

Nicolas WALDBURGER

3 boulevard des Métairies
35510 Cesson-Sévigné, Fr
+33 (0)6 52 58 12 03
nicolas.waldburger@irisa.fr

EDUCATION

- 2020 – 2021 **MASTER PARISIEN DE RECHERCHE EN INFORMATIQUE**, PARIS, FRANCE
- Theoretical training in France's top Master degree in Computer Science research
 - Followed courses on topics such as Automata, Game Theory, Algorithmics and Logic
- 2017 – 2020 **ECOLE POLYTECHNIQUE**, PALAISEAU, FRANCE
- France's leading school of science and engineering
 - Multidisciplinary training in second year, theoretical Computer Science specialization in third year (Algorithmics & randomization, computational logic, compilation...)
 - Cumulative GPA: 3.91/4, ranked 36th out of 540 students

EXPERIENCE

- OCT. 2021 – TODAY **PHD STUDENT**, SUMO TEAM, IRISA, RENNES, FRANCE
- Working on a theoretical project with Nathalie Bertrand, Nicolas Markey and Ocan Sankur about *parameterized Verification of round-based shared-memory systems*
 - Developing mathematical tools towards automated parameterized verification of a specific class of distributed algorithms such as Aspnes' consensus algorithm
- MAR. 2021 – AUG. 2021 **RESEARCH INTERN**, IRIF, PARIS, FRANCE
- Carried out a project of theoretical Computer Science with Thomas Colcombet (supervisor) and Gabriele Puppis on *Fixpoint Automata and Rewriting Systems*
 - Defined and exploring properties of new abstract objects, in particular a new class of tree automata involving fixpoint calculation and countable ordinals
- APR. 2020 – AUG. 2020 **RESEARCH INTERN**, IRIF, PARIS, FRANCE
- Carried out a project of theoretical Computer Science with Mahsa Shirmohammadi (supervisor) on *Reachability in 1-VASS with equality and disequality tests*
 - Managed to prove NP-completeness in a special case of the previous problem
 - Received the *Grand Prix du stage de recherche*, awarded best research internship by the Computer Science Department of *Ecole Polytechnique*
- JUN. 2019 – AUG. 2019 **INTERN**, ROHDE & SCHWARZ, MUNICH, GERMANY
- Contributed to the establishment of test protocols by developing Python scripts and algorithms

PUBLICATIONS

- 2022
- Nathalie Bertrand, Nicolas Markey, Ocan Sankur and Nicolas Waldburger. *Parameterized safety verification of round-based shared-memory systems*. International Colloquium on Automata, Languages and Programming 2022 (ICALP'22).

KEY SKILLS

- Languages:*
- French:** Native, **English:** Fluent (C1/C2), **German:** Advanced (B2/C1)
- Programming:*
- LateX, Python, C/C++, Ocaml, Java, Coq, Agda, Lustre**