Manuel Striani

Personal Data

Bio and education

Manuel Striani is currently a Ph.D. Student at University of Torino, Computer Science Department.

He has obtained his Master Degree at the Department of Sciences and Technological Innovation (DISIT) of the University of Eastern Piedmont on the 21th October 2015.

University career

2015-	Ph.D. Student, University of Turin - Computer Science Department
2012-2015	Master Student, University of Eastern Piedmont (DISIT – Computer Science Institute)

Main fields of interest

1. Artificial Intelligence
2. Medical Informatics
3. Knowledge Representation
4. Case Based Reasoning
5. Decision Support System
6. Semantic Process Mining
7. Computational Ontologies

Current issues of research

1. Mining, retrieval, analysis of business process for the improvement of health care

We propose the adoption of process mining techniques to learn process models from business process traces; the definition of proper similarity metrics for traces and business process models; the exploitation of these metrics within proper retrieval and ordering algorithms to support process analysis; testing will take place in real world domains (e.g. stroke management) optimization of process task scheduling in a cloud computing environment). Application of process mining techniques to process logs created from the information services of hospitals, to extract the process model by which patients with specific conditions (e.g. stroke patients, pre-term born babies or accident victims) are treated. This allows to understand what is really done in the structure, in order to compare this model with the procedures that are expected to be performed by the staff. This comparison highlights the differences that can help understanding why the expected procedures are not properly managed, obtaining useful information for the optimization and improvement of the care process.

2. Towards a Knowledge-Intensive and Technology-enhanced Patient Emergency Management

Patients in emergency (e.g. stroke patients, pre-term born babies or accident victims) are normally taken to the closets hospital structure, which might be insufficiently equipped, in terms of human or instrumental resources, to address their needs. In these situations, the stabilization process may be suboptimal because patients has to be stabilized, and then carried to a larger and more suitable health care center, where specialized physicians and all necessary diagnostic/therapeutic devices are available. During transportation to a larger center by ambulance, their parameters are monitored, but the time series are not recorded and not accessible in real time. We propose tools and methodologies to overcome these issues. The work will advance research in process mining, case based reasoning, time series retrieval.

TOP FIVE PAPERS

1. M. Canonico, S. Montani, M. Striani, TEEM: a mobile app for technology-enhanced emergency management, Proc. EAI International Conference on IoT Technologies for Helthcare, Vasteras, October 2016, Springer, Berlin, LNICST 187, M. Ahmed et al eds., Springer, Berlin, 1-6, 2017

2. Stefania Montani, Massimo Canonico, Manuel Striani: SUPPORTING DATA COMMUNICATION AND PATIENT ASSESSMENT DURING EMERGENCY TRANSPORTATION. Report number: TR-INF-2016-09-03-UNIPMN, Affiliation: DiSIT, Computer Science Institute, UPO