

Preface

Proceedings ACM Student Research Competition at MoDELS 2015

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1 Introduction

MoDELS 2015 hosted the ACM Student Research Competition, which is sponsored by Microsoft Research, for the 3rd time. The Student Research Competition (SRC) is a forum for undergraduate and graduate students to showcase their research, exchange ideas, and improve their communication skills while competing for prizes. The Student Research Competition has the following goals:

- to give undergraduate and graduate students the opportunity to share their research ideas and results in a special forum that provides visibility for their work;
- to give students the opportunity to meet with and interact with conference attendees to share ideas, gain new insights, and understand possible practical applications;
- to give students an opportunity to sharpen their communication skills, including visual, organizational, oral, and aural modalities;
- to provide detailed feedback to students about their research and presentation, from a panel of distinguished judges from industry and academia to recognize and reward outstanding student research.

The contest has two categories, one for undergraduate research and the other for graduate research³. For works accepted to the MoDELS 2013 Student Research Competition, a travel grant of up to US \$500 were awarded to help cover travel expenses to the conference. The top three winners at MoDELS 2013 in each category (undergraduate and graduate) received prizes of US \$500, US \$300, and US \$200, respectively. Moreover, all winners received an award plaque and two-year complimentary ACM membership with a subscription to ACM Digital Library. Winners were recognized during the closing plenary session of the MoDELS 2013 conference.

2 Selection procedure

The winners selection encompassed three steps as summarized in the following.

³ For more information about the ACM SRC please refer to <http://src.acm.org/>

Abstract submission To participate in the competition, students submitted a research abstract related to the main themes of the conference and describing the research problem and motivation, background and related work, approach and uniqueness, results, and contributions. Thirteen contributions were submitted and a panel of experts (see Section 4) reviewed the submissions and selected eleven students to participate in the second round of the competition, which was held in Ottawa. The abstracts that were selected and are included in this document encompass a wide variety of subjects in the software modeling paradigm. They are listed below.

Graduate students category

- *Generating Examples for Knowledge Abstraction in MDE: a Multi-Objective Framework*, Edouard Batot, DIRO, Université de Montréal, Canada
- *Testing M2M/M2T/T2M Transformations*, Loli Burgueno, University of Malaga, Spain
- *Automated Metamodel/Model Co-Evolution using a Multi-Objective Optimization Approach*, Wael Kessentini, University of Montreal, Canada
- *Change-driven Incremental Symbolic Execution of Evolving State Machines*, Amal Khalil, Queen's University, Canada
- *Explicitly Modelling Model Debugging Environments*, Simon Van Mierlo, University of Antwerp, Belgium
- *Generating model with uncertainty by means of JTL*, Gianni Rosa, University of L'Aquila, Italy
- *Architectural and Analytic Integration of Cyber-Physical System Models*, Ivan Ruchkin, Carnegie Mellon University, USA
- *Model-Based Reuse of APIs using Concern-Oriented*, Matthias Schoettle, McGill University, Canada
- *Automatic Generation of Transformations for Software Process Tailoring*, Luis Silvestre, University of Chile, Chile
- *Foundations of a Multi-Paradigm Modelling Tool*, Yentl Van Tendeloo, University of Antwerp, Belgium
- *A Behavioral Programming Approach to Search Based Software Engineering*, Moshe Weinstock, Ben-Gurion University of the Negev, Israel

Undergraduate students category: None

Poster session It took place in Ottawa and students had the opportunity to present their research to conference attendees and leading experts in the software engineering fields, including the SRC committee. Judges reviewed the posters and spoke to participants about their research. The judges evaluated the research (quality, novelty, and significance) and the presentation of the research (poster, discussion).

Presentation session All students gave short presentation of their research in a special session at the MoDELS 2015 conference. After each presentation, a short question and answer session occurred. Evaluations were based on the presenter's knowledge of his/her research area, contribution of the research, and the quality of the oral and visual presentation.

3 Winners

The following winners were selected by the selection procedure previously summarized:

Graduate students category

1. *Architectural and Analytic Integration of Cyber-Physical System Models*, Ivan Ruchkin, Carnegie Mellon University, USA
2. *Change-driven Incremental Symbolic Execution of Evolving State Machines*, Amal Khalil, Queen's University, Canada
3. *Testing M2M/M2T/T2M Transformations*, Loli Burgueno, University of Malaga, Spain

4 Acknowledgement

We would like to thank everyone who has made this special event possible. We are obliged to the students that contributed to have a successful event, and to Tim Lethbridge that as MoDELS2015 general chair strongly supported the event. The following judges made an excellent job in the different phases of the selection procedure:

- Silvia Abrahao (Universitat Politecnica de Valencia, Spain),
- Joao Araujo (Universidade Nova de Lisboa, Portugal),
- Zinovy Diskin (University of Waterloo, Canada),
- Geri Georg (Colorado State University, USA),
- Emilio Insfran (Universitat Politecnica de Valencia, Spain).
- Yvan Labiche (Carleton University, Canada),
- Lior Limonad (IBM, Israel),
- Alfonso Pierantonio (University of L'Aquila, Italy),
- Ivan Porres (Abo Akademi University, Finland),
- Gianna Reggio (DISI, Universita' di Genova, Italy),
- Houari Sahraoui (DIRO, Universite De Montreal, Canada),
- Martina Seidl (Johannes Kepler University Linz, Austria),
- Arnor Solberg (SINTEF, Norway),
- Harald Stoerrle (Danmarks Tekniske Universitet, Denmark),
- Arnon Sturm (Ben-Gurion University, Israel),
- Jon Whittle (Lancaster University, UK),
- Steffen Zschaler (King's College, London, UK),

Silvia Abrahao, Mira Balaban, Geri Georg, Martin Gogolla, Emilio Insfran, Martina Seidl, Arnor Solberg, and Arnon Sturm participated in a physical meeting during MoDELS 2015 and settled the final results.