurement. Of the 32 plant species sampled, Cyperus odoratus showed potential for Cd uptake and internal transfer; Cenchrus echinatus, Vernonia cinerea and Terminalia catappa for Cr uptake, and Cynodon dactylon for Cr internal transfer. The plants in the landfill differed in their response towards the heavy metals. To confirm the behavior of C. odoratus towards Cd, and C. echinatus, C. dactylon, V. cinerea, and T. catappa towards Cr, controlled experiments are recommended, as the plant samples analyzed were collected from the field.


Design and Development of a Web Application Framework for Alumni Profiling

A Research Publication of Prof. Nelia Ereno

Abstract

Profiling systems are primarily used in decision-making. In universities, they can be used to assess the curriculum of the program to make it relevant in meeting the market demand. However, they are implemented in different ways. In this paper, we present an integrated web application framework for alumni profiling that may be used by any university. With WAF, many aspects in web applications that are crucial to data integrity and the system itself are already inherently provided. A prototype was created and details of the design and some statistical analyses of the data gathered are presented. Initial results showed that the integrated web application framework developed can be customized based on their needs. We recommend improving the prototype by integrating an automated statistical system for faster decision-making.

Examining the Resilience of Public Participation Structures for Sustainable Mining in the Philippines

A Research Publication of Dr. Weena Jade Gera

Abstract

This paper analyzes the interplay of institutional-legal architecture, politico-structural conditions and civil society configurations and how it influences the resilience of public participation structures towards sustainable mining in the Philippines. It illustrates how intersecting forces of predominant political economic interests and emergent civil society networks navigate through legal frameworks to influence dependencies and the shifting boundaries of public engagement in mining governance. It argues that the country’s mining sector is in a state of impasse with a government struggling to restructure its mining policies to accommodate a growing public clamor for environmental and social protection while continuing to provide incentives to large-scale mining corporations within a neoliberal framework. This has expanded and created new spaces, including legal and juridical paths, for civil society to pursue accountability mechanisms and challenge entrenched constraints. However, this attempt by the government to reconcile incompatible interests in the mining sector, translates to an ambivalent framework of governance that could not identify its priority. This results to arbitrary policy compromises that exacerbate prevailing tensions amid power imbalances in the sector, leaving civil society in perpetual square-off against mining corporations.

The research paper is the Chapter 2.4.2 of the upcoming edited book "Legal Aspects of Sustainable Development" to be published by Springer Publishers.

The Battle against GMOs in the Philippines: Confronting the WTO’s Attempts to Destabilize Sustainable Agriculture

An Online Publication of Dr. Belinda Espiritu

The Philippines has become a GMO battlefield, with the small farmers and organic farming advocates on one hand and the Philippine government with pro-GMO scientists on the other hand. The Philippine government is showing its cooptation to the neoliberal agenda of transnational biotechnology corporations and the World Trade Organization which protects TNCs’ interests in its approval of the importation of 60 genetically modified plants and plant products for direct use as food and feed or for processing, an additional eight GM plant varieties for propagation, and 21 modified plant varieties for field testing in Philippine soil.

Alarmingly, despite concerns about BT corn’s impact on the environment, it now has 750,000 hectares of Philippine land devoted to it. According to Greenpeace Southeast Asia spokesman Daniel Ocampo, no GMO application has ever been rejected, which is very shocking and alarming given the controversy over their use. This makes the Philippines the country in Southeast Asia having the most number of genetically modified (GMO) crops approved by the government for human consumption, animal feed, propagation, and field trial, according to Greenpeace (InterAksyon.com, 2012).

This critical research paper was published online in the Centre for Research on Globalization on July 18, 2015.

