9th IADIS International Conference on
Information Systems 2016
CONFERENCE PROGRAM

Saturday 9th, April 2016

08:30-19:00 Welcome Desk

09:45-10:00 Session O – Opening Session
(Room: Lima & Sado)

OPENING SESSION
Profs. Philip Powell, Miguel Baptista Nunes and Pedro Isaías

10:00-11:00 Session KL1 – Keynote Presentation
(Room: Lima & Sado)

CHALLENGES OF TECHNOLOGICAL INNOVATION: IS A MORAL COMPASS NEEDED?
Professor Kevin Grant, Kent Business School, University of Kent, UK
Abstract
The discussion into technology and innovation continues to expand. Technology led innovation and organisational transformation refers to the process by which new products and processes are generated. When emergent technologies are deployed to bring about new ways of making existing products and services 'better', this is called process innovation. When they include entirely new products and services, the change is referred to as product/service innovation and, when something so disruptive changes how we work, rest and play, this is often termed paradigm shift based innovation.
A number of challenges and concerns still exist today with regards to our understanding and sense making of technology infused innovations. In this session, some thoughts and observations will be explored such as; hidden technological innovation, what is being measured and how, gender based technological innovation, how do we 'spot' emergent technologies, financial innovation, socially responsible innovation and new organisational forms and model of innovation to promote, enhance and deliver technology transfer. One developing concept is the notion that all IT led technology innovation is a good thing. We will explore/interrogate this further looking at the relationship between technology adoption and potential addiction factors of 'Generation Y' users as archetypical digital natives. We will also explore the possible need for us, as IT professionals, to incorporate a moral compass as technology led innovation continues to expand and permeate our everyday lives.

11:00-11:30 Coffee Break

11:30-13:00 Session FP 9.1
Knowledge Management
(Room: Lima & Sado)
Chair: Miguel Baptista Nunes

WORLDS APART – IT SUPPORT STRATEGIES FOR EVIDENCE BASED MEDICINE MEET REALITY (F034)
Hanife Rexhepi and Anne Persson
Abstract
When practitioners make decisions as well as treat and care for patients they interpret patient specific information according to evidence based medical knowledge. This process is complex as evidence is infrequently available in a form that can be acted upon at the time decisions must be made. The aim of this paper is to (1) explore how primary, secondary and municipality care in Sweden work with the process of managing knowledge, (2) explore how healthcare practitioners' experience, availability of medical knowledge when and where they need it and (3) conditions for developing a coherent IT-based knowledge portal for different areas of knowledge bases in healthcare. The results show significant deficiencies in the knowledge management process of the participating organizations. The knowledge management processes are not embedded in business processes, activities and relationships, which cause major difficulties for practitioners to keep up with the latest medical evidence.

CONTENT CLUTTER AND ENTERPRISE SOCIAL MEDIA: A CASE STUDY (F071)
Jason Weir and David W. Wilson
Abstract
A single case study of the UK subsidiary of a multinational corporation (Colpal) that currently utilizes enterprise social media technology to share organisational knowledge has revealed an emergent theme. The relational and cognitive dimensions of social capital and organisational leadership were found to play important influencing roles for knowledge sharing within the organisation's virtual communities. However, a new theme emerged from the case suggesting that the affordance of persistence offered by social media technology can actually hinder knowledge sharing once content reaches a certain level. Labelled as content clutter, it concerns the phenomenon whereby the amount of knowledge content becomes sufficient to discourage future knowledge sharing. As an organisation's use of enterprise social media starts to mature, these findings serve as a starting point for future research concerned with how to effectively manage knowledge content in virtual communities in a way that encourages effective knowledge sharing.

