



CV Laure Gonnord

Habilitation Tenured Assistant Professor (Maître de Conférences HDR Hors Classe)
Topics : Software Verification, Embedded Systems, High Performance Computing, Static Analysis, Compilation.

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Highlights

- 2020/21 : PC member of the POPL 2021 conference.
- 2020 : acceptance (as PI) of the CAPESA Inria associate team (33k for 3 years), with the ACE team at UQAM (Canada).
- 2019 : Best paper at the VMCAI'2019 conference. PC member of the CAV'2019 conference. Elected member of the Inria Evaluation committee for 2019-2023.
- 2018 : active participation to the emerging new team, CASH at the LIP laboratory <http://www.ens-lyon.fr/LIP/CASH>.
- 2017 : acceptance (as PI) of the CODAS ANR Project. Habilitation Thesis. Qualification (27th section CNU) for full Professor positions.
- 2015 : acceptance of our paper "Synthesis of ranking functions using extremal counterexamples" to the A*-ranked PLDI (Programming Languages, Design and Implementation) conference.

Current and Former Positions

Spring 2018	Half-year leave (Délégation) Inria.
Spring 2017	Half-year leave (Délégation) CNRS.
since Sept 2013	Assistant Professor <i>University Lyon 1</i> . Science Faculty, Computer Science Department. Lab : LIP, CASH Team (since January 2018)
2009 - 2013	Assistant Professor <i>University Lille1</i> . Polytech Engineer School. Computer Science and Embedded System Departments
2008 - 2009	Teaching and research assistant <i>University Lyon I</i> and LIP.
2007 - 2008	Postdoctoral position , <i>INSA Lyon</i> , Lab CITI, ANR Project REVE.
2003 - 2007	PhD In Computer Science Grenoble University, Synchronous Team, Verimag Lab advisor N. Halbwachs and teaching position , <i>Grenoble University</i> .

Theses

- **PhD thesis** ([T2]) "Accélération Abstraite pour l'amélioration de la précision de l'Analyse des Relations Linéaires", defended on October 2007, 27th, Grenoble University, France.
 - Chair : Mr Yves Ledru (UJF).
 - Reviewers : Mr François Irigoien (Mines Paris) and Mr Philippe Schnoebelen (CNRS, LSV).
 - Examinators : Mr Bertrand Jeannet (INRIA) and Mr Thomas Reps (University of Wisconsin).
 - PhD advisor : Mr Nicolas Halbwachs (CNRS/Verimag).
- **"Habilitation à diriger les recherches"** ([T1]) "Contributions to program analysis : expressivity and scalability". University of Lyon, defended on November 9th, 2017.
 - Jury chair : Mrs Isabelle Guérin-Lassous, Professor (Université Lyon1 Claude Bernard);
 - Reviewers : Mr Paul H J Kelly, Professor (Imperial College London), Mr Antoine Miné, Professor (Université Pierre et Marie Curie, France), and Mr Andreas Podelski, Professor (Freiburg University, Germany).

- Examinators : Mr Albert Cohen, Senior Research Scientist (Inria Paris) and Mr Sebastian Hack, Professor (Saarland University, Germany).

Software

- **LustreArray** : A prototype of implementation of the Lustre synchronous language's semantics into Horn Clauses with Arrays (Participation 25%, collaboration with A. Gontier and S. Bagoly and L. Morel). Associated publication :[R5].
- **Vaphor** : A prototype of a static analysis tool that abstract programs with arrays into array-free horn clauses (2k OCaml LoCs) (Participation 40%, collaboration with D. Monniaux) . The tool has been substantially re-engineered by Julien Braine in June 2016. Associated publications [C5, R6, W1].<https://github.com/vaphor>
- **Termite** (10% participation) : termination proof tool, in collaboration with G. Radanne, main developer, and D. Monniaux. <https://termite-analyser.github.io/>. Associated publication :[C7].
- **Signal2SMT** : A prototype of a verification tool for the Signal Synchronous language (Participation 80%, collaboration with P. Feautrier and A. Gamatié). Associated publications :[C10, J3]
- **StOP** : A prototype of a modular tool for proving termination (20% participation, collaboration with G. Andrieu and C. Alias). Associated publication :[W5].
- **Aspic** : A static analysis tool that implements accelerated Linear relation Analysis, (20 000 OCaml LoCs) <http://laure.gonnord.org/pro/aspic/aspic.html>. Associated publications :[C15, C12, W6, J2].
- **ReveViewer** : A prototype «proof of concept» for the REVE ANR Project, a remote image viewer and the software architecture around it to deal with resource's constraints (5000 C++ LoCs). Associated publications :[C13, J4].

