2018 ACM/IEEE International Workshop on Software Engineering for Science SE4Science 2018

Table of Contents

Message from the ICSE 2018 General Chair	
Message from the SE4Science 2018 Co-Chairs	
Organizing Committee for SE4Science 2018	
Program Committee for SE4Science 2018	
ICSE 2018 Sponsors and Supporters	xii
Improving the Quality of Software	
Hierarchical Metamorphic Relations for Testing Scientific Software Xuanyi Lin (University of Cincinnati), Michelle Simon (Environmental Protection Agency), and Nan Niu (University of Cincinnati)	1
Methodology for Building Granular Testing in Multicomponent Scientific Software	9
The Software Engineering Initiative of DLR: Overcome the Obstacles and Develop Sustainable Software Carina Haupt (German Aerospace Center), Michael Meinel (German Aerospace Center), and Tobias Schlauch (German Aerospace Center)	. 16
Improving the Practice of Research	
(Automated) Literature Analysis - Threats and Experiences Yusra Shakeel (University of Magdeburg and METOP GmbH), Jacob Krüger (University of Magdeburg and Harz University), Ivonne von Nostitz-Wallwitz (University of Magdeburg and METOP GmbH), Christian Lausberger (METOP GmbH), Gabriel Campero Durand (University of Magdeburg), Gunter Saake (University of Magdeburg), and Thomas Leich (Harz University and METOP GmbH)	20
Fundamentals of Programming for Science and Engineering Valerie Maxville (Curtin University)	28
Beyond Software Carpentry	32
Author Index	. 41