THE IMPORTANCE OF COMMUNICATION IN THE TRANSFER OF KNOWLEDGE AND IN THE CREATION OF A SHARED VISION - A CASE STUDY (F039)
Maria Terezinha Angeloni, Rafael Zimmermann Homma, Luiz Afonso Pereira Athayde Filho and Aldo Cosentino
Abstract
This article aims to present a Communication Plan, to support the transfer of knowledge and the creation of a shared vision among the members of the Research and Development Project (R&D) for the sponsor / client company – Celesc, electric utility company in the State of Santa Catarina, Brazil and executed by the Institute for Studies and Energy Management - INERGE. The project is part of the R & D program of the National Electric Energy Agency - ANEEL in accordance with the law 12.212 – January 20, 2010. The theoretical framework is based on the areas of Project Management, Knowledge Management and Organizational Communication. Methodologically it is characterized as an interorganizational, interproject research of experimental development. The results are not yet effective because of the short implementation time of the project, however, based on the actions implemented up to present time it can be inferred that the communication is an important element in the transfer of knowledge and the creation of a shared vision between the team members – interproject, as well as between the organizations involved – interorganizations.

13:00 – 14:30 Lunch Break

14:30-15:30 Panel Session
(Room: Lima & Sado)

CHALLENGES AND OPPORTUNITIES IN INFORMATION SYSTEMS
Profs. Philip Powell, Miguel Baptista Nunes, Pedro Isaías and Kevin Grant

15:30-16:20 Session FSP 9.2
IS in Practice, Technology Infrastructures and Organisational Processes
(Room: Lima & Sado)
Chair: Thomas Keller

BYOD VS. CYOD – WHAT IS THE DIFFERENCE? (F026)
Martin Brodin
Abstract
During the last years mobile devices have become very popular to use both for work and pleasure. Different strategies have evolved to increase productivity and to satisfy the employees. In this paper, we look at the two most popular strategies and look at the strengths and weaknesses of those. This is done by a systematic literature review and semi-structured interviews with CIO's or equivalent roles. We conclude that BYOD and CYOD comes with similar strengths, but CYOD brings a little fewer security risks.

GEOREFERENCING HISTORICAL DOCUMENTS: THE CASE OF THE DUME BOUNDARY (S085)
Natália Botica, Francisco Andrade and Luís Fontes
Abstract
Much of the information of historical documents about the territory and property are defined on textual form. This information is mostly geographic and defines territorial areas, its limits and boundaries. For the treatment of this data, we have defined one information system where the treatment of the documental references for the study of the settlement and landscape implies a systematization of the information, normalization, integration and graphic and cartographic representation.
This methodology was applied to the case study of the boundary of the monastery-diocese of Dume, in Braga - Portugal, for which there are countless documents and references to this site, but where the urban pressure has mischaracterized very significantly the landscape, making the identification of territorial limits quite difficult. The work carried out to give spatial and cartographic expression to the data, by defining viewing criteria according to the recorded information, proved to be a central working tool in the boundary study and in understanding the dynamics of the sites in the various cultural periods.

16:30-17:00 Coffee Break

17:00-19:00 Tutorial
(Room: Lima & Sado)

INFORMATION RETRIEVAL FROM THE INTERNET AND WWW, USING SEARCH BY IMAGE: A TUTORIAL
Prof. Paul Nieuwenhuysen, Vrije Universiteit Brussel, Belgium
Abstract
This tutorial workshop is based on a continuing investigation of the power, applicability, usefulness and limitations of search by image through the Internet. In this relatively new method for information retrieval, a query does not consist of text, but of an image file. The search results lead to images on the WWW and also to related texts.

19:00 – 19:30 Welcome Cocktail

Sunday 10th, April 2016

08:30-15:30 Welcome Desk

10:10-11:00 Session FSP 10.1
Innovation and Knowledge Management // Enterprise Resource Planning
(Room: Lima & Sado)
Chair: Hans-Peter Steinbacher