Research Activities : conferences, projects

Conferences

- From 2020, Steering Comitee of **NSAS'19** (Numerical and Symbolic Abstract Domains, workshop affiliated to SAS (Static Analysis Symposium).
- PC chair and local organizer of **NSAD'19** (satellite event of SAS'19, FM'2019), Porto, October 2019.
- PC member of **POPL21** (15 papers with ACM journal format without subreviewers, PC meetings and paper shepherding, best paper nomination), **CC2021** (5 long papers and one short, ACM double column 10 pages, no subreviewers) , **CAV'19** (8 papers including 4 subreviews) , TAPAS'18, VMCAI'18, NSAD'17 VMCAI'17, WST'14, TAPAS'12.
- PC Jury of the Student Competition at PLDI'17 and CGO'16.
- Co-organisator (with D. Monniaux) of VMCAI'17 in Paris.
- Reviewer of the conferences CAV, VMCAI, STACS, LCTES...
- Keynote speaker : Journées FAC 2018 (Toulouse)[INV1], LOPSTR 2018[INV2] (Frankfurt am Main).
- Invited seminars : Google and SRI (California, June 2015 [INV6]), student seminar at ENSL (2014), ... (<http://laure.gonnord.org/pro/research/seminars.html>).

Projects

- Participation to the projects System@tic "APRON" and ANR "REVE".
- Coordination of the Lille university BQR Project "ALIL" (languages and analysis for software engineering) in 2011/2012.
- Coordination of the CNRS INS2I Project "HLS-RT" for 2012 and 2013. (16k€ for 2 years) High level synthesis under real-time constraints.
- Partner of the "PROSPIEL" Inria associate team (Brasil-France), in 2015-2017 (20k€ per year, 2 years).
- Principal instigator of the BQR ENS de Lyon Project "SODAS", October 2015-2017 (12k€ for 2 years) High performance programing of complex data structures.
- Principal instigator of the **CODAS** "Young researcher" ANR Project, starting March 2018 (175k€ for 42 months). High performance analysis, scheduling with complex data structures. <http://codas.ens-lyon.fr>.
- Principal instigator of the **CAPESA** Inria associate team with the ACE team, UQAM (Canada), on compilation techniques for program composition problems (33k€ for 3 years).

Informal collaborations I also have regular collaborations with David Monniaux (CNRS/Verimag, Grenoble), Fernando Magno Pereira (UFMG, Brasil), Lionel Morel (CEA List, Insa Lyon) and Tobias Groesser (UTZH,

Suisse).

Teaching Activities, Student Supervision, PhD Jurys

Courses

- From 2020 I am responsible to the CAPES-NSI training at Univ. Lyon1.
- From 2019 I actively participate to the professor training for the new teaching courses NSI (computer science) courses in secondary schools.
- From 2017 I actively participate to the student preparation to the CAPES competition for teaching in secondary courses.
- In 2016-17 and 2017-18, I spent one semester on a temporary Fellowship at the CNRS, then Inria.
- From 2002, I taught to undergraduate and graduate students, from basic programming courses to advanced courses like Program Analysis and Compilation, on average 220 hours per year (except during half-year leaves, 96 hours per year).
- I have been or I am still responsible of the following courses :
 - Undergraduate (mainly L3) : Computer Architecture, Operating Systems, Algorithmics, Data Structures.
 - Graduate (M1,M2) : Theoretical Computer Science, Compilation, Compilation and Program Analysis, Compilation and Software Engineering, Program Analysis and Verification, Real-Time (advanced Systems).
- Regular participation to internships jurys. In Lille I was responsible of their organisation (last year of the Engineer School Polytech'Lille).

