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Vincenzo Gervasi · Andreas Vogelsang (Eds.)

Requirements Engineering: Foundation for Software Quality

28th International Working Conference, REFSQ 2022
Birmingham, UK, March 21–24, 2022
Proceedings

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Preface

This volume contains the papers presented at REFSQ 2022, the 28th International Working Conference on Requirements Engineering: Foundation for Software Quality, held on March 21–24, 2022 in Aston, Birmingham, UK. As we write these lines, it seems highly likely that REFSQ 2022 will be held in-person as planned, for the first time after a two-year hiatus forced by the COVID-19 pandemic which has impacted so many aspects of our lives.

We, on behalf of the entire REFSQ community, would like to take this chance to thank the many colleagues who, in their various roles, have dedicated their time, energy, and ingenuity in the last two years to organizing REFSQ 2020 and 2021 in such difficult conditions and with so much uncertainty.

The REFSQ series was established in 1994, at first as a workshop series, and since 2010 in the “working conference” format, with ample time for presentations and substantial discussions of each contribution. It is often considered among the major international scientific events in Requirements Engineering, and the only one to be permanently located in Europe, with a special connection to European industry and academia. The need for ever-increasing levels of quality in requirements has not diminished in the 28 years since the first REFSQ; on the contrary, requirements are pervasive in the design, implementation, and operation of software systems and related services that impact the lives of billions.

The special theme for REFSQ 2022 was “Explainability in Requirements Engineering”. As the impact of decisions taken by software systems increases, so does our duty, as requirements engineers, to investigate how such systems can be held accountable, and their operations made understandable to those affected by them, as part of our collective social responsibility.

The call for papers explicitly solicited contributions on how to elicit, specify and validate requirements for explainability in (and thus accountability of) software system, and how to design and implement systems whose behavior in specific instances is explainable, back to the requirements whose implementation caused the behavior, to the stakeholders expressing those requirements, and to their rationale for supporting those requirements. Among others, the special theme included issues such as:

- What is Explainability and who needs it
- How to elicit and specify Explainability
- How to check/assure Explainability
- Product vs. Process Explainability
- Consequences of low Explainability
- Self-Explainable Systems
- Explainability of Design Decisions

We were very happy to observe that the challenge was promptly taken up by the research community, with many submissions focusing on exactly those issues. Several

of those contributions were accepted for presentation at the conference, and are now part of this volume.

In response to the Call for Papers, we received 50 abstracts, which resulted in 48 full papers. Three submissions were withdrawn by the authors prior to review, and each of the remaining 45 was reviewed by three program committee members, extensively discussed among the reviewers, and then brought for additional discussion if needed and final decision at the plenary program committee meeting that was held (online) on December 16, 2021. Six papers for which no consensus had been reached were discussed in special depth, with two of them accepted on the condition that certain improvements be made (those underwent an additional check by a PC member before final acceptance).

Overall, 19 papers were finally accepted for publication, and are now collected in this volume. In particular, based on paper category, the acceptance ratios are as follows:

- Scientific Evaluation (long): 20 submissions, 10 accepted (50%)
- Technical Design (long): 8 submissions, 2 accepted (25%)
- Vision (short): 5 submissions, 1 accepted (20%)
- Research Preview (short): 12 submissions, 6 accepted (50%)

The overall acceptance rate was thus 42% (19/45), almost identical for long and short papers.

As in previous years, the conference was organized as a three-day symposium (Tuesday to Thursday), with one day devoted to industrial presentations (in a single track), and two days of academic presentations (in two parallel tracks). In addition to paper presentations and related discussions, the program included keynote talks, a Poster & Tools sessions, and awards to recognize the best contributions in various categories. On the Monday before the conference, four co-located events were held: NLP4RE (5th Workshop on Natural Language Processing for Requirements Engineering) organized by Fabiano Dalpiaz, Davide Dell’Anna, Sylwia Kopczyńska and Lloyd Montgomery; RE4AI (3rd International Workshop on Requirements Engineering for Artificial Intelligence) organized by Renata Guizzardi, Jennifer Horkoff, Anna Perini and Angelo Susi; Design Thinking (International Workshop on Design Thinking, Design Fiction and Requirements Engineering) organized by Andrew Darby, Peter Sawyer, Wei Liu and Nelly Bencomo; and the REFSQ Doctoral Symposium, organized by Liliana Pasquale and Andrea Zisman. The proceedings of co-located events and the Poster & Tools track are published in a separate volume via CEUR.

We would like to thank all members of the Requirements Engineering community who prepared a contribution for REFSQ 2022: there would be no progress in our discipline without the talent, intelligence, and effort that so many brilliant researchers dedicated to the field. We would also like to thank members of the Program Committee and additional reviewers for their invaluable contribution to the selection process.

Special thanks are due to all the colleagues that served in various distinguished roles in the organization of REFSQ 2022 – your help in assembling a rich program has been invaluable. The REFSQ Steering Committee has provided excellent support and guidance throughout the process; we have found our path well marked by previous PC members who happily shared their experiences. Finally, we would like to thank the Local Organizers Nelly Bencomo and Pete Sawyer; the Steering Committee Chair Anna Perini

and Vice-Chair Fabiano Dalpiaz, and the head of the Background Organization, Xavier Franch, for making our regular organizational meetings so enjoyable that we *almost* looked forward to each subsequent one with pleasurable anticipation.

Last but not least, we would like to thank you, the reader. You are the reason for this volume to exist. We hope you will find its contents interesting, useful, stimulating, and inspirational.

February 2022

Vincenzo Gervasi
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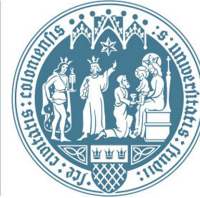
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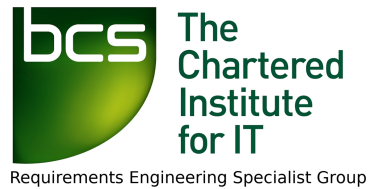
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