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# Generative and Transformational Techniques in Software Engineering III

International Summer School, GTTSE 2009  
Braga, Portugal, July 6-11, 2009  
Revised Papers

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# Preface

The third instance of the international summer school on Generative and Transformational Techniques in Software Engineering (GTTSE 2009) was held in Braga, Portugal, July 6–11, 2009. In this volume, you find revised and extended lecture notes for most of the long and short summer-school tutorials as well as a small number of peer-reviewed papers that originated from the participants' workshop.

The mission of the GTTSE summer school series is to bring together PhD students, lecturers, as well as other researchers and practitioners who are interested in the generation and the transformation of programs, data, models, metamodels, documentation, and entire software systems. This mission crosscuts many areas of software engineering, e.g., software reverse and re-engineering, model-driven engineering, automated software engineering, generic language technology, software language engineering—to name a few. These areas differ in interesting ways, for example, with regard to the specific sorts of metamodels (or grammars, schemas, formats, etc.) that underlie the involved artifacts, and with regard to the specific techniques that are employed for the generation and the transformation of the artifacts.

The first two instances of the school were held in 2005 and 2007, and their post-proceedings appeared as volumes 4143 and 5235 in Springer's *LNCS* series.

The 2009 instance of GTTSE offered eight long tutorials, given by renowned representatives of complementary approaches and problem domains. Each tutorial combined foundations, methods, examples, and tool support. The program of the summer school featured another six short(er) tutorials, which presented more specific contributions to generative and transformational techniques. All tutorial presentations were invited by the organizers to complement each other in terms of the chosen application domains, case studies, and the underlying concepts. Yet another module in the program was a Research 2.0 event which combined tutorial-like aspects with a great discussion.

The program of the school also included a participants' workshop to which all students had been asked to submit an extended abstract beforehand. The Organizing Committee reviewed these extended abstracts and invited ten students to present their work at the workshop. The quality of this workshop was exceptional, and two awards were granted by a board of senior researchers that was formed at the school.

The program of the school remains available online.<sup>1</sup>

This volume contains revised and extended lecture notes for most of the long and short summer-school tutorials as well as a small number of peer-reviewed

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<sup>1</sup> <http://gttse.wikidot.com/2009>

papers that originated from the participants' workshop. Each of the included seven long tutorial papers was reviewed by two members of the Scientific Committee of GTTSE 2009. Each of the included six short tutorial papers was reviewed by three members. The tutorial papers were primarily reviewed to help the authors with compiling original, readable and useful lecture notes. The three included participant contributions were peer-reviewed with three reviews per paper. For all papers, two rounds of reviewing and revision were executed.

We are grateful to our sponsors for their support and to all lecturers and participants of the school for their enthusiasm and hard work in preparing excellent material for the school itself and for these proceedings. Thanks to their efforts the event was a great success, which we trust the reader finds reflected in this volume. Our gratitude is also due to all members of the scientific committee who not only helped with the labor-intensive review process that substantially improved all contributions, but also sent their most suitable PhD students to the school.

The next edition of GTTSE, GTTSE 2011, will be organized in Braga again, and it will be co-located with the 4th International Conference on Software Language Engineering. This co-location will provide for excellent synergies.

October 2010

João M. Fernandes  
Ralf Lämmel  
João Saraiva  
Joost Visser



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