

RANDRIANAINA Georges Aaron

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Postdoctoral Researcher at [The Software REBELS](#)
David R. Cheriton School of Computer Science
University of Waterloo, Ontario, Canada

Positions

2025–now Postdoctoral Researcher, University of Waterloo, Canada

Supervisor: Shane McIntosh

2021–2025 Ph.D. Candidate, University of Rennes, France

Education

2021–2025 Ph.D. in Computer Science, University of Rennes, France

Funded by the Ministère de l'Enseignement Supérieur et de la Recherche

Thesis: Incremental, Reproducible Builds of Software Variants [8]

Supervisors: Mathieu Acher, Djamel Eddine Khelladi and Olivier Zendra

2019–2021 M.Sc. in Computer Science, University of Rennes, France

Student at the École Normale Supérieure de Rennes (ENS Rennes)

Thesis: Incremental Builds of Linux Kernel Configurations

Supervisors: Mathieu Acher, Jean-Marc Jézéquel and Djamel Eddine Khelladi

2016–2019 B.Sc. in Computer Science, University of Lille, France

Thesis: Optimization of Python's Energy Consumption

Supervisor: Romain Rouvoy

Services

- *Reviewer*

- *Empirical Software Engineering (EMSE)*
 - *Journal of Systems and Software (JSS)*

- *Program committee*

- *41st International Conference Automated Software Engineering (ASE'26), Research Track*
 - *48th International Conference on Software Engineering (ICSE'26), Artifact Evaluation*
 - *23rd International Mining Software Repositories Conference (MSR'26), Mining Challenge*
 - *47th International Conference on Software Engineering (ICSE'25), Artifact Evaluation*
 - *46th Conference on Programming Language Design and Implementation (PLDI'25), Artifact Evaluation*
 - *22nd International Mining Software Repositories Conference (MSR'25), Research Track (Junior PC)*
 - *29th International Systems and Software Product Line Conference (SPLC'25), Demonstrations and Tools Track ([Certificate of Appreciation](#))*
 - *28th International Systems and Software Product Line Conference (SPLC'24), Demonstrations and Tools Track*
 - *6th International Workshop on Variability and Evolution of Software-Intensive Systems (VariVoluition'23)*

- *Volunteer*

- *Groupements De Recherche – Génie de la Programmation et du Logiciel (GDR GPL'23), Student Volunteer*

- *Seminar Organization*

- Organizer of the DiverSE’s research group weekly seminar, a.k.a. DiverSE Coffee (2022–2024)
I have invited presenters on various subjects, including Computer Science Research (e.g., academics from various universities), Computer Science Education (e.g., a trained high school teacher), Free and Open-Source Software Ecosystem (e.g., a developer from the Tails OS project)

Workshop

- 1st Workshop on Continuous Software Engineering (CSE), Bellairs Research Institute of McGill University in Holetown, Barbados, 2026

Dissemination

Talks

- 2024 Free and Open Source Software Developers’ European Meeting (FOSDEM)
Documenting and Fixing Non-Reproducible Builds due to Configuration Options
- 2024 Groupements De Recherche – Génie de la Programmation et du Logiciel (GDR GPL)
Options Matter: Documenting and Fixing Non-Reproducible Builds in Highly-Configurable Systems
- 2023 Groupements De Recherche – Génie de la Programmation et du Logiciel (GDR GPL)
Towards Incremental Build of Software Configurations
- 2022 Language and Software Engineering Department Seminar of IRISA Research Center
Smart Building of Software Variants

Mentions

- 2024 [Reproducible Builds in February 2024](#)
The report mentions our MSR’24 paper [3]
- 2022 [CNRS Online Press](#)
The article “Accelerating software configuration space study through incremental build” covers our ICSE’22 paper [6]

Teaching

- Fall’23 *Model-Driven Engineering (27h)*, Master 2, ISTIC, University of Rennes
Domain-Specific Language (16h), 5th Year, INSA Rennes
- Fall’22 *Compiler Construction (32h)*, Master 1, ISTIC, University of Rennes
Object-Oriented Modeling (32h), Licence 3, ISTIC, University of Rennes
- Fall’21 *Object-Oriented Modeling (64h)*, Licence 3, ISTIC, University of Rennes

Publications

International Journal Article

- [1] Georges Aaron Randrianaina, Djamel Eddine Khelladi, Olivier Zendra, and Mathieu Acher. “PYROBUILDS: Speeding up the exploration of large configuration spaces with incremental build”. In: *Journal of Systems and Software* (2026). doi: [10.1016/j.jss.2025.112592](https://doi.org/10.1016/j.jss.2025.112592).

International Conference Proceedings

- [2] Mathieu Acher, Benoit Combemale, Georges Aaron Randrianaina, and Jean-Marc Jezequel. “Embracing Deep Variability For Reproducibility and Replicability”. In: *Proceedings of the 2nd ACM Conference on Reproducibility and Replicability*. ACM REP. 2024. doi: [10.1145/3641525.3663621](https://doi.org/10.1145/3641525.3663621).

- [3] Georges Aaron Randrianaina, Djamel Eddine Khelladi, Olivier Zendra, and Mathieu Acher. “Options Matter: Documenting and Fixing Non-Reproducible Builds in Highly-Configurable Systems”. In: *Proceedings of the 21st International Conference on Mining Software Repositories*. MSR. 2024. doi: [10.1145/3643991.3644913](https://doi.org/10.1145/3643991.3644913).
- [4] Mathieu Acher, Luc Lesoil, Georges Aaron Randrianaina, Xhevahire Ternava, and Olivier Zendra. “A Call for Removing Variability”. In: *Proceedings of the 17th International Working Conference on Variability Modelling of Software-Intensive Systems*. VaMoS. 2023. doi: [10.1145/3571788.3571801](https://doi.org/10.1145/3571788.3571801).
- [5] Georges Aaron Randrianaina, Djamel Eddine Khelladi, Olivier Zendra, and Mathieu Acher. “Towards incremental build of software configurations”. In: *Proceedings of the ACM/IEEE 44th International Conference on Software Engineering: New Ideas and Emerging Results*. ICSE-NIER. 2022. doi: [10.1145/3510455.3512792](https://doi.org/10.1145/3510455.3512792).
- [6] Georges Aaron Randrianaina, Xhevahire Ternava, Djamel Eddine Khelladi, and Mathieu Acher. “On the benefits and limits of incremental build of software configurations: an exploratory study”. In: *Proceedings of the 44th International Conference on Software Engineering*. ICSE. 2022. doi: [10.1145/3510003.3510190](https://doi.org/10.1145/3510003.3510190).
- [7] Xhevahire Ternava, Luc Lesoil, Georges Aaron Randrianaina, Djamel Eddine Khelladi, and Mathieu Acher. “On the Interaction of Feature Toggles”. In: *Proceedings of the 16th International Working Conference on Variability Modelling of Software-Intensive Systems*. VaMoS. 2022. doi: [10.1145/3510466.3510485](https://doi.org/10.1145/3510466.3510485).

Theses

- [8] Georges Aaron Randrianaina. “Incremental, Reproducible Builds of Software Variants”. Ph.D. Dissertation, University of Rennes, 2025. URL: <https://hal.science/tel-05242776>.
- [9] Georges Aaron Randrianaina. “Incremental Builds of Linux Kernel Configurations”. Master’s Thesis, University of Rennes, 2021.
- [10] Georges Aaron Randrianaina. “Optimization of Python’s Energy Consumption”. Bachelor’s Thesis, University of Lille, 2019.