Student Supervision

- From 2009 I have advised 14 undergraduate internships and 6 master students. The complete list and links to their reports (on HAL) can be found on the webpage <http://laure.gonnord.org/pro/research/internships.html>.
- From sept 2014 to sept 2017 I co-advised (80%, with F. Vivien) the PhD of Maroua Maalej, on designing low cost *static analyses for efficient compilers*. The work led to the publications [C6, C4, J1]. The PhD defense was on 26th Sept 2017.
- From september 2018, I co-advise (70%, with David Monniaux, Verimag) the PhD studies of Julien Braine, on designing *data structures abstractions* for verification.
- From september 2018, I co-advise (70%, with Lionel Morel, CEA Grenoble & Insa de Lyon) the PhD studies of Paul Iannetta, on the *efficient compilation of data structures* for HPC programs.

PhD Jurys From 2012, I was in the PhD Jury of 11 students, including 3 as a referee.

- Oct 2012. Examiner of the PhD defense of Peter Schrammel, Université de Grenoble. “Logico-Numerical Verification Methods for Discrete and Hybrid Systems”.
- Dec 2013. Examiner of the PhD defense of Clément Guy, Université de Rennes. “Facilités de typage pour l’ingénierie des langages”.
- July 2014. Reviewer of the PhD manuscript of Chan Ngo, Université de Rennes. “Formal Verification of a Synchronous Dataflow Compiler : from Signal to C”.
- Dec 2016. Examiner of the PhD defense of Nasrine Damouche, Université de Perpignan. “Improving the Numerical Accuracy of Floating-Point Programs with Automatic Code Transformation Methods”
- Dec 2016. Examiner of the PhD defense of Sajith K. Alathingal, Université de Rennes. “Transforming Thread Level Parallelism into Data Level Parallelism with the Dynamic Inter-Thread Vectorization Architecture”
- Dec 2017. Reviewer of the PhD manuscript of T. Rubiano, Université Paris 13. “Implicit computational complexity for compilers”.
- Dec 2017. Examiner of the PhD defense of Maurica Fonenantsoa, Université de la Réunion. “Termination Analysis of Floating-Point Computations”.
- Dec. 2017. Examiner of the PhD defense of J. Lidman, Chalmers, Sweden. “Fault tolerant software systems, fuzzy dataflow analysis”. I also wrote a report on his work.
- Jul. 2018. Examiner of the PhD defense of Hoby Rakotoarivelo "Approche de co-design de noyaux irréguliers sur accélérateurs manycore. Application au cas du remaillage adaptatif pour le calcul intensif.", University of Evry, France.
- Sept. 2018. Reviewer of the PhD manuscript of Vincent Botbol, Sorbonne Université. “Analyse statique

- de programmes concurrents avec variables numériques”.
- Nov. 2019. Examiner of the PhD defense of Yohan Uguen, Insa de Lyon. “High-level synthesis and arithmetic optimizations”
 - Dec 2020 and January 2021 : Two upcoming Phd defenses.

Other activities

Local and regional activities

- Seminar organisation : co-organisation of the LIP seminar “Langages, Semantics, Compilation”, <http://perso.ens-lyon.fr/christian.perez/journeelangages>, in 2016-2019.
- Informal Grenoble Lyon Verif Working Group <http://stator.imag.fr/w/index.php/VerifGroup> in 2017-2019
- Member of the Labex MILYON teaching commission (since 2016), of finance committee of the Science Faculty (2014-2019), finance committee of the LIP (since 2017), parity commission (since 2020) .
- Elected member of the LIP Lab Council (since 2016) and the “Conseil de fédération Informatique de Lyon” (since 2017). In 2020, coordination (with N. Schabanel) of the HCERES committee discussion with research staff representants.
- Participation to the restricted Phd committee of the LIP Lab (6 members), and to the habilitation list (all habilitated members of the lab) since 2017.