ONTOLOGY LEARNING FOR OPEN SEMANTIC TRIZ IN SOFTWARE ENGINEERING (F053)
Vanja Bevanda, Giorgio Sinković and Marko Turk
Abstract
TRIZ (the theory of inventive problem solving; an acronym for the Russian phrase "Teoriya Resheniya Izobretatelskikh Zadatch") is a broad title representing a collection of methodologies, tools, knowledge bases, and model-based technologies for generating inventive ideas and solutions. It has been developed for over 65 years to support engineers and natural scientists solving problems in the fields of physics, chemistry and mechanical systems by using knowledge of former inventors.
In today business environment, new technologies and competitions force business organizations to invest additional resources in order to continuously improve their business models, products, processes, services, management, information system and knowledge of employees. As a part of these efforts, appears an exigency for strengthening the importance of inventive solving problems capabilities in area of software engineering, supporting innovative aspects of business organizations in extremely changing environment.
Although the software engineering (SE) is "a branch of computer science that deals with the design, implementation, and maintenance of complex computer programs", the existing research shows that only a part of the available TRIZ toolkit is applicable to this specific field. The current literature records numerous attempts made in different directions in order to fulfil a prominence need for adjustment, widening or upgrading existing TRIZ methodology to SE domain. This article synthetizes those efforts and proposes the development of semantic portal for open TRIZ in supporting collaborative software engineers` inventive problem solving process. As a part of this development process, authors have offered a solution for facilitating the ontology acquisition activities using inductive learning.

DIGITALIZATION: THE DILEMMA IN HIGHLY STANDARDIZED COMPANIES AND ORGANIZATIONAL DEVELOPMENT (S078)
Paavo Heikkinen and Bernd Hilgarth
Abstract
Many so called disruptive trends like the Five SMART Technologies (Gartner, 2014) affect more and more existing business models with high dynamics and complexities. At the same time the affected organizations do show more or less settled business models with partly long traditions of process improvement work. During researching the Business Process Management (BPM) last-mile phenomenon in the past five years (Kurz et al, 2012), some general reasons arise for failures of process improvements and implementations in highly standardized organizations. At the same time for the authors of this paper it became clear that this research might be expanded to aspects coming from other disciplines like project management, strategy management, quality management or change management are nearby the BPM approaches. In the era of the widely discussed trend of digitalization, the number and intensity of process improvements an organization has to react on with the adaptation of their business processes and organizational structures increases from the authors experience and point of view in an enormous way. Mature organization show often that the problem to react on necessary changes are initiated by the use of new technologies. This article serves as (1) a first summary of the observations were made during the past three years in context of adaptations of disruptive technologies and business models like 3D printing in standardized process organizations and (2) it will draft from the authors point of view the need and way for researching on this complex.

11:00-11:30 Coffee Break

11:30-12:50 Session FSP 10.2
IS Management
(Room: Lima & Sado)
Chair: David Wilson

RANKING-TYPE DELPHI STUDIES IN IS RESEARCH: STEP-BY-STEP GUIDE AND ANALYTICAL EXTENSION (F037)
Jörn Kobus and Markus Westner
Abstract
Ranking-type Delphi is a frequently used method in IS research. However, besides several studies investigating a rigorous application of ranking-type Delphi as a research method, a comprehensive and precise step-by-step guide on how to conduct a rigorous ranking-type Delphi study in IS research is currently missing. In addition, a common critic of Delphi studies in general is that it is unclear if there is indeed authentic consensus of the panelists, or if panelists only agree because of other reasons (e.g. acquiescence bias or tiredness to disagreement after several rounds). This also applies to ranking-type Delphi studies. Therefore, this study aims to (1) Provide a rigorous step-by-step guide to conduct ranking-type Delphi studies through synthesizing results of existing research and (2) Offer an analytical extension to the ranking-type Delphi method by introducing Best/Worst Scaling, which originated in Marketing and Consumer Behavior research. A guiding example is introduced to increase comprehensibility of the proposals. Future research needs to validate the step-by-step guide in an empirical setting as well as test the suitability of Best/Worst Scaling within described research contexts.

CULTURE AND E-COMMERCE ACCEPTANCE IN INDONESIA (F016)
Arief Rahman and Wahyu Wardhani Putri
Abstract
The purpose of this research was to examine the impacts of Indonesia national culture in the consumer e-commerce acceptance. Based on Hofstede's cultural dimensions, this research investigates the moderating effect of power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation. The Partial Least Square (PLS) method was employed to analyze of the model. Involving 172 respondents through online and direct survey, this study found that all variables of national culture except masculinity and long-term orientation moderate e-commerce acceptance in Indonesia. The research contributes to the theory as well as to the practice. The discussion on the implications for theory and practice are included in the paper.

