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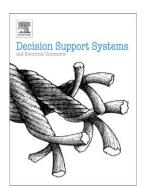
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## ACCEPTED MANUSCRIPT

# Fodina: a Robust and Flexible Heuristic Process Discovery Technique

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#### **Abstract**

In this paper, we present Fodina, a process discovery technique with a strong focus on robustness and flexibility. To do so, we improve upon and extend an existing process discovery algorithm, namely Heuristics Miner. We have identified several drawbacks which impact the reliability of existing heuristic-based process discovery techniques and therefore propose a new algorithm which is shown to be better performing in terms of process model quality, adds the ability to mine duplicate tasks, and allows for flexible configuration options.

Keywords: process mining, process discovery, event logs

#### 1. Introduction

The digital revolution that is taking place is significantly changing the way industry and people manage, store and analyze the vast amounts of data that is being generated and processed. Naturally, the challenge in this "big data" environment is to be able to extract value and insights from these

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