National activities

- Elected member of the Inria Evaluation Committee (2019-2022) <https://www.inria.fr/institut/organisation/instances/commission-d-evaluation>. This includes participation to reflexion groups as well as juries.
- Nominated member of the GDR GPL “Bureau”, from 2021. Steering of the french “Young researchers School in Programming”. Participation to the redacted proposal and inter-subgroup animations.
- Participation to the 2019’s Best phd thesis award from the National French Computer Science Society (SIF). *4 reports, involvement in two thematical subgroups, 1 day remote jury.*
- (2010-2020) Co-coordinator of the French Compilation group <http://compilfr.ens-lyon.fr/>. Cofounder with Fabrice Rastello in 2010.
- Together with four other members of the LIP we organised the Summer School in Programming, in June 2018 <https://ejcp2018.sciencesconf.org/>.
- (2011-2020) Member of the GDR GPL (<http://gdr-gpl.cnrs.fr/>) and co-leader of the Compilation group. Organisation of work sessions during the National Days since 2011.
- Since 2013, I participated to 7 associate professor and three junior researcher (CR Inria Rennes Spring 2016, CR Inria Bordeaux and National, Spring 2020) selection committees.
- (2014-2019) Grenoble-Alpes’ Inria doctorate studies committee.
- (2019-2020), member of the Jury of the French “Agrégation de Sciences Industrielles”, computer engineering option.

Personal Publications, sorted by type

All my publications can be found on the following webpage <http://laure.gonnord.org/pro/papers.html>

Phd and Habilitation

- [T1] Laure GONNORD. “Contributions to program analysis : expressivity and scalability”. Habilitation à diriger des recherches. Université Lyon 1 Claude Bernard, nov. 2017. URL : <https://tel.archives-ouvertes.fr/tel-01633065> (cf. p. 1).
- [T2] Laure DANTHONY, GONNORD. “Abstract Acceleration to improve precision in Linear Relation Analysis”. Theses. Université Joseph-Fourier - Grenoble I, oct. 2007. URL : <https://tel.archives-ouvertes.fr/tel-00196899> (cf. p. 1).

International journal papers

- [J1] Maroua MAALEJ et al. “Combining Range and Inequality Information for Pointer Disambiguation”. In : *Science of Computer Programming (SCP)* (2017). URL : <https://hal.archives-ouvertes.fr/hal-01625402> (cf. p. 3).
- [J2] Laure GONNORD et Peter SCHRAMEL. “Abstract Acceleration in Linear Relation Analysis”. In : *Science of Computer Programming (SCP)* (2014), p. 125-153. URL : <https://hal.archives-ouvertes.fr/hal-00787212> (cf. p. 2).
- [J3] Paul FEAUTRIER, Abdoulaye GAMATIÉ et Laure GONNORD. “Enhancing the Compilation of Synchronous Dataflow Programs with a Combined Numerical-Boolean Abstraction”. In : *CSI Journal of Computing* 1.4 (2012), 8 :86-8 :99. URL : <https://hal.archives-ouvertes.fr/hal-00860785> (cf. p. 2).
- [J4] Laure GONNORD et Jean-Philippe BABAU. “Qinna : a component-based framework for runtime safe resource adaptation of embedded systems”. In : *Scalable Computing : Practice and Experience (SCPE)* 10.3 (sept. 2009), p. 253-264. URL : <https://hal.archives-ouvertes.fr/hal-00670185> (cf. p. 2).
- [J5] Nicolas HALBWACHS, David MERCHAT et Laure GONNORD. “Some ways to reduce the space dimension in polyhedra computations”. In : *Formal Methods in System Design (FMSD)* 29.1 (juil. 2006), p. 79-95. URL : <https://hal.archives-ouvertes.fr/hal-00189633>.

