Time & Location: April 5, 2016 at 9:30 AM in ENG2 312L
Title: A HYBRID SIMULATION FRAMEWORK OF CONSUMER-TO-CONSUMER ECOMMERCE SPACE

In the past decade, ecommerce transformed the business models of many organizations. Information Technology leveled the playing field for new participants, who were capable of causing disruptive changes in every industry. "Web 2.0" or "Social Web" further redefined ways users enlist for services. It is now easy to be influenced to make choices of services based on recommendations of friends and popularity amongst peers.

This research proposes a simulation framework to investigate how actions of stakeholders at this level of complexity affect system performance as well as the dynamics that exist between different models using concepts from the fields of operations engineering, engineering management, and multi-model simulation.

Viewing this complex model from a systems perspective calls for the integration of different levels of behaviors. Complex interactions exist among stakeholders, the environment and available technology. The presence of continuous and discrete behaviors coupled with stochastic and deterministic behaviors present challenges for using standalone simulation tools to simulate the business model.

We propose a framework that takes into account dynamic system complexity from a hybrid paradigm. The SCOR model is employed to map the business processes and it is implemented using agent based simulation and system dynamics. By combining system dynamics at the strategy level with agent based models of consumer behaviors, an accurate yet efficient representation of the business model that makes for sound basis of decision making can be achieved to maximize stakeholders’ utility.

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Approved for distribution by Dr. Luis Rabelo, Committee Chair, on March 20, 2016.

The public is welcome to attend.