

Preface

A recent forecast from the International Data Corporation (IDC) envisions that 41 billion Internet-of-Things (IoT) endpoints will be in use by 2025¹, representing great business opportunities. The next generation IoT systems needs to perform distributed processing and coordinated behavior across IoT, edge and cloud infrastructures, manage the closed loop from sensing to actuation, and cope with vast heterogeneity, scalability and dynamics of IoT systems and their environments.

On the one hand, Model-driven engineering (MDE) techniques can support the design, deployment, and operation of IoT systems and smart city projects. For instance, to manage abstractions in IoT systems definition and to provide means to automate some of the development and operation activities of IoT systems, e.g., domain specific modeling languages can provide a way to represent different aspects of systems leveraging a heterogeneous software and hardware IoT infrastructure and to generate part of the software to be deployed on it. On the other hand, the application of modeling techniques in the IoT poses new challenges for the MDE community.

The International Workshop on Model-Driven Engineering for the Internet of Things (MDE4IoT) is one of the most accurate venues to offer researchers a dedicated forum to discuss fundamental as well as applied research that attempts to exploit model-driven techniques in the IoT domain. The program of this fourth edition consisted of the accepted papers presentation and of a keynote given by Pankesh Patel. The workshop has been held has a half-day online event of the Software Technologies: Applications and Foundations (STAF) conference on the June 22nd, 2020.

We would like to thank the STAF 2020 organization for giving us the opportunity to organize this workshop, especially to the workshop chairs Loli Burgueo (Open University of Catalonia, Spain) and Lars Michael Kristensen (Western Norway University of Applied Sciences, Norway), who were always very helpful and supportive. Many thanks to all those that submitted papers, and particularly to the presenters of the accepted papers. We also warmly thank Pankesh Patel for providing a very inspiring keynote talk and the many participants who contributed to the open discussions with their comments and experience. Last but not least, our thanks go to the reviewers and the members of the Program Committee, for their timely and accurate reviews and for their help in choosing and suggestions for improving the selected papers.

¹<https://www.idc.com/getdoc.jsp?containerId=prUS45213219>

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Federico CICCOTZI
Nicolas FERRY
Sébastien MOSSER
Arnor SOLBERG
Manuel WIMMER

Program Committee

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