

# The 18<sup>th</sup> Workshop on Domain-Specific Modeling

<http://www.dsmforum.org/events/DSM21>

<https://2021.splashcon.org/home/dsm-2021>

SPLASH

18 October 2021

Virtual (Chicago)

# Objectives

- Attempt to discuss, share and solve challenging problems
- See others' work, DSM languages, tools etc.
- ~~Intensive collaborative sessions with group work~~
- Have something to report to community
- Have fun!

# About DSM workshops



- BOF at OOPSLA'00
- First DSVL workshop at OOPSLA'01
- 10<sup>th</sup> DSM workshop at SPLASH'11
- 18<sup>th</sup> DSM workshop – first virtual workshop
  - Discord + Zoom
  - Twitter: #dsm2021



- Special issues on Domain-Specific Modeling
  - Journal of Visual Languages and Computing, Vol. 15., 3-4, 2004
  - IEEE Software, Jul/Aug, 2009
  - Software & Systems Modeling, Volume 13, Issue 1, 2014



# 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
- Lets people design using domain terms
  - Apply familiar terminology
  - Solve the RIGHT problems!
  - Solve problems only ONCE!
- Often aims at generation of production code

# About submissions

- 9 submissions
- Accepted 6 papers
  - 22 authors
- Papers focus on
  - cases and experiences
  - verification and validation
- ACM DL
  - <https://www.conference-publishing.com/Proc/SPLASH21/index-splash21.html>
  - Account details at Discord

# DSM'21 PC

- Ankica Barisic, Université Côte d'Azur, INRIA, France
- Loli Burgueño, Open University of Catalonia, Spain
- Huseyin Ergin, Ball State University, USA
- Steven Kelly, MetaCase, Finland
- Hourieh Khalajzadeh, Monash University, Australia
- Juan de Lara, Autonomous University of Madrid, Spain
- Henrik Lönn, Volvo Technology, Sweden
- Ramin Tavakoli Kolagari, TH Nuremberg, Germany
- Naoyasu Ubayashi, Kyushu University, Japan
- Mert Özkaya, Yeditepe University, Turkey

## **Organizing committee:**

- Jeff Gray, University of Alabama, USA
- Matti Rossi, Aalto University School of Business, Finland
- Jonathan Sprinkle, Vanderbilt University, USA
- Juha-Pekka Tolvanen, MetaCase, Finland

# Schedule and format

- 09:00 – Overview and introductions
- 09:20 – Paper presentations: Cases
- 10:20 – Break
- 10:50 – Paper presentations: V&V, tooling
- 11:50 – Discussion
- 12:10 – Closing



# Program

9:00 **Introduction**

## **Papers on cases and experiences**

9:20 MOLEGA: Modeling Language for Educational Card Games  
Kaylynn Borrer, Eric Rapos

9:40 PrintTalk: a Constraint-based Imperative DSL for 3D Printing  
Jef Jacobs, Jens Nicolay, Christophe De Troyer, Wolfgang De Meuter

10:00 Industrial Experiences With the Evolution of a DSL  
Mathijs Schuts, Marco Alonso, Jozef Hooman

10:20 Break

# Program

## **Papers on verification and validation, tooling**

- 10:50 Co-designing DSL Quality Assurance Measures for and with Non-programming Experts  
Holger Borum, Christoph Seidl, Peter Sestoft
- 11:10 Integration of Modeling and Verification for System Model Based on KARMA Language  
Jie Ding, Michael Reniers, Jinzhi Lu, Guoxin Wang, Lei Feng, Dimitris Kiritsis
- 11:30 Differential-FORMULA: Towards a Semantic Backplane for Incremental Modeling  
Qishen Zhang, Daniel Balasubramanian, Tamas Kecskes, Janos Sztipanovits
- 11:50 **Discussion and summary**

# Publishing results

- Workshop web-site: [www.dsmforum.org/dsm21/](http://www.dsmforum.org/dsm21/)
  - Presentation slides
  - Photo
- Twitter: #dsm2021
- Papers: ACM DL