# The Futures of Reactive Synthesis

#### Monday

9:00-10:30 Introduction

9:00 - 9:30 Everyone

Short introduction (30 sec, no slides)

9:30 - 10:00 Bernd Finkbeiner

A primer on reactive synthesis

10:00 - 10:30 Guillermo A. Perez

A primer on SYNTCOMP

10:30-11:00 Coffee break

11:00–12:00 OPEN PROBLEM SESSION

12:15-14:00 Lunch

14:00–15:30 Symbolic algorithms for synthesis

14:00 - 15:00 Anne-Kathrin Schmuck

Invited talk: Reactive Synthesis for Feedback Control

15:00 - 15:30 Q & A

15:30-16:00 Coffee break

16:00-17:30 Working session 1

16:00 - 17:30 Guillermo A. Perez

Graph neural networks and reactive synthesis

16:00 - 17:30 Shaull Almagor

Specification formalisms for synthesis of quantitative models

16:00 - 17:30 Pierre Ohlmann

Positionality and memory in games

16:00 - 17:30 Nathanaël Fijalkow

Programmatic reactive synthesis

#### **Tuesday**

9:00–10:30 Constraint-based synthesis

9:00 - 10:00 Armando Solar-Lezama
Invited talk

10:00 - 10:30 Q & A

10:30-11:00 Coffee break

11:00-12:00 Contributed talks 1

11:00 - 11:20 Rüdiger Ehlers

Fixpoint Equations for Synthesis - Towards a Renewed Interest

11:20 - 11:40 Frederik Schmitt

Deep Learning for Reactive Synthesis

11:40 - 12:00 Niklas Metzger

Compositional Synthesis with Hyperproperties

12:15-14:00 Lunch

14:00-15:30 Working session 2

14:00 - 15:30 Frederik Schmitt

Deep learning for reactive synthesis

14:00 - 15:30 Rüdiger Ehlers, Tom van Dijk

Symbolic synthesis with BDDs and beyond

14:00 - 15:30 Shufang Zhu

Synthesis for LTL on finite traces

15:30–16:00 Coffee break

16:00-17:00 Summary of first two days

#### Wednesday

9:00-10:30 SYGUS

9:00 - 10:00 Ruzica Piskac

Invited talk

10:00 - 10:30 Q & A

10:30-11:00 Coffee break

11:00-12:00 Contributed talks 2

11:00 - 11:20 Mark Santolucito

Reactive Synthesis as a Programming Language Paradigm

11:20 - 11:40 Hazem Torfah

Synthesizing pareto-optimal interpretations for black-box models

11:40 - 12:00 Elizabeth Polgreen

Synthesis modulo oracles

12:15-14:00 Lunch

14:00-17:00 HIKE

### **Thursday**

9:00–10:30  $\omega$ -Automata Learning

9:00 - 10:00 Dana Fisman *Invited talk* 

10:00 - 10:30 Q & A

10:30-11:00 Coffee break

11:00-12:00 Contributed talks 3

11:00 - 11:20 Emmanuel Filiot

Synthesis from LTL specifications and examples

11:20 - 11:40 Anca Muscholl

On distributed synthesis

11:40 - 12:00 Rayna Dimitrova

Solving Infinite-State Games via Acceleration

12:15-14:00 Lunch

14:00–15:30 Working session 3

14:00 - 15:30 Anca Muscholl

Distributed synthesis

14:00 - 15:30 Guillermo A. Perez

SYNTCOMP benchmarking

14:00 - 15:30 Cesar Sanchez

Reactive synthesis beyond the Bools

15:30-16:00 Coffee break

16:00–17:00 Summary of Past two days

## **Friday**

9:00–10:00 Closed Problem Session

10:00-10:30 Coffee break

10:30-12:00 Working session 4

12:15-14:00 Lunch