INFLUENCING FACTORS OF IN-MEMORY DATABASES FOR BUSINESS INFORMATION SYSTEMS (S030)
Hans-Peter Steinbacher and Hendrik Teerling

Abstract
Nowadays companies have to face the exponential increasing amount of data and therefore to manage the complexity of storing, analyzing and organizing it. The challenge is the economical usage of this information and known database management system might have reached their limitations. New concepts and database types have to be used for managing this big data. In the following, the driving and restraining factors of the use of In-memory databases for business information systems are analyzed. To identify critical factors of the use, a structural equation model based on the information-system success model of DeLone and McLean was used. A literature research and quantitative survey have been used for verify or falsify the hypothesis.

13:00 – 14:30 Lunch Break

14:30-15:10 Doctoral Session
(Room: Lima & Sado)
Chair: Philip Powell

AN EXPLORATORY MODEL OF KNOWLEDGE TRANSFER PROCESS THROUGH INFORMATION SYSTEM IMPLEMENTATION: CASE STUDY (NHS IN THE UK). (D072)
Firas Masri, Peter Kawalek and Trevor Wood-Harper

Abstract
Grant (1996) cited that "Knowledge is viewed as residing within the individual and the primary role of the organisation is the knowledge application rather than knowledge creation" (p. 109). Kogut and Zander (1992) wrote: "what firms do better than markets is the sharing and transfer of the knowledge of individuals and groups within an organisation" (p.383). From above citations, we can adopt that the interaction and sharing of knowledge on an individual level will generate new organisational knowledge through knowledge transfer (KT) which achieves high organisational performance (Maurer, 1998 and Holsapple et al., 2000; Argote, 2013). Despite the importance of transferring and sharing knowledge as the basic and crucial function in organisations, employees frequently resist sharing their knowledge (Ciborra, and Patriotta, 1998; Bock, and Kim, 2001; Tsai et al., 2013). To this end, "Knowledge Transfer" (KT) emerged in the 1990s as a process by which research messages were "pushed" by the source to the users (Lavis et al. 2003; Pentland et al., 2011; Argote, 2013). Thus, this paper adopts that knowledge embedded in the interactions of people, tools, and tasks provides a basis for competitive advantage in firms.
Healthcare is mainly knowledge-based, where the transfer of knowledge is imperative for suitable health outcome (Willem et al., 2007). In the health industry, knowledge is still widely scattered; it is collected at different times and by different people or information systems which make it difficult to understand, to compare and to exchange (Bate & Robert 2002). Moreover, in most studies, effective transfer of knowledge increases productivity, creates competitive advantage and enhances the organisational performance. Thus, the ability of health organisations to capture, disseminate, and organize knowledge (what we can call knowledge transfer functions) allows them to improve the quality of the outcome, process efficiency, patient satisfaction, reducing errors, and cost control (El Morr, and Subercaze, 2010).
However, knowledge is complex, dynamic and embedded in people, and transferring it between agents (i.e. Sender and receiver) is problematic (Grol et al., 2013). This issue becomes more evident in the systems which are mainly dependent on people (e.g. Healthcare systems). In the healthcare systems Levin and Cross, (2004), Lin et al., (2008) and Nicolini et al., (2008) found that professionals (i.e. physicians and nurses etc.) are not aware of the various enablers and barriers that effectively influence Knowledge Transfer (KT). Thus, it is strongly recommended to explore these factors from different perspectives and how they could enhance the KT systems that would influence the system performance, which has aspects such as; outcomes, quality and appropriateness of services, and productivity.
My main aim to join this conference is to enhance and develop my thesis in a way to create a model for knowledge transfer in the healthcare situation which can be linked to theories; Knowledge Based View, organisational learning and Socio-technical aspects.

