

IV International Workshop FEN

Information and Business Process Management

FEN (FACULTAD DE ECONOMÍA Y NEGOCIOS)
School of Economics and Business

Monday, August 19th 2019

07:45-08:00 RECEPTION - Coffee

08:00-08:05 WELCOME TO THE “IV INTERNATIONAL WORKSHOP FEN 2019” (Room: P-301)

08:05 -09:20 ACTIVITY I (Room: P-301)

Keynote speaker: PANKAJ SETIA, Arkansas University

Audience: undergraduate students FEN

***Title:** “Emotionalizing Retail: By Building Bridges that Harness Computations (Artificial Intelligence)” (AI and Organization Series Book 1)*

***Abstract:** Contemporary computational technologies are transforming retail. The transformations are threatening the survival of retailers that are unable to harness these technologies. However, retailers (e.g. Amazon) that are able to harness the power of computational technologies are unleashing huge value. This book unravels the principles for leveraging these computational technologies. Notably, the book highlights how retailers may build advanced computational bridges that will continue to create tremendous retail value in the 21st Century.*

09:30 - 11:00 ACTIVITY II (Room: Aula Magna)

Keynote speaker: PEDRO ANTUNES, Victoria University of Wellington

Audience: undergraduate students FEN

***Title:** “A New Meaning for Business Processes”*

***Abstract:** The concept of business process is integral to the understanding of how organizations structure themselves. In this talk, we analyze this concept using affordance theory, considering processes as artifacts, discussing their action possibilities and constraints, and relating them to the business users. In particular, we focus on two facets of process affordances: synoptic, regarding artifacts as general, reusable models; and episodic, describing what happens in singular cases. We then discuss how to reconcile synoptic and episodic process affordances through storytelling: we define process as a collection of episodes combining events with contextual information. This new definition promotes diversity and context in understanding of how organizations structure their processes.*

11:00 -11:15 Coffee Break (Room: P-301)

11:15 -12:45 ACTIVITY III: Research Meeting 1 (Room: P -301)

Presenter: PANKAJ SETIA, Arkansas University

Audience: FEN Faculty

***Title:** "How to Leverage Intra-Firm IT Spillovers? It takes Infrastructure Similarity and Governance Choice to Tango"*

Abstract: Due to synergies, investments in IT across one entity lead to benefits for other entities (such as organizations) creating spillovers. While the spillovers have been examined in the inter-firm and industry contexts, it is unclear whether information technology (IT) investments lead to spillovers for a business unit (BU), due to greater IT investments across other BU's within the multi-business firm (MBF). In the inter-firm context, geographical proximity and business relatedness are crucial to harnessing spillovers. Because business units (BUs) are often spread geographically and operate in different industries, intra-firm spillovers may be less prominent due to the structure of MBFs—operating in heterogeneous industries across geographies. We examine whether IT infrastructure centralization may be an effective governance mechanism for harnessing intra-firm spillovers. We theorize and unravel whether IT governance centralization interacts with IT asset similarity (ITAS) across BUs to engender intra-firm spillovers. To empirically test our hypotheses, we utilize longitudinal observations across 9,885 unique units nested in 1,115 unique firms from 2005 to 2013. The results indicate that BUs with relatively higher ITAS and higher levels of IT centralization realize greater intra-firm spillovers. Specifically, our elasticity estimates show that a 1 percent increase in the size of intra-firm spillover pools leads to a 0.011 percent increase in value. We also find that intra-firm spillover elasticities are almost twice as large as inter-firm spillover elasticities, and these estimates are robust across a broad set of alternative specifications and measures. Additionally, the analysis in a restrictive sample focusing on newly merged/acquired BUs shows that deviation from the expected levels of ITC, i.e., ITC-ITAS misalignment, is detrimental for the BU's productivity.

Tuesday, August 20th 2019

08:30-09:30 **ACTIVITY IV (Room: Aula Magna)**
Keynote Speaker: PANKAJ SETIA, Arkansas University
Audience: undergraduate students
(Simultaneous Translation English-Spanish)

Title: *"Emotionalizing Retail: By Building Bridges that Harness Computations (Artificial Intelligence)" (AI and Organization Series Book 1)*

Abstract: *Contemporary computational technologies are transforming retail. The transformations are threatening the survival of retailers that are unable to harness these technologies. However, retailers (e.g. Amazon) that are able to harness the power of computational technologies are unleashing huge value. This book unravels the principles for leveraging these computational technologies. Notably, the book highlights how retailers may build advanced computational bridges that will continue to create tremendous retail value in the 21st Century.*

09:30 -10:30 **ACTIVITY V (Room: Aula Magna)**
Keynote Speaker: YASSER DESSOUKY, San José State University
Audience: undergraduate students
(Simultaneous translation English-Spanish)

Title: *"How data analytics can be used to help in solving supply chain problems"*

