

PhD defense: 'Behavioral-based algorithms for process model simplification'

Data: martes, 5 outubro, 2021 -10:00 -
12:00

Lugar: Salón de actos del CiTIUS - Microsoft
Teams

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Idioma: Inglés

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The analysis of processes, either by Business Process Management (BPM) or Process Mining (PM) techniques, has become a must for every organization in order to improve their performance. The role of the process model, a diagrammatic representation of the process, is crucial in most of the BPM and PM phases. During past years, the amount of process-related data that has been gathered by information systems has greatly increased. With more information and behavior related to the processes being recorded, the apparition of complex process models ---with hundreds of edges and activities--- has become more common, hindering the analysis of the process during most stages of BPM and PM.

For this reason, the simplification of complex process models is a promising research field that can help the analysis of complex processes. In this PhD thesis, we explore the simplification of complex process models aiming to support as much behavior of the process as possible, while increasing the precision of the process model. We propose to retain the subprocesses that are being executed more frequently, on the one hand, and to avoid the support of the process model for the subprocesses that are observed fewer times, on the other hand. To achieve this, in this dissertation we present a set of behavioral-based algorithms to simplify complex process models by abstracting the infrequent behavior into artificial activities.

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