

First International Workshop on Process-Oriented Data Science for
Health Care (PODS4H)

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1st International Workshop on Process-Oriented Data Science for Healthcare (PODS4H18)

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The world's most valuable resource is no longer oil, but data. The ultimate goal of data science techniques is not to collect more data, but to extract knowledge and insights from existing data in various forms. For analyzing and improving processes, event data is the main source of information. In recent years, a new discipline has emerged combining traditional process analysis and data-centric analysis: Process-Oriented Data Science (PODS). The interdisciplinary nature of this new research area has resulted in its application for analyzing processes in different domains such as education, finance, and especially healthcare.

The International Workshop on Process-Oriented Data Science for Healthcare 2018 (PODS4H18) aimed at providing a high-quality forum for interdisciplinary researchers and practitioners (both data/process analysts and a medical audience) to exchange research findings and ideas on healthcare process analysis techniques and practices. PODS4H research includes a wide range of topics from process mining techniques adapted for healthcare processes, to practical issues on implementing PODS methodologies in healthcare centers' analysis units. For more information visit pods4h.com

The first edition of the workshop attracted a remarkable number of high quality submissions, from which 9 Regular Papers and 4 Success Cases were selected for presentation. The papers included a wide range of topics: process-oriented dashboards for operation room analysis, process mining for medical training, conformance checking for melanoma surveillance, drug use patterns, trauma patients transport, interactive analysis of emergency processes, event log improvement based on indoor location system data, care pathway simulation, and emergency room episode analysis. The success cases include a framework for managing data quality issues when performing process mining on health records, the combination of real time location systems with process analysis, a methodology for applying process mining in the emergency room, and the NETIMIS care pathway simulation tool. The workshop also hosted a panel where several topics were discussed, including new projects and initiatives in the area.

This edition of the workshop included two awards to the best regular paper and the best success case. The PODS4H18 Best Paper Award was given to

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the “Tailored Process Feedback through Process Mining for Surgical Procedures in Medical Training” by Ricardo Lira, Juan Salas-Morales, Rene de La Fuente, Ricardo Fuentes, Marcos Sepúlveda, Michael Arias, Valeria Herskovic, and Jorge Munoz-Gama. The PODS4H18 Best Success Case Award was given to Applying Value-Based Healthcare in Hospital Management with Process Mining and Real Time Location Systems” by Carlos Fernandez-Llatas, Vicente Traver, Salvador Vera, Eduardo Monton and Jordi Rovira. The price included a voucher for a professional Data Scientist Training, provided by the Celonis Academic Alliance.

The workshop was an initiative of the Process-Oriented Data Science for Healthcare Alliance. The goal of this international alliance is to promote the research, development, education and understanding of process-oriented data science in healthcare. For more information about the activities and its members visit pods4h.com/alliance

The organizers would like to thank all the Program Committee members for their valuable work in reviewing the papers, and the BPM 2018 organizing committee for supporting this successful event.

Workshop Organizers

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