

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 (VariVolution'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 Tërnavà, 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 Tërnavà, 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 Tërnavà, 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.