International Conferences

- [C1] Clément BALLABRIGA et al. “Static Analysis Of Binary Code With Memory Indirections Using Polyhedra”. In : *International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI'19)*. Lisbon, Portugal, jan. 2019. URL : <https://hal.archives-ouvertes.fr/hal-01939659>.
- [C2] Romain FONTAINE, Laure GONNORD et Lionel MOREL. “Polyhedral Dataflow Programming : a Case Study”. In : *International Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD'18)*. Lyon, France, sept. 2018. URL : <https://hal-cea.archives-ouvertes.fr/cea-01855997>.
- [C3] Laure GONNORD et Sébastien MOSSER. “Practicing Domain-Specific Languages : From Code to Models”. In : *14th Educators Symposium at MODELS 2018*. Copenhagen, Denmark, oct. 2018, p. 1-8. URL : <https://hal.archives-ouvertes.fr/hal-01865448>.
- [C4] Maroua MAALEJ et al. “Pointer Disambiguation via Strict Inequalities”. In : *Code Generation and Optimisation (CGO'17)*. Austin, United States, fév. 2017. URL : <https://hal.archives-ouvertes.fr/hal-01387031> (cf. p. 3).
- [C5] David MONNIAUX et Laure GONNORD. “Cell morphing : from array programs to array-free Horn clauses”. In : *23rd Static Analysis Symposium (SAS'16)*. Static Analysis Symposium. Edimbourg, United Kingdom, sept. 2016. URL : <https://hal.archives-ouvertes.fr/hal-01206882> (cf. p. 2).
- [C6] Vitor PAISANTE et al. “Symbolic Range Analysis of Pointers”. In : *International Symposium of Code Generation and Optimization (CGO'16)*. Barcelona, Spain, mar. 2016, p. 791-809. URL : <https://hal.inria.fr/hal-01228928> (cf. p. 3).
- [C7] Laure GONNORD, David MONNIAUX et Gabriel RADANNE. “Synthesis of ranking functions using extremal counterexamples”. In : *Proceedings of the 2015 ACM International Conference on Programming Languages, Design and Implementation (PLDI'15)*. Portland, Oregon, United States, juin 2015. URL : <https://hal.archives-ouvertes.fr/hal-01144622> (cf. p. 2).

- [C8] Henrique Nazaré Willer SANTOS et al. “Validation of Memory Accesses Through Symbolic Analyses”. In : *Proceedings of the 2014 ACM International Conference on Object Oriented Programming Systems Languages And Applications (OOPSLA'14)*. Portland, Oregon, United States, oct. 2014. URL : <http://hal.inria.fr/hal-01006209>.
- [C9] Benoit COMBEMALE, Laure GONNORD et Vlad RUSU. “A Generic Tool for Tracing Executions Back to a DSML's Operational Semantics”. In : *Seventh European Conference on Modelling Foundations and Applications (ECMFA'11)*. T. 6698. Lecture Notes in Computer Science. Birmingham, United Kingdom : Springer Verlag, juin 2011, p. 35-51. URL : <https://hal.archives-ouvertes.fr/hal-00593425>.
- [C10] Abdoulaye GAMATIÉ et Laure GONNORD. “Static analysis of synchronous programs in signal for efficient design of multi-clocked embedded systems”. In : *ACM SIGPLAN/SIGBED conference on Languages, compilers, and tools for embedded systems, LCTES 2011*. Chicago, IL, United States, avr. 2011, p. 71-80. URL : <https://hal.inria.fr/inria-00586137> (cf. p. 2).
- [C11] David MONNIAUX et Laure GONNORD. “Using Bounded Model Checking to Focus Fixpoint Iterations”. In : *Proceedings of the 18th International Static Analysis Symposium, SAS'11*. Venice, Italy : Springer, sept. 2011.
- [C12] Christophe ALIAS et al. “Multi-dimensional Rankings, Program Termination, and Complexity Bounds of Flowchart Programs”. In : *Static Analysis Symposium*. Perpignan, France, sept. 2010. URL : <https://hal.inria.fr/inria-00523298> (cf. p. 2).
- [C13] Laure GONNORD et Jean-Philippe BABAU. “Quantity of Resource Properties Expression and Runtime Assurance for Embedded Systems”. In : *The seventh ACS/IEEE International Conference on Computer Systems and Applications (AICCSA'09)*. Rabat, Morocco : IEEE, mai 2009. URL : <https://hal.inria.fr/inria-00349918> (cf. p. 2).
- [C14] Jean-Philippe BABAU et Laure GONNORD. “Runtime resource assurance and adaptation with Qinna framework : a case study”. In : *Real Time Software (RTS'08)*. Poland, oct. 2008, p. 617-624. URL : <https://hal.archives-ouvertes.fr/hal-00801546>.
- [C15] Laure GONNORD et Nicolas HALBWACHS. “Combining Widening and Acceleration in Linear Relation Analysis”. In : *Static Analysis Symposium (SAS'06)*. Seoul, South Korea, août 2006, p. 144-160. URL : <https://hal.archives-ouvertes.fr/hal-00189614> (cf. p. 2).

