Jui-Hsuan WU

Born October 31st, 1996
From New Taipei, Taiwan

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Education

Since 2021 PhD student in Computer Science
Institut Polytechnique de Paris, Palaiseau, France.

2019–2020 Master 2 (M.Sc.) in Computer Science, with honours
École Normale Supérieure and MPRI, Paris, France.

2018–2019 Master 1 in Computer Science
École Normale Supérieure and MPRI, Paris, France.

2017–2018 Licence 3 (B.Sc.) in Computer Science, with highest honours
École Normale Supérieure and Paris Diderot University, Paris, France.

2017–2021 Élève Normalien
École Normale Supérieure, Paris, France.

2015–2017 CPGE (2-year preparatory program leading to entrance exams to the French *Grandes Écoles*).
Lycée Janson-de-Sailly, Paris, France.

Research Experiences

2020 (M2) **On first-order combinatorial proofs**
Internship supervised by Dr. Lutz Straßburger at INRIA Saclay.
A more compact representation of first-order combinatorial proofs using sequent calculus and deep inference rules, and a simpler completeness proof of first-order combinatorial proofs. This work has led to a paper "Combinatorial Proofs and Decomposition Theorems for First-order Logic" accepted at LICS 2021.

2019 (M1) **Checking the type-safety of rewrite rules in the $\lambda\Pi$-calculus modulo**
Internship supervised by Dr. Frédéric Blanqui and Dr. Valentin Blot at INRIA Saclay.
Implementation of an algorithm for checking the type preservation of rewrite rules and design of an algorithm for checking the injectivity of function symbols in the $\lambda\Pi$-calculus modulo.

2018 (L3) **Automated proof search in linear logic**
Internship supervised by Dr. Olivier Laurent at ENS de Lyon and Dr. Youakim Badr at INSA Lyon.
Development of an automated prover (available on GitHub) for propositional linear logic and its intuitionistic fragment implemented in OCaml. In order to guarantee the validity of proofs, it is also possible to export proof certificates using the proof assistant Coq.

Proceeding

April 2021 *Combinatorial Proofs and Decomposition Theorems for First-order Logic*, with Dominic Hughes and Lutz Straßburger. Logic in Computer Science, Roma, Italy.

Talks

Dec 2018 Workshop on machine proofs of linear logic, Lyon, France

Other Experiences

Jan 2022	Participation in the Linear Logic Winter School, CIRM, Marseille, France
Jul 2019	Participation in the 11th International School on Rewriting, Mines ParisTech, Paris, France

Skills

Languages	Mandarin (mother tongue), English (bilingual), French (bilingual), German (basic)
Programming	OCaml, Coq, Python
Others	Git, Linux, LaTeX