Learning and Verification

13 January 2020, LaBRI, Amphitheatre

Morning

9:00–10:30 SYNTHESIS

> 9:00 - 9:30 Guillaume Lagarde (LaBRI)
> *Search algorithms for program synthesis*
> 9:30 - 10:00 Benjamin Kaminksi (UCL)
> *What I expect from machine learning in verification*
> 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 I

> 14:00 - 14:30 Borja Balle (Deepmind)
> *A framework for robustness certification of smoothed classifiers using f-divergences*
> 14:30 - 15:00 Benedikt Bollig (LSV, Saclay)
> *Between Automata and Neural Networks*

15:00–15:30 Coffee break

15:30–16:30 VERIFICATION OF NEURAL NETWORKS II

> 15:30 - 16:00 Pranav Ashok (TU Munich)
> *Neural Network Abstraction for Accelerating Verification*
> 16:00 - 16:30 Nathanaël Fijalkow (LaBRI)
> *Specifying Global Robustness using Generative Models*

19:00–22:00 Dinner at Café du Port