The 14th Workshop on Domain-Specific Modeling

http://www.dsmforum.org/events/DSM14

SPLASH
21 October 2014
Portland, OR USA
Objectives

- Share new insights and observations
- Identify new areas of DSM research and practice needs
- Intensive collaborative sessions
- Attempt to discuss, share and solve challenging problems
- See others’ work, DSM languages, tools etc.
- Have something to report to the community
- Have fun!
About past workshops

- BOF at OOPSLA’00
- First DSVL workshop at OOPSLA’01
  ...

- 13th DSM workshop at SPLASH’13

- Special issues on Domain-Specific Modeling
What is Domain-Specific Modeling

- Captures domain knowledge (as opposed to code)
  - Uses domain abstractions
  - Applies domain concepts and rules as modeling constructs
  - Narrow down the design space
  - Focus on single range of products
- Lets developers design products using domain terms
  ➔ Apply familiar terminology
  ➔ Solve the RIGHT problems!
  ➔ Solve problems only ONCE!
- Often aims at generation of full production code
Some demonstrated languages
About submissions and review

- 15 submissions
- 36 authors
- 11 countries
- 3 reviews/paper
- 8 accepted
- 2 visa issues

Program Committee

- Robert Baillargeon, Sodius
- Ankica Barisic, Universidade Nova de Lisboa
- Christian Berger, University of Gothenburg
- Marco Brambilla, Politecnico di Milano
- Dejiu Chen, KTH
- Joachim Denil, McGill University
- James Hill, Indiana University
- Steven Kelly, MetaCase
- Heiko Kern, University of Leipzig
- Mikko Riepula, Aalto University
- Yu Sun, Cal Poly Pomona
- Eugene Syriani, University of Montreal
- Naoyasu Ubayashi, Kyushu University
- Timo Wegeler, Fraunhofer
Schedule and format

- 08:30 – Overview and introductions
- 09:00 – Paper presentations: Topics in Model Transformation
- 10:00 – Break
- 10:30 – Paper presentations: Tools and Language Design
- 11:10 – Group Photo and Group Topic Selection
- 12:00 – Lunch
- 13:30 – Paper presentations: Modeling Cyber-Physical Systems
- 14:10 – Group work begins
- 15:00 – Break
- 15:30 – Group work continues
- 16:15 – Group work reporting and discussion
- 16:45 – Wrap-up and closing
Publishing results

- Workshop web-site
  - www.dsmforum.org/events/DSM14
  - Papers and Presentations
  - Workgroup results
  - Photos

- Twitter: #dsm14

- ACM DL
  - Due in late November; more details forthcoming
  - The SIGPLAN WORD/TeX template must be used: http://www.sigplan.org/authorInformation.htm
    - Authors are instructed to use the 9 pt template & formatting (per the SPLASH'13 chairs).
    - 6 pages for full papers
Program 1/3: Topics in Model Transformation

- **08:30** Introduction

- **Session Chair: Christian Berger**

- **09:00** A Closed-loop Model-based Design Approach Based On Automatic Verification and Transformation
  - Kun Zhang and Jonathan Sprinkle

- **09:20** Generating Code using Reflection in the Context of Computer-assisted Legacy System Analyses and Reengineering
  - Peter Krall

- **09:40** Omniscient Debugging for Model Transformations
  - Jonathan Corley, Brian Eddy and Jeff Gray

- **10:00** Break
Program 2/3: Tools and Language Design

- **Session Chair:** Jonathan Sprinkle

- **10:30** Development of Modelling Frameworks and Viewpoints with Kitalpha
  - Benoit Langlois, Daniel Exertier and Boubekeur Zendagui

- **10:50** Mapping-Based Exchange of Models Between Meta-Modeling Tools
  - Heiko Kern, Vladimir Dimitrieski, Fred Stefan and Milan Celikovic

- **11:10** Group Photo and Group Topic Selection
  - Using https://todaysmeet.com

- **12:00** Lunch
Program 3/3: Modeling Cyber-Physical Systems

- Session Chair: Jonathan Corley

- 13:30 Generating Model Transformations for Mending Dynamic Constraint Violations in Cyber Physical Systems
  - Sean Whitsitt, Jonathan Sprinkle and Roman Lysecky

- 13:50 SenseDSL: Automating the Integration of Sensors for MCU-based Robots and Cyber-Physical Systems
  - Christian Berger

- 14:10 Group Work Begins
Introductions

- Please take 10-15 seconds, and say a few words about yourself, and where you’re from
- Keep it short!