

## Preface

This volume includes the proceedings of the First edition of the International Workshop on “Valuable visualization of healthcare information: from the quantified self data to conversations” (VVH 2016), which took place on the 7<sup>th</sup> of June, 2016 during the ACM International Working Conference on Advanced Visual Interfaces (AVI 2016), Bari, Italy [1].

The workshop focused on the role of interactive data visualization tools by which people can gain insight from healthcare data. These data encompass the output of sensors, the structured and unstructured content of electronic health records, personal health records, diaries, registries, as well as the messages exchanged within vertical social media, email correspondences between patients and their doctors, and clinical discussions among different specialists to reach a diagnosis or decide a therapy. On the other hand, the intended users of these tools encompass medical doctors, nurses, managers of healthcare facilities and agencies, policy makers and common citizens [2]. The variety of healthcare data, the heterogeneity of the users involved and, above all, their lay nature with respect to data-oriented and e-literacy skills call for tools that are easy-to-use, easy-to-learn, and easy-to-tailor in multiple contexts and situations of unintended use and needs. A multidisciplinary approach has been recently proposed to study and design these tools, called Human-Data Interaction [2], which is at the intersection between the research areas of Data Visualization and Human-Computer Interaction. The workshop discussion, documented in these proceedings, is a contribution in this line of research toward a sounder and more human-oriented validation of visualization tools, in critical domains like healthcare [3].

The volume includes six papers, selected after a review process by two Program Committee members. All papers are improved and extended versions of the papers presented and discussed at the workshop. They contribute in different ways to the following themes:

- Clinical dashboards and clinical decision support systems;
- End-user development applied to the Electronic Health Record;
- Data visualization as a trigger for patient-doctor communication;
- Reading and literacy levels to interpret data visualizations;
- Visual analytics for decision making;
- Self-monitoring and powerful visual feedback;
- Tensions between the data value-driven and data quality-driven evaluation of interactive visualization tools;
- Tensions between adaptive and adaptable interfaces, open data and meaningful information, big data and additional effort by health practitioners;
- Human-Data Interaction and evidence-based approaches.

We are grateful to the members of the Program Committee and to all of the authors for contributing to the workshop’s success and to this volume. We finally wish to thank

the AVI 2016 Conference Chairs and Workshop Chairs for giving us the possibility to organize the workshop. The support of the EasyChair system for managing submissions and reviews is acknowledged.

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## References

- [1] Cabitza, F., Locoro, A., Fogli D., Giacomini, M. 2016. Valuable Visualization of Healthcare Information: from the quantified self data to conversations. In: *Proceedings of AVI 2016, International Working Conference on Advanced Visual Interfaces*, Bari, Italy 7-10 June 2016. ACM Press, pp. 376-380.
- [2] Cabitza, F., Locoro, A. 2016. Human-Data Interaction in Healthcare: Acknowledging Use-related Chasms to Design for a Better Health Information. In: *Proceedings of the 8th IADIS International Conference on e-Health 2016, Part of the Multi Conference on Computer Science and Information Systems, MCCSIS 2016*.
- [3] Ammenwerth, E., & Rigby, M. (Eds.). (2016). *Evidence-Based Health Informatics: Promoting Safety and Efficiency Through Scientific Methods and Ethical Policy* (Vol. 222). IOS Press.

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