Predicting the Presence of Signal Peptide on Physico-chemical Properties of Protein Sequences
A Research Presentation of Prof. Demelo Lao

Abstract
Presence of signal peptide (SP) in the query protein sequence has a direct bearing in the predicted transmembrane (TM) topology during prediction analysis because of the tendency of topology prediction methods to predict SP as the first TM segment. In globular proteins, however, presence of SP indicates whether the protein is secreted outside the cell or not. Two methods for predicting the presence of SP are presented here. The first method discriminates the detected first hydrophobic segment between a putative first TM segment and a SP among TM proteins, while the second method detects the presence of SP among globular proteins. Higher success rates were obtained in globular proteins (93-96%) than in TM proteins (87-91%). Overall (mean) success rates for both protein groups are 93% and 90% for the reference and cross-validation sets, respectively, which is comparable with SignalPV2.0’s performance. Hence, proposed methods can be used to estimate SP proportion among proteomes.

This paper was presented during the Workshop on Computation: Theory and Practice (WCTP) 2015 on September 23, 2015, at the UP Cebu Performing Arts Hall. Prof. Lao also submitted the final paper of this research to CVSC on September 24, 2015, in fulfillment of his requirements for the Faculty Grant 2012.

Media Self-regulation through Media Literacy: Insights from the Cebu Citizens-Press Council (CCPC)
A Thesis of Prof. Mayette Tabada

Abstract
This study analyzed how the Cebu Citizens-Press Council (CCPC) promotes self-regulation among the Cebu press and media literacy with the Cebu public. Set against a synthesized framework of media self-regulation that incorporates the theories of social responsibility (Hutchins Commission, 1942), new media monopoly (Bagdikian, 2004), public sphere (Habermas, 2006) and network society (Castells, 2010), the researcher studied documents and analyzed the interviews of key informants to answer these objectives: 1) history of the CCPC in the context of media self-regulation initiated by the community press in Cebu; 2) handling by Cebu newspapers and the CCPC of citizens’ complaints about accuracy and fairness or right of reply in local newspapers; 3) CCPC campaigns to promote media self-regulation with the Cebu media and the public; 4) CCPC campaigns to promote media literacy among citizens and Netizens; and 5) assessment of the CCPC’s promotion of media self-regulation and media literacy through its reactive and pro-active mechanisms. Media self-regulation thrives in a setting that involves the stakeholdership of four key sectors: newspapers, media advocacy groups, citizens and Netizens. Media self-regulation can be enhanced, balanced and sustained through media literacy, which ensures greater participation of citizens and Netizens as media watchdogs and defenders of freedom of expression.

This paper is an unpublished Master’s Thesis of Ms. Tabada in the College of Mass Communication, UP Diliman.
UPLB professor discusses possible research collaboration with DCS faculty members and students on Twitter research

Prof. Jaderick Pabico of UP Los Baños Computer Science and head of the Research Division of the Institute of Computer Science expressed his interest for a possible collaboration with faculty members and students of the Department of Computer Science as he shared his research on the efforts on the long-term continuous profiling of sentiment and readability of Tweets from disaster-prone areas in the Philippines.

Pabico revealed that the motivation for the research, “System for sensing human sentiments to augment a model for predicting rare lake events,” was the untimely information of fish kill events (FKE) that is not enough for fisher folks to conduct emergency avoidance procedures. Having noticed that residents of Taal Lake, where FKE is rampant, own electronic communication devices, scientists resorted to using social media to create a real-time forecasting on the occurrence of the natural FKE. The research was further supported by the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development of the Department of Science and Technology (DOST-PCAARRD) in 2012 to develop a fishkill warning system.

More than 40 students from DCS attended the talk in the UP Cebu ILC-AVR on 4 September 2015.

DCS in cooperation with CVSC host international conference

CVSC assisted the Department of Computer Science in hosting the Workshop on Computation: Theory and Practice (WCTP) 2015 last 22-23 September 2015 at the UP Cebu Performing Arts Hall.

WCTP 2015 is the fourth workshop organized by the Tokyo Institute of Technology, The Institute of Scientific and Industrial Research-Osaka University, University of the Philippines-Diliman, and De La Salle University-Manila that is devoted to theoretical and practical approaches to computation. It aims to present the latest developments by the theoreticians and practitioners in academe and industry working to address computational problems that can directly impact the way we live in society.

More than 70 participants attended the international conference. The first night of the conference concluded with a dinner in City Sports Club Cebu.
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