

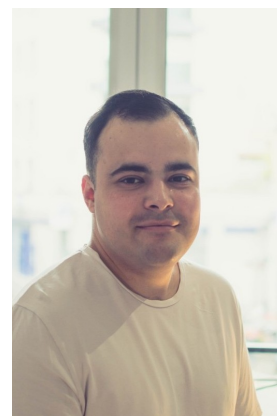
# Dylan Marinho

Post-doctoral researcher

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🌐 <https://dylan-marinho.gitlab.io/>

📅 October 20th, 1997



## Current position

2023 – ... 📌 Post-doctoral researcher at Télécom SudParis, Palaiseau, France

2022 – ... 📌 Associate member at LIPN, Villetaneuse, France

## Research experience

- 11/2023 – ... 📌 **Post-doctoral researcher**, Télécom SudParis, Palaiseau, France (CDD).  
“*An Explainable Language-Agnostic Ontology-Based Attack Model for Cyber-Physical Systems*”, under the supervision of Jean Leneutre and Dominique Blouin
- 10/2020 – 10/2023 📌 **PhD Student**, Université de Lorraine, LORIA, Nancy, France (Contrat doctoral d'établissement).  
“*Theoretical and algorithmic contributions to the analysis of safety and security properties in timed systems under uncertainty*”, under the supervision of Étienne André
- 04/2020 – 07/2020 📌 **Intern researcher (Master thesis)**, LORIA, Nancy, France.  
“*Defeating Opaque Predicates Statically through Machine Learning and Binary Analysis*”, under the supervision of Jean-Yves Marion
- 05/2019 – 07/2019 📌 **Intern researcher (Master thesis)**, Université Laval, Québec, Canada.  
“*Toward Semantic-Based Android Malware Detection Using Model Checking*”, under the supervision of Nadia Tawbi and Josée Desharnais
- 09/2018 – 05/2019 📌 **Project researcher (Master project)**, Inria, Rennes, France.  
“*GhostBusters: Mitigating Spectre Attacks on a DBT-Based Processor*”, under the supervision of Steven Derrien and Simon Rockiki
- 05/2018 – 07/2018 📌 **Intern researcher (Bachelor thesis)**, Inria, Rennes, France.  
“*Study of Common Sub-graphs of System Call Dependency Graphs for Malware Classification*”, under the supervision of Axel Legay and Jean Quilbeuf




## Education

- 2020 – 2023 📌 **PhD**, Computer Science, Université de Lorraine & LORIA.  
“*Theoretical and algorithmic contributions to the analysis of safety and security properties in timed systems under uncertainty*”, under the supervision of Étienne André
- 2017 – 2020 📌 **Magister's degree**, Computer Science, École normale supérieure de Rennes.
- 2019 – 2020 📌 **M.Sc. Public Policies**, Institut d'Études Politiques de Rennes.  
Université de Rennes 1 & École normale supérieure de Rennes.