15:30 – Conference Tour and Dinner

Monday 11th, March 2016

08:30-13:30 Welcome Desk

09:40-11:00 Session FSP 11.1
IS in Practice, Technology Infrastructures and Organisational Processes
(Room: Lima & Sado)
Chair: Deborah Gears

OPTIMIZING DECISION SUPPORT IN BUSINESS PROCESS MANAGEMENT USING OBLIGATION AND PROHIBITION NORMS (F024)
Thomas Keller and Bastin Tony Roy Savarimuthu
Abstract
Social norms constrain behavior of individuals either through obligating or prohibiting certain types of behavior. Norm-based mechanisms have only recently found applications in enhancing decisions of knowledge workers in an automated business process management context. While previous work on such social BPM has focused on the use of prohibition norms based approach for norm inference, this paper extends the work by combining both prohibition and obligation norm based approaches to provide a holistic approach of norm inference. The norms inferred in the context of business process executions are then recommended to users so as to enable them to make informed decisions. The previous work on prohibition norm inference focused on identifying failure cases, which is now complemented by first inferring norms from the successful process execution cases (i.e. obligations) and then inferring prohibition norms. This approach based on considering social feedback (i.e. inferring what is obliged and prohibited from history logs of process execution) shows encouraging results under uncertain business environments. Using simulation results the paper demonstrates that using the norm based mechanism results in reduced failure rates in the decision making of a knowledge worker while still providing maximum flexibility for the user to choose from a range of actions to execute.

INVESTIGATING THE SOURCES OF DIFFICULTIES IN MANAGING PROJECT INTERDEPENDENCIES: A STUDY OF IT/IS PROJECT PORTFOLIOS (F084)
Sameer Bathallath, Åsa Smedberg and Harald Kjellin
Abstract
Interdependencies between projects have come to play a more active role in the decision on Information Technology/Information Systems (IT/IS) portfolios and their constituent projects. However, managing these interdependencies can be a complex task, especially when there is a high degree of uncertainty and many interdependencies between the projects. In times of unexpected events, portfolio managers may face challenges not only from handling the impact on the projects but also from handling the subsequent effects on the interdependencies of these projects. This may threaten the project portfolio from achieving its final goal. This paper presents an exploratory study aimed at investigating the sources of difficulties and challenges associated with the implementation of project interdependencies. We conducted a qualitative study using semi-structured interviews with managers from four leading organizations in Saudi Arabia. The findings reveal three main categories of factors that increased the difficulty of managing project interdependencies in IT/IS project portfolios: 1) Insufficient understanding of human responsibilities in the whole portfolio, 2) Environmental change and 3) Technology constraints.

STRATEGIC ALIGNMENT WITH A BALANCED SCORECARD APPROACH (S006)
Jorge Gomes and Mário Romão
Abstract
Strategic alignment is a topic which has received considerable attention over the last decades. There are many reasons why organisations have performed strategic alignment, but perhaps the most critical one is that it can help them improve performance and competitive advantage in the organisations when properly applied. Managers should be capable of interpreting the external business environment in order to capitalise the opportunities, and deal with threats. The Balanced Scorecard approach (BSC) recognises the rise of intangible assets in value creation strategies and the limitations of traditional financial measurements for this type of assets. Balanced Scorecard translates an organisation's mission and strategy into a comprehensive set of performance measures by providing a framework for the strategic alignment between an organisation's strategy and its business units. BSC uses a balanced mix of financial and non-financial measures to evaluate performance through four perspectives, based on a cause-and-effect logic. This paper highlights the importance of adopting this type of frameworks in line with the organisation's strategic alignment and its focus on implementing its mission and strategic objectives at all organisation levels.

11:00-11:30 Coffee Break

11:30-13:00 Session FP 11.2
Multidisciplinary Views and Multi Methodological Approaches // IS Learning and Teaching // Other
(Room: Lima & Sado)
Chair: Philip Powell