Abstract: *Supply Chain is a tricky business. One missing entity or a lack of synchronization can break the entire chain and mean millions in losses for a company. However, the use of analytics in the supply chain is resolving several pain points in supply chain management at the strategic, operational, and tactical levels. For instance, machine learning makes it possible to discover patterns in supply chain data by relying on algorithms that quickly pinpoint the most influential factors to a supply networks' success, while constantly learning in the process. Discovering new patterns in supply chain data has the potential to revolutionize any business. Machine learning algorithms are finding these new patterns in supply chain data daily, without needing manual intervention or the definition of taxonomy to guide the analysis. The algorithms iteratively query data with many using constraint-based modeling to find the core set of factors with the greatest predictive accuracy.*

11:00 -11:15 **Coffee Break (Room: T-601)**

11:15 -12:45 ACTIVITY VI: Research Meeting 2 (Room: T -601)

Presenter: YASSER. DESSOUKY, San José State University

Audience: FEN Faculty

Title: *“Applying Statistical and Machine Learning Techniques to Veteran Affairs Health Problems”*

Abstract: *Managing risks in healthcare environment to understand and control adverse events is essential. This presentation discusses predictive modeling techniques to help identify drivers that cause harms in an Intensive Care Unit (ICU) and causes for Posttraumatic Stress Disorder (PTSD) for military veterans. The Veterans Affairs Healthcare facility is studied in this problem. When a dataset of drivers and harms is available, a question then is how to analyze this dataset to identify drivers that cause harms. This paper presents a methodology to analyze dataset containing binary coded harms and drivers. Harms were not aggregated to form total burden of harm. Total burden of harms is an aggregated measure of a broad range of harms. It may be used to better reflect true level of harm occurring in intensive care units (ICUs). Posttraumatic Stress Disorder (PTSD) is a psychiatric disorder that can occur in people after experiencing or witnessing a life-threatening event such as a war/military-combat, terrorist attack, natural disaster, serious accident, sexual or other violent personal attack. It is one of the biggest problems facing veterans in the Veterans Health Administration. In this work, we present a methodology that is used to analyze a sample data set with dummy data created based on the findings in literature and build a prediction model. First, 2X2 Contingency tables are used to investigate the statistical independence of variables. Then, a Bayesian Model is developed to understand the underlying relationship between PTSD and various risk factors including but not limited to depression, substance abuse, bipolar disease, service length, combat experience along with varying demographic factors. Finally, logistic regression is used to model the relationship between PTSD and other variables that are found to be significantly related to PTSD. Our findings indicate that PTSD has significant relationship to depression and substance abuse.*

Wednesday, August 21th 2019

18:30 -18:45 Coffee Break (Graduate Building, third floor – Cafeteria sector)

18:45 -19:30 ACTIVITY VII (Room P-301)

Presenter: BENJAMÍN ARIAS (Foresta.IO Director)

Audience: Students from Executives Master and Certificate Programs

Title: *"From mass production to mass customization".*

The idea of this presentation is to show how the world and business problems are changing from mass production to mass customization. In that sense, the customization focus introduces complexity in the logistics/supply chain and some businesses are showing solutions for this challenge.

Some key learning of the presentation are:

- What are some of the leading companies doing now?*
- Why does the AI work well in more complex scenarios?*
- Examples of solutions.*

After the presentation of Mr. Benjamín Arias, professors Dessouky and Antunes will give their viewpoints about *supply chain solutions and artificial intelligence*.

Active participants:

- **YASSER DESSOUKY**, San José State University
- **PEDRO ANTUNES**, Victoria University of Wellington

Thursday, August 22nd 2019

09:30 -10:50 ACTIVITY VIII (Room H-107)

Keynote speaker: PEDRO ANTUNES, Victoria University of Wellington

AUDIENCE: undergraduate students (Professor Zurita's class)

(Activity in Spanish)

***Title:** "A New Meaning for Business Processes"*

***Abstract:** The concept of business process is integral to the understanding of how organizations structure themselves. In this talk, we analyze this concept using affordance theory, considering processes as artifacts, discussing their action possibilities and constraints, and relating them to the business users. In particular, we focus on two facets of process affordances: synoptic, regarding artifacts as general, reusable models; and episodic, describing what happens in singular cases. We then discuss how to reconcile synoptic and episodic process affordances through storytelling: we define process as a collection of episodes combining events with contextual information. This new definition promotes diversity and context in understanding of how organizations structure their processes.*

11:00 -11:15 Coffee Break (Room P-302)

11:15 -12:45 ACTIVITY IX: Research Meeting 3 (Room P-302)

Presenter: PEDRO ANTUNES, Victoria University of Wellington

AUDIENCE: FEN Faculty

***Title:** "Business Processes and Flexibility: A Theoretical Perspective"*

***Abstract:** We address the intractable problem of flexibility in business process management: how to deal with variations, unique cases and exceptions? We identify and characterise five conceptualisations of business process. We discuss the main elements and relationships, contracts, and existential and representational properties established by each conceptualisation. For each conceptualisation, we analyse how it impacts flexibility and discuss different strategies for increasing flexibility. Finally, we synthesise our findings in an integrated framework, which helps by relating different conceptualisations of business process with strategies to increase flexibility.*