

Yannick Zakowski – Curriculum Vitae

Address	195 ter, rue Marcel Mérieux 69007 Lyon	Email	yannick.zakowski@inria.fr
Birth date	1990, March 19 th	Website	http://perso.ens-lyon.fr/yannick.zakowski/
Nationality	French		

Experience

- 2020-** Researcher (*Chargé de Recherche*) at Inria Lyon
Member of the CASH research group in the LIP laboratory.
- 2018-2020** Postdoctoral researcher at UPenn, within the Programming Language research group,
under the supervision of Steve Zdancewic.
Participant of the DeepSpec NSF-supported project.
- 2014-2017** PhD student at the ENS Rennes, hosted within the IRISA,
under the supervision of David Pichardie and David Cachera.
Topic: “*Verification of a Concurrent Garbage Collector.*”
Teaching duties at the ENS Rennes and University of Rennes 1.

Publications

- Conference *Modular, Compositional, and Executable Formal Semantics for LLVM IR*
Yannick Zakowski, Calvin Beck, Irene Yoon, Ilia Zaichuk, Vadim Zaliva, Steve Zdancewic
In the 26th ACM SIGPLAN International Conference on Functional Programming (ICFP’21)
- Conference *An Equational Theory for Weak Bisimulation via Generalized Parameterized Coinduction*
P. He, CK. Hur, Y. Zakowski, S. Zdancewic
In the 9th ACM SIGPLAN International Conference on Certified Programs and Proofs (CPP’20)
- Conference *Interaction Trees – Representing Recursive and Impure Programs in Coq*
L. Xia, Y. Zakowski, P. He, CK. Hur, G. Malecha, B. Pierce, S. Zdancewic
In the 47th ACM SIGPLAN Symposium on Principles of Programming Languages (POPL’20)
- Conference *Compilation of Linearizable Data Structures: A Mechanised RG Logic for Semantic Refinement*
Y. Zakowski, D. Cachera, D. Demange, D. Pichardie
In the Proceedings of the 33rd Annual ACM Symposium on Applied Computing (SAC’18) –
Software Verification and Testing track
- Conference *Verifying a Concurrent Garbage Collector using a Rely-Guarantee Methodology*
Y. Zakowski, D. Cachera, D. Demange, G. Petri, D. Pichardie, S. Jagannathan and J. Vitek.
In Interactive Theorem Proving (ITP’17), LNCS 10499, Springer 2017.
- Journal *Verifying a Concurrent Garbage Collector using a Rely-Guarantee Methodology*
Y. Zakowski, D. Cachera, D. Demange, G. Petri, D. Pichardie, S. Jagannathan and J. Vitek.
In the Journal of Automated Reasoning (JAR’18).
- Thesis *Verification of a Concurrent Garbage Collector*
Yannick Zakowski
Doctoral Thesis, ENS Rennes, 2017

Teaching duties

- fall 2021** *Program Verification with Coinduction and Proof Assistants*
with Damien Pous
Audience: Second year of Master at ENS Lyon.
- fall 2021** *Static Analyses for Optimizing Compilers*
with Christophe Alias and Laure Gonnord during fall 2021
Audience: Second year of Master at ENS Lyon.

Fundings

- fall 2021-** PhD co-advisor to Nicolas Chappe
Co-advisor: Mattieu Moy
Topic: "Toward a verified compilation infrastructure for concurrent programs:
Non-sequential paradigms in Vellvm"
Source of funding: *Allocation Specifique Normalien (ASN)*
- Participant to the ANR *RECIPROG*
Principal investigator: Alexis Saurin
Local coordinator: Denis Kuperberg

Service

- Member of program committees: ICFP'22, JFLA'22, CPP'21
- Examineur mandaté par l'ENS de Rennes à l'épreuve pratique d'algorithmique et programmation 2021.
- Popularization article hosted on the blog *Binaire* as part of the series "Il était une fois... Ma thèse".
<https://www.lemonde.fr/blog/binaire/2018/01/23/il-etait-une-fois-ma-these-le-lave-vaisselle-de-la-memoire>
- Co-conception and co-hosting of a popularization demo at the IRISA, Decembre 2015 ("Journée portes ouvertes pour les 40 ans de l'IRISA")
- Conception and co-organisation of the first edition of the national seminar for french PhD students in computer science (2016).
- Student volunteer at the European Conference on Object-Oriented Programming 2015 (ECOOP'15) in Prague.

Education

- 2009-2014** Studies at the ENS Rennes.
Bachelor in mathematics (2009). Master in computer science (2013, ranked 3rd).
- 2013-2014** Ten months internship at the Aarhus University, in the Logics and Semantics group.
Supervisors: Lars Birkedal and Filip Sieczkowski
Topic: "*Toward a formalization in Coq of a parallelization theorem for an higher order concurrent language with general references*"
- 2013** Five months internship at IRISA, Rennes, in the Celtique team.
Supervisor: David Cachera
Topic: "*Generation of polynomial inequalities as invariants*"
- 2012** Three month internship in Sweden, at Chalmers University.
Supervisor: David Sands
Topic: "*Programming With Information Flow-Control: the Paragon language*"
- 2011** Two month internship at IRISA, Rennes, in the Celtique team.
Supervisor: David Cachera
Topic: "*Fast inference of polynomial invariants for imperative programs*"