

# Learning and Verification

LaBRI, 13 January 2020

## Morning

9:30–10:30 SYNTHESIS

9:30 - 10:00 Guillaume Lagarde (LaBRI)

*Search algorithms for program synthesis*

10:00 - 10:30 Loïc Paulevé (LaBRI)

*Synthesis of Boolean Networks from Structural and Dynamical Properties*

10:30–11:00 Coffee break

11:00–12:00 AUTOMATA

11:00 - 11:30 Gerco van Heerdt (UCL)

*Learning Weighted Automata over Principal Ideal Domains*

11:30 - 12:00 Pierre Ganty (IMDEA Software Institute)

*Deciding language inclusion problems using quasiorders*

12:00–14:00 Lunch

## Afternoon

14:00–15:00 VERIFICATION OF NEURAL NETWORKS

14:00 - 14:30 Borja Balle (Deepmind)

*A framework for robustness certification of smoothed classifiers using  $f$ -divergences*

14:30 - 15:00 Nathanaël Fijalkow (LaBRI)

*Specifying Global Robustness using Generative Models*

15:30–16:00 Coffee break

16:00–17:00 PERSPECTIVES

16:00 - 16:30 Benedikt Bollig (LSV, Saclay)

*From automata learning to neural networks*

16:30 - 17:00 Benjamin Kaminski (UCL)

*What I expect from machine learning in verification*

19:00–22:00 Dinner at Café du Port