Alexandre Goy

Current position	PhD student at Paris-Saclay University, France
Postal address	CentraleSupélec, Laboratoire MICS
	Bâtiment Bouygues, 3 rue Joliot Curie
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Interests	Category theory, Automata, Coalgebra, Logic
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Education

PhD in Computer Science
Paris-Saclay University, France, 2018 - Present
Thesis title: *On the Compositionality of Monads via Weak Distributive Laws*, under the supervision of Marc Aiguier (MICS, Paris-Saclay University) and Daniela Petrişan (IRIF, Paris-Diderot University). Defense planned in October 2021.

MSc in Engineering
CentraleSupélec, France, 2018
Thesis title: *Morpho-Logic and the Theorem of Łoś*, under the supervision of Marc Aiguier (MICS, Paris-Saclay University). Major in mathematics, 1st out of 95.

MSc in Mathematical Logic and Foundations of Computer Science
Paris-Diderot University, France, 2017
Thesis title: *Trace Semantics via Determinization for Probabilistic Transition Systems*, under the supervision of Jurriaan Rot (ICIS, Radboud University Nijmegen).

BSc in Mathematics
Paris-Saclay University, France, 2015

Publications

(1) Alexandre Goy, Daniela Petrişan, Marc Aiguier. *Powerset-like Monads Weakly Distribute over Themselves in Toposes and Compact Hausdorff Spaces.* ICALP 2021, *to appear*.

(2) Alexandre Goy, Daniela Petrişan. *Combining Probabilistic and Non-Deterministic Choice via Weak Distributive Laws.* LICS 2020: 454-464.

(3) Alexandre Goy, Marc Aiguier, Isabelle Bloch. *From Structuring Elements to Structuring Neighborhood Systems.* ISMM 2019: 16-28.

(4) Alexandre Goy, Jurriaan Rot. *(In)finite Trace Equivalence of Probabilistic Transition Systems.* CMCS 2018: 100-121.

(5) Alexandre Goy. *Trace Semantics via Determinization for Probabilistic Transition Systems*, MSc thesis. CoRR abs/1802.09084, 2017.

WORK EXPERIENCE

Teaching Assistant
CentraleSupélec, France, 2017 - Present
For BSc/MSc in Engineering students.

- *Support in Programming*, 45h;
- *Support in Mathematics*, 13h;
- *Algorithms*, 39h;
- *Theoretical Computer Science*, 84h;
- *Game Theory*, 12h;
- Volunteer Teaching Assistant for *Support in Mathematics*, 4h per week in 2017-2018.

TALKS

- *Powerset-like Monads Weakly Distribute over Themselves in Toposes and Compact Hausdorff Spaces*, ICALP, July 2021.
- *An Overview of Weak Distributive Laws*, SMP (LICS Workshop), June 2021.
- *Alternating Automata via Weak Distributive Laws*, CMCS, September 2020.
- *Alternating Automata via Weak Distributive Laws*, HIGHLIGHTS, September 2020.
- *Combining Probabilistic and Non-Deterministic Choice via Weak Distributive Laws*, LICS, July 2020.
- *From Structuring Elements to Structuring Neighborhood Systems*, ISMM, July 2019.
- *Dual Logic Concepts based on Mathematical Morphology in Stratified Institutions: Applications to Spatial Reasoning*, UNILOG, June 2018.
- *(In)finite Trace Equivalence of Probabilistic Transition Systems*, CMCS, April 2018.

PARTICIPATION IN EVENTS

- *Structure Meets Power*, LICS Workshop, June 2021 (online).
- *ETAPS 2020/2021*, March 2021 (online).
- *Coalgebraic Methods in Computer Science*, September 2020 (online).
- *Highlights*, September 2020 (online).
- *International Symposium in Mathematical Morphology*, Saarbrücken, Germany, July 2019.
- *Topology, Algebra and Categories in Logic*, Nice, France, June 2019.
- *TACL Summer School*, Porquerolles, France, June 2019.
- *ForMal Summer School*, Cachan, France, June 2019.
- *Universal Logic*, Vichy, France, June 2018.
- *Coalgebraic Methods in Computer Science* (ETAPS Workshop), Thessaloniki, Greece, April 2018.

Organisation of events

- Support in the organisation of CMCS 2020 (online).
- Reviewer for CMCS 2020 (1 paper), IJCAI 2020 (3 papers), Journal of Applied Non-Classical Logics (1 paper).

Other

Spoken Languages

French	Mother tongue
English	Fluent
German	Intermediate

Technical Skills

Programming languages	Python, OCaml, Prolog
Theorem prover	Coq
Other	LaTeX

June 30, 2021