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| DAY II 20th April 2016 | |
| Parallel Sessions I | |
| “Women, Innovation and Technology” organised by the College of Information Technology | |
| Theme | Women, Innovation and Technology |
| Chair | Dr. Virginia Franke Kleist, West Virginia University |
| Speaker | Dr. Virginia Franke Kleist, West Virginia University |
| Title | “Exploring Between And Within Group Gender Based Differences In Learning And Using Technology” |

ABSTRACT

Too often, it seems that research about women in Science, Technology, Engineering and Math (STEM) careers focuses on the negative- what is wrong, what are the ongoing obstacles women continue to face in the workplace and the myriad of reasons why women choose to drop out of the STEM work environment after years of formal education and effort on the job (Vedantam, 2012). Nearly half of US women in SET are likely to drop out over time (Hewlett and Sherbin, 2014), and about one third of US SET women intend to drop out of the work force within one year (Sherbin, 2015). In this theoretical paper, we model the underlying issues related to within group gender based differences in learning and using technology, and present a research-in-process program that is designed to yield a deeper understanding of this issue. Women think about technology differently than do men (Margolis and Fisher 2003), and women learn, interact and approach technology in dissimilar ways when compared to men (Littleton and Hoyles 2002). Further, there are fewer women working in technology fields than men, implying to some researchers that women have different motivational perspectives about the meaningfulness of using various information technologies (Margolis and Fisher 2003). Women’s participation in computer science fields has been declining, even though much effort has been invested in trying to achieve parity with men in this area (Cuny and Aspray 2006). Worse, female participation in Computer Science and Math occupations fell from 30% in 2000 to 27% in 2009, not a good trajectory (Beede, et al, 2011). Yet, there is room for additional research that goes beyond traditional between-gender research and explores within-women differences with respect to learning and using technology. This ongoing research may help us to better explain the more subtle aspects of gender based variations in terms of technology learning and use differences, thus leading to a better understanding of the technologically underserved within-women population. Such an understanding could lead to a more gender- balanced IT workforce in organizations.

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| Theme | “Women, Innovation and Technology” |
| Chair | Dr. Virginia Franke Kleist, West Virginia University |
| Speaker | Dr. Humam Elagha, RUW |
| Title | “Framing the Frameworks: Integrating IT Governance Structures and Processes” |

ABSTRACT

In many organizations, Information Technology has become crucial in the support, the sustainability and the growth of the business. This pervasive use of technology has created a critical dependency on Information Technology that calls for a specific focus on IT Governance and has raised the concern of organizations in establishing and implementing effective IT governance. To implement IT governance in practice, an IT governance framework can be deployed composed of a mixture of various structures, processes and relational mechanisms. This paper presents an Integrated IT governance framework and introduces an assessment tool designed to measure its effectiveness. The framework builds on the integration between the structural and processes perspectives of IT governance, and business-IT alignment. The paper contributes to the IT governance literature on the importance of IT governance domains and mechanisms in establishing mature and effective IT governance.

Keywords: *IT Governance Domains, Maturity, Processes, Structure, Mechanisms*

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| Theme | “Women, Innovation and Technology” |
| Chair | Dr. Virginia Franke Kleist, West Virginia University |
| Speaker | Dr. Nasrin Rahmati, Dar Al Hekma |
| Title | “The endangered species in Information technology and Computer Science” |

ABSTRACT

This study is a gender specific review of literature on technology related psychological domains. The paper starts with examining literature on psychological studies on human social stereotypes. Only those psychological studies were selected that were directly relevant to gender differences and the impact on individual attitudes. This is further extended by research studies looking into gender differences in attitudes and the impact on individual’s behaviour. In the next section the study examines the research studies in Information Systems which address gender issues. Most of these studies are concerned with adoption and use of computer technology. The selected studies confirm the result of the psychological studies on gender differences that there is a difference in the users’ attitudes and use of the technology on the basis of their gender. The study then looks into some basic theories and Information Systems theoretical models relevant to gender difference studies. The target for further study is gender differences in learning computer and Information Technology.

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| Theme | “Women, Innovation and Technology” |
| Chair | Dr. Virginia Franke Kleist, West Virginia University |
| Speaker | Dr. Mahmoud Jazzar, RUW |
| Title | “Enhanced Security Architecture for Cybercrime Evidence Collection” |

ABSTRACT

There is an obvious and dangerous increase in network cybercrimes activities which target organizations and individuals. Such activities have affected many regional and international organizational function and smooth operations. Finding clear and direct evidence for cybercrimes is critical as there are huge amount of data on the network and the analysis of such data is complex. This paper propose and discuss an enhanced security architecture model for simplifying and filtering cybercrime evidence collection. The model consumes a number of intrusion detection sensors input which contribute to collect and fine-tune large number of evidences at lower level. A relevant evidence processing criteria have been defined for further reduction and fine-tuning of cybercrime evidences. Initial results of the testbed shows that it is possible to reduce more than 40% of randomly collected data.

Key Words: Intrusion Detection, Network Forensic, Cybercrimes, Digital Evidence.

