Preface

Leen Lambers[1], Meng Wang[2]

[1]*Hasso-Plattner-Institut für Digital Engineering gGmbH, Campus Griebnitzsee, Universität Potsdam, Prof.-Dr.-Helmert-Straße 2 - 3, 14482 Potsdam*
[2]*Merchant Venturers Building, Woodland Road, Clifton, Bristol, BS8 1UB*

This volume contains the proceedings of Bx 2021, the 9th International Workshop on Bidirectional Transformations. Bx 2021 was planned to take place at the Western Norway University of Applied Sciences in Bergen, Norway, as part of STAF (Software Technologies: Applications and Foundations), a federation of leading conferences on software technologies. Due to the global situation of the pandemic and the restrictions still in place, the workshop ran virtually as part of the STAF conference on June 21, 2021.

Bidirectional transformations (bx) are a mechanism for maintaining the consistency between two or more related (and heterogeneous) sources of information (i.e., relational databases, software models and code, or any other artefacts following standard or domain-specific formats). The strongest argument in favour of bx is its ability to provide a synchronization mechanism that is guaranteed to be correct by construction. Bx has been attracting a wide range of research areas and communities, with prominent presence at top conferences in several different fields (namely databases, programming languages, software engineering, and graph transformation). Nowadays, the fast-growing complexity of software- or data-intensive systems has forced the industry and the academy to use and investigate different development techniques to manage the many different aspects of the systems. Researchers are actively investigating the use of bidirectional approaches to tackle a diverse set of challenges with various applications including model-driven software development, visualization with direct manipulation, big data, databases, domain-specific languages, serializers, and data transformation, integration and exchange. Bx 2021 is a dedicated venue for bx in all relevant fields and is part of a workshop series that was created in order to promote cross-disciplinary research and awareness in the area. As such, since its beginning in 2012, the workshop has rotated between venues in different fields.

The workshop solicited five categories of submissions: full research papers, tool papers, experience reports, short papers, and talk proposals. Bx 2021 attracted 7 submissions, and the Program Committee selected two full research papers, one tool paper and two short papers for publication. One of the submissions was accepted for presentation at the workshop. All submissions were reviewed thoroughly by at least three Program Committee members. The topics of the accepted papers range over a wide spectrum, from the realization of bx using lenses, over new bx features, to bx applications. The Bx 2021 program also included a keynote,

given by Edward Kmett, a researcher at the Machine Intelligence Research Institute and Senior Technical Advisor at Groq.