International Workshops

- [W1] Julien BRAINE et Laure GONNORD. “Proving array properties using data abstraction”. In : *Numerical and Symbolic Abstract Domains (NSAD)*. Virtual, United States, nov. 2020. URL : <https://hal.archives-ouvertes.fr/hal-02948081> (cf. p. 2).
- [W2] Christophe ALIAS, Carsten FUHS et Laure GONNORD. “Estimation of Parallel Complexity with Rewriting Techniques”. In : *Workshop on Termination*. Workshop on Termination (WST'16). Obergurgl, Austria, sept. 2016. URL : <https://hal.archives-ouvertes.fr/hal-01345914>.
- [W3] Raphael Ernani RODRIGUES et al. “Real-world loops are easy to predict : a case study”. English. In : *Workshop on Software Termination (WST'14)*. Wien, Austria, juil. 2014. URL : <http://hal.inria.fr/hal-01006208>.
- [W4] Christophe ALIAS et al. “Rank : a tool to check program termination and computational complexity”. English. In : *Workshop on Constraints in Software Testing Verification and Analysis (CSTVA'13)*. Luxembourg, mar. 2013. URL : <http://hal.archives-ouvertes.fr/hal-00801571>.
- [W5] Guillaume ANDRIEU, Christophe ALIAS et Laure GONNORD. “SToP : Scalable Termination Analysis of (C) Programs (tool presentation)”. In : *International Workshop on Tools for Automatic Program Analysis (TAPAS'12)*. Deauville, France, sept. 2012. URL : <http://hal.inria.fr/hal-00760926> (cf. p. 2).
- [W6] Paul FEAUTRIER et Laure GONNORD. “Accelerated Invariant Generation for C Programs with Aspic and C2fsm”. In : *Tools for Automatic Program Analysis (TAPAS'10)*. Perpignan, France, sept. 2010. URL : <https://hal.inria.fr/inria-00523320> (cf. p. 2).
- [W7] Laure GONNORD, Nicolas HALBWACHS et Pascal RAYMOND. “From Discrete Duration Calculus to Symbolic Automata”. In : *Third International Workshop on Synchronous Languages, Applications, and Programs (SLAP'04)*. T. 153. 4. Barcelona, Spain, mar. 2003, p. 3-18. URL : <https://hal.archives-ouvertes.fr/hal-00198433>.

National (french) Conferences

- [FC1] Laure GONNORD et Sébastien MOSSER. “Du code aux modèles, des modèles au code : enseigner les langages dédiés (DSL)”. In : *Conférence en Ingénierie du Logiciel (CIEL'18)*. Grenoble, France, juin 2018. URL : <https://hal.archives-ouvertes.fr/hal-01816239>.

Invited talks, keynotes

- [INV1] L. GONNORD. *Experiences in designing scalable static analyses*. Invited talk, Journées FAC, Toulouse. Avr. 2018 (cf. p. 2).
- [INV2] L. GONNORD. *Experiences in designing scalable static analyses*. Keynote, LOPSTR Conference, Frankfurt am Main. Sept. 2018 (cf. p. 2).
- [INV3] L. GONNORD. *Abstract Interpretation 101*. Invited talk, Université de Nice. 2017.
- [INV4] L. GONNORD. *Analysing C programs : arrays, pointers with precision and scale*. Invited talk, Université d'Evry. 2016.
- [INV5] L. GONNORD. *Synthesis of ranking functions using extremal counterexamples*. Invited talk, SRI, California, June 2015. 2015.
- [INV6] L. GONNORD. *Validation of Memory Accesses Through Symbolic Analyses*. Invited talk, Google, Mountain View, June 2015. 2015 (cf. p. 2).
- [INV7] D. MONNIAUX et al. *Path-focused analysis of numerical transitions*. Invited talk, June 30, SVARM & VERIFY workshop, Manchester, co-located with IJCAR. 2012.

