Focus of this Minitrack

This minitrack deals with evaluating and measuring the effectiveness of information technologies. There are two closely interrelated issues:

- evaluating instruments in information systems/technology
- managing the effectiveness of technologies

In addressing these issues, the Minitrack will consider papers within these two research streams. This minitrack is organized into two sessions. Both of the sessions deal with the evaluation and measurement of effectiveness of emerging technologies. In the ten years of this minitrack, 238 papers have been submitted for review indicating a strong interest in research in advancing new measures. The purpose of this minitrack is to generate a stream of research oriented toward the study of measuring effectiveness and impacts of information technology in areas where theoretical models may need to be borrowed from referent disciplines, precise variable definitions may not exist, or where models and associated operationalizations have been proposed but not yet tested.

Stream A: IS/IT Evaluation

The aim of the stream will be to help researchers and practitioners understand the processes involved in the decision making of adopting Information Systems in contemporary organisations. The articles in this stream address the justification process necessary to evaluate IS deployments through identifying the constructs associated with investment decision-making. Emphasis is placed on investment decision-making in the context of business process change and effective capital budgeting. The papers accepted provide a combination of strategic frameworks, conceptual and analytical models, and real-case studies of IS evaluation.
Stream B: Managing the Effectiveness of Emerging Technologies

This stream deals with developing and testing effectiveness measures of emerging technologies. Research dealing with instrument validation and model/hypotheses testing are especially desired, as well as the investigation of new constructs. This stream is oriented toward describing the research study in order to advance knowledge of a specific construct rather than reporting research findings. Papers that were accepted into the minitrack address all three issues of the effectiveness triad:

1. "Diffusion Follows Structure – A Network Model of the Software Market" Falk v. Westrapp and Oliver Wendt, J.W. Goethe-University, Germany

This paper is based on an empirical survey with MIS managers to show the importance of externality variables and their differing among software categories. The researchers conducted simulations to demonstrate connectivity and topology of the personal network influences on the diffusion process in software markets. They found substantial correlations among and between the different typologies.

2. "Engineering and Cultivation of a Metrics Programme" Jakob H. Iversen and Lars Mathiassen, Aalborg University, Denmark

This paper explores the effect of software process improvement efforts. The metrics program developed is intended to measure key indicators of all completed projects and summarize progress information in a quarterly management report. This research describes the implementation of this programme.

3. “Use of Content Analysis for Studying the Creativity Construct in the Context of Technology-Rich Applications” Donald L. Amoroso, Electronic Commerce Associations, USA and Inger Eriksson, University of Turku, Finland

This research aims at developing a method for identifying creative information systems based on descriptions of technology-rich applications. The results from the study...
show that more than one characteristic is needed to adequately discriminate between creative and less creative applications. Content analysis is an extremely valuable tool for studying the content of e-commerce systems.

Session 2: Evaluating Information Systems

4. "Interpreting Key Issues in IS/IT Benefits Management" Gurpreet Dhillon, University of Nevada, Las Vegas, USA

This paper examines the contextual issues that determine the success of a computer-based information system. It shows that a narrow technology focused orientation in systems development is a limiting factor in realizing benefits. The research examines benefits management aspects through two IS implementation case studies.

5. "IT Performance Evaluation of Professional Consulting Firms in Construction: Some Preliminary Observations" Heng Li, Hong Kong Polytechnic University, Zahir Irani, Brunel University, UK, and Peter E.D. Love, Deakin University, Australia

This paper is dedicated to understanding how IT can be effectively used to improve organizational performance. An empirical investigation of 60 professional consulting firms from the Hong Kong construction industry was undertaken. A model for determining the organizational productivity of IT is proposed and the methodology for testing it the model is described.

6. "Component-Based Information Systems: Toward a Framework for Evaluation" Mark Lycett and George Giaglis, Brunel University, UK

This paper applies the critical research in the context of component-based development. The riskiness of investment decisions inherent in the migration to component-based systems is discussed. A framework is presented to address the limitations of evaluation and provide both the researcher and the practitioner with the foresight to make informed decisions related to costs, benefits, and risks.