MOTIVATIVE COMPUTING: AN INTERDISCIPLINARY ANALYSIS AND DESIGN FRAMEWORK (F014)
Deborah A. Gears, Carla Lorek, Keli DiRisio and Alexander Goldberger
Abstract
Competition for funded research continues to tighten around the globe with awards granted to higher impact projects. While sharing of ideas generally occurs in pockets, it becomes crucially necessary to advance collaborative engagement among researchers. At a growing research university, interdisciplinary methods were applied to gain deep understanding of the scholar's world and to develop an engaging platform for collaboration. User-centered design, systems analysis and design, object-oriented analysis and design, and psychology theory facilitated a multidimensional view of the problem domain. A critical finding revealed that faculty did not know about the skills, knowledge, and interests of others across campus. Curiosity, honor, and idealism were found to intrinsically motivate researchers that provided an empirical basis for creative design.
Analysis findings, along with aesthetic and game elements, informed a solution designed to energize and direct self-determined participation—elements missing in classic systems development processes. Scholar Trading Cards™—the locus of purposeful and serendipitous interaction—mobilized researcher acumen in digital and non-digital spaces. Digital card data published on the university Intranet allowed for searching and sharing of information useful to collaborators, administrators, and staff. Paper-based cards facilitated face-to-face interactions. The platform is showing promise in bridging interpersonal gaps to improve the flow of scholar information across campus. We introduce a contemporary systems framework and information platform that is demonstrating a positive effect on campus-wide collaboration.

METHODOLOGICAL FRAMEWORK FOR THE DEVELOPMENT OF COMPUTATIONAL THINKING AND PROGRAMMING THROUGH EXPERIENTIAL LEARNING: CASE STUDY FROM SCHOOLS JUAN SEGUEL AND ALLIPEN IN FREIRE, CHILE (F050)

Marcos Lévano, Vanessa Córdova and Andrea Albornoz

Abstract

In this study a methodological framework to develop computational thinking in the students' process of developing logical and abstract self-learning in computer programing on epistemic learning based on TICs is presented. The framework is constructed on an experiential learning cycle that allows students increase their skills in an insightful way, in order to develop programing computer since childhood.

From the intervention of Scratch software in the subject of mathematics, the results of the case study were obtained. The study was conducted in two schools from Freire district, Chile: Escuela Municipal Juan Seguel, from the urban sector, and Escuela de Allipén, from the rural sector. We worked with 135 students and their ages ranged from 9 to 13 years old. There were two groups of study, group 1 (rural), from which the following results were obtained when Scrach software was applied 92.5%, motivation 96.2%, creativity 96.2%, and problem solving 77.7%; as from group 1 (urban) the following results were obtained when Scrach software was applied: 79.1%, motivation 100%, creativity 83.3%, and problem solving 95.8%. In the group 2 (rural) the following results were obtained when Scrach software was applied: 72.7%, motivation 72.7%, creativity 63.6%, and problem solving 77.2%; while from group 2 (rural) the following results were obtained when Scrach software was applied: 72.7%, motivation 72.7%, creativity 63.6%, and problem solving 77.2%.

Scratch is software used as a pedagogical resource. It allows students to develop some skills like logical thinking, so they can express ideas concerning generation of algorithms in order to solve problems in a consistent way. It also strengthens the personal relationship between teachers and students and builds knowledge and self-learning within a social environment. Through the activities carried out with the software, a type of learning called "learning by doing" was developed in theory and in practice. The main purpose of the implementation of this type of learning was to enhance the motivation and participation of students during class. In addition, by implementing Scratch, peer collaboration was generated, which is useful to carry out projects of greater and lesser complexity.

DECOMPOSING ERP SUCCESS DYNAMICS: A PROPOSAL FOR A MEASUREMENT MODEL (F028)

Pierluigi Zerbino, Davide Aloini, Riccardo Dulmin and Valeria Mininno

Abstract

Defining success in ERP implementation projects is a relevant, complex, and still unsolved endeavor. To our best knowledge, existing proposals are neither comprehensive nor univocal. Thus, extant ERP success models may be incomplete, flawed, and misleading.

This work delimits and redefines ERP success in most of its dimensions, initially drawing upon theories about IS failure. Through a rigorous logical shift, we attempt to model ERP success as a third order factor. Results overcome the literature gaps and potentially open the way for further developments such as revisiting ERP success / implementation frameworks for addressing ERP success in a more systematic, complete, and hence correct way.

13:00 Best Paper Awards Ceremony and Closing Session
(Room: Lima & Sado)

Profs. Philip Powell and Pedro Isaías