Data-aware Processes and their Executions: what's in for Knowledge Representation and Graphs

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Résumé The worlds of Business Process Management (BPM) and Process Mining (ProM) has had only few connections with those of Information Extraction (IE), Knowledge Management (KM), and Semantic Web (SW). Indeed their intersections amounted in few attempts to model semantic business processes or exploit ontologies, such as the BPMN ontology, to reason on semantically enriched process models. One of the reasons of this distance might lie in the fact that the business process oriented communities were mainly focused on handling temporally oriented entities such as activities and their temporal (work)flows relations, while the knowledge oriented ones were mainly focused on the modelling and handling of static entities and relations. In the last few years nonetheless the two groups have started expanding their interests and this may end up in better connecting with each others. Indeed, the business process communities have started looking more and more towards multi-dimensional processes, characterised by a complex network of entities that go beyond the typical event-based ones and include data objects, resources, actors, goals, among others. At the same time the knowledge oriented one has shown a growing interest in temporally denoted entities such as events, stories and narratives. In this talk I will use some of our works on Semantic Modelling and Analysis of Complex Data-aware Processes and their Executions to try to highlight possible connections between these two worlds and challenges where an interaction may provide mutual benefit.

Bio Chiara Ghidini is a senior Research Scientist at Fondazione Bruno Kessler (FBK), Trento, Italy, where she heads the Process & Data Intelligence (PDI) research unit and is responsible of the scientific ordination of the new centre of digital Health & Well Being. Her scientific work in the areas of Semantic Web, Knowledge Engineering and Representation, Multi-Agent Systems and Process Mining is internationally well known and recognised, and she has made significant scientific contributions in the areas of multi-context logics; deliberative resource bounded agents; ontology mappings and integration; collaborative modeling platforms, business process modelling, and predictive business process monitoring. She has been involved in a number of international research projects, among which the FP7 Organic.Lingua and SO-PC-Pro European projects and the current network of Excellence Humane-AINet, as well as industrial projects in collaboration with companies in the Trentino area.