Research reports, preprints

- [R1] Christophe ALIAS, Samuel THIBAULT et Laure GONNORD. *A Compiler Algorithm to Guide Runtime Scheduling*. Research Report RR-9315. INRIA Grenoble; INRIA Bordeaux - Sud-Ouest, déc. 2019. URL : <https://hal.inria.fr/hal-02421327>.
- [R2] Laure GONNORD, Paul IANNETTA et Lionel MOREL. *Semantic Polyhedral Model for Arrays and Lists*. Research Report RR-9183. Inria Grenoble Rhône-Alpes; UCBL; LIP - ENS Lyon; CEA List, juin 2018, p. 1-28. URL : <https://hal.archives-ouvertes.fr/hal-01815759>.
- [R3] Paul IANNETTA et al. *Semantic Array Dataflow Analysis*. Research Report RR-9232. Inria Grenoble Rhône-Alpes, déc. 2018, p. 1-22. URL : <https://hal.archives-ouvertes.fr/hal-01954396>.
- [R4] Romain FONTAINE, Lionel MOREL et Laure GONNORD. *Combining dataflow programming and polyhedral optimization, a case study*. Technical Report RT-0490. Inria Rhône-Alpes; CITI - CITI Centre of Innovation in Telecommunications and Integration of services; LIP - ENS Lyon, juil. 2017, p. 40. URL : <https://hal.archives-ouvertes.fr/hal-01572439>.
- [R5] Laure GONNORD, Szabolcs-Martón BAGOLY et Lionel MOREL. *Static Analysis via Horn Encoding from synchronous Dataflow Programs*. Technical Report RT-0492. Université Lyon 1 Claude Bernard, LIP & INSA, CITI, oct. 2017, p. 25. URL : <https://hal.inria.fr/hal-01614637> (cf. p. 2).
- [R6] Julien BRAINE, Laure GONNORD et David MONNIAUX. *Verifying Programs with Arrays and Lists*. Inter-ship report. ENS Lyon, juin 2016. URL : <https://hal.archives-ouvertes.fr/hal-01337140> (cf. p. 2).
- [R7] Maroua MAALEJ et al. *Combining Range and Inequality Information for Pointer Disambiguation*. Research Report RR-9076. ENS Lyon; CNRS; INRIA, déc. 2016. URL : <https://hal.inria.fr/hal-01429777>.
- [R8] David MONNIAUX et Laure GONNORD. *An encoding of array verification problems into array-free Horn clauses*. Research Report. Juil. 2015. URL : <https://hal.archives-ouvertes.fr/hal-01206882>.
- [R9] Maroua MAALEJ et Laure GONNORD. *Do we still need new Alias Analyses?* Research Report RR-8812. Université Lyon Claude Bernard / Laboratoire d'Informatique du Parallélisme, nov. 2015. URL : <https://hal.inria.fr/hal-01228581>.
- [R10] Paul FEAUTRIER, Abdoulaye GAMATIÉ et Laure GONNORD. *Enhancing the Compilation of Synchronous Dataflow Programs with a Combined Numerical-Boolean Abstraction*. Research Report HAL number 780521. Author Version of [FGG12] journal paper. University of Lille et Éns Lyon, jan. 2013. URL : <http://hal.archives-ouvertes.fr/hal-00780521>.
- [R11] Laure GONNORD et Peter SCHRAMMEL. *Abstract acceleration in linear relation analysis (extended version)*. Research report HAL number 787212. Research report version of the [GS14] journal paper. University of Lille et University of Oxford, fév. 2013. URL : <http://hal.archives-ouvertes.fr/hal-00787212>.

- [R12] Christophe ALIAS et al. *Bounding the Computational Complexity of Flowchart Programs with Multi-dimensional Rankings*. Research Report 7235. INRIA, mar. 2010. URL : <https://hal.inria.fr/inria-00464356>.
- [R13] Laure GONNORD et Nicolas HALBWACHS. *Abstract Acceleration to improve precision of Linear Relation Analysis*. Research Report. Verimag, mar. 2010. URL : <http://verimag.imag.fr/>.
- [R14] Vlad RUSU, Laure GONNORD et Benoît COMBEMALE. *Formally Tracing Executions From an Analysis Tool Back to a Domain Specific Modeling Language's Operational Semantics*. Research Report 7423. INRIA, oct. 2010. URL : <https://hal.inria.fr/inria-00526561>.
- [R15] Christophe ALIAS et al. *Program Termination and Worst Time Complexity with Multi-Dimensional Affine Ranking Functions*. Research Report 7037. INRIA, sept. 2009. URL : <https://hal.inria.fr/inria-00434037>.
- [R16] Laure GONNORD et Jean-Philippe BABAU. *Resource management with Qinna framework : the remote viewer case study*. Technical Report 6562. INRIA, juin 2008. URL : <https://hal.inria.fr/inria-00288593>.