

HEDA 2023

The 3rd International Workshop on Health Data

Preface

This volume contains the proceedings of HEDA 2023, the 3rd edition of the International Health Data Workshop. The workshop was held on 21 July 2023 in Leicester, United Kingdom, as a co-located event at STAF 2023.

Health data may be broadly conceived as data pertaining to the health of an individual or population. As such it includes not only findings documented by physicians and other clinical staff, but also a vast array of other data such as: information gathered by schools regarding the prevalence of infectious diseases; fitness, dietary and other information on smart devices, and so on. More and more this data is in electronic form and increasingly there are public archives that contain vast amounts of it. The potential for learning from this data is tremendous. The need to improve the health services delivery and lower costs is critical across the globe. However, due to the semantic heterogeneity and the distributed storage of health data, we still do not have a unified approach and use divide-and-conquer approaches instead.

The HEDA workshop series aims to bring together academics, practitioners and other interested attendees for presentations and discussions in the domain of health with special focus on health data modelling, health processes description and analytics. Our goal is to develop the necessary formalisms, techniques and tools to extract information from health data as considered above.

HEDA 2023 invited paper submission, including position and work-in-progress papers, about unpublished research covering all aspects of health data modelling, interoperability and analytics. The workshop received eight submissions. Each submission was peer-reviewed by program committee members. A total of seven papers, three regular and four short, were accepted and presented at the workshop and are included in this volume. The workshop program included an invited talk by the ECMFA keynote speaker, Andrzej Wąsowski, as well as presentations and a panel discussion on the current status and future direction of health data modelling, interoperability and analytics by Yngve Lamo, Martin Leucker and Gunnar Phio.

The organisers wish to thank the authors and the participants of the workshop for making this event possible. Our thanks also goes to the program committee members. Without their great efforts in ensuring the quality of the papers, this workshop would not be as successful as it was. We are indebted to the EasyChair system for providing support throughout the paper submission and review process. We would also like to thank the organizers of STAF 2023 for facilitating the workshop.

July, 2023

Wendy MacCaull and Violet Ka I Pun
(HEDA 2023 Chairs)

HEDA 2023: the 3rd International Workshop on Health Data (<https://conf.researchr.org/home/staf-2023/heda-2023>).
Co-located with STAF 2023, 18–21 July, Leicester, United Kingdom.



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 CEUR Workshop Proceedings (CEUR-WS.org)

Program Committee

The program committee consisted of experts in various fields related to computer science, software engineering and health informatics. The committee members who represent various universities and institutions located in twelve different countries, are listed below:

Paulo Barbosa	NUTES, Paraiba State University (UEPB), BR
Vincenzo Ciancia	Institute for Information Science and Technologies – CNR, IT
Gayo Diallo	University of Bordeaux, FR
Lukas Fischer	Software Competence Center Hagenberg GmbH, AT
Jose Garcia-Alonso	Universidad de Extremadura, ES
Thomas H. Hildebrand	University of Copenhagen, DK
Craig Kuziemsky	MacEwan University, CA
Yngve Lamo	Western Norway University of Applied Sciences, NO
Martin Leucker	University of Lübeck, DE
Zhiming Liu	Southwest University, CN
Wendy MacCaull	St Francis Xavier University, CA
Dominique Mery	LORIA, Université de Lorraine and Telecom Nancy, FR
Deshen Moodley	University of Cape Town, ZA
Liam Peyton	University of Ottawa, CA
Gunnar Piho	Tallinn University of Technology, EE
Violet Ka I Pun	Western University of Applied Sciences, NO
Fazle Rabbi	University of Bergen, NO
Manfred Reichert	Ulm University, DE
Peeter Ross	Tallinn University of Technology, EE
Bian Yang	Norwegian University of Science and Technology, NO

Accepted Papers

- Evaluation of Data Quality in the Estonian National Health Information System for Digital Decision Support
Markus Bertl, Kristian Juha Ismo Kankainen, Gunnar Piho, Dirk Draheim and Peeter Ross
- Clinical Data Modeling Combining Agent-Based and Epidemiological Models
Denisse Kim, Manuel Campos, Bernardo Canovas-Segura and Jose M. Juarez
- Towards a Framework for Visualization and Analysis of Eye Tracking Data for Functional Vision Screening
Qasim Ali, Carsten G. Helgesen and Ilona Heldal
- Intelligent Tracing and Process Improvement of Pathology Workflows using Character Recognition
Markus Hatlem, Fazle Rabbi, Patrick Stünkel and Friedemann Leh
- Analyzing Eye Tracking Data using Symbolic Aggregate Approximation
Carsten G. Helgesen, Atle Geitung, Ilona Heldal and Henrik Borgli
- Automatic Inference of Smart Data Discovery Interfaces for Rare Disease Datasets
Artur Boronat, Adekunle Ademeyo, Mehdi Mehtarizadeh and Steffen Zschaler
- Maintaining Data Integrity in Electronic Health Records with Hyperledger Fabric
Marten Kask, Toomas Klementi, Gunnar Piho and Peeter Ross