



**Department of Mathematics, Statistics and Computer
Science**

St. Francis Xavier University

Presents

**An MDE Approach to Timed Compensable
Workflows**

by

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Workflows coordinate activities performed by various participants towards a business goal. A workflow consists of a sequence of connected steps depicting execution of a sequence of tasks. In most real-life cases, tasks are executed in parallel, or when certain conditions hold. During workflow execution, when a task fails it may be necessary to undo its execution and recover from all changes in the system which are introduced that execution. Hence workflows need to support *compensation* (or undoing) of already executed tasks in order to get rid of the side effects introduced by these tasks. In addition to compensation, workflows may need to support *time-awareness*. For instance, a task should be executed if another task's execution takes longer than t time unit. Workflow modelling languages are used to define workflow models. These languages are typically graphical, assisting domain experts in workflow specification and design. Workflow models are usually used as a description of a system's behaviour, and most importantly to de-couple a system's logic from its control flow. Following the MDE methodology, each workflow model has to conform to a metamodel which defines the syntax of the workflow's modelling language. This approach has several advantages. For instance, it opens for transformations between different workflow modelling languages, transformations to formal frameworks for the purpose of verification, generation of executable code for deployment on different application platforms, integration of workflow models defined by different languages, etc.

Refreshments will be served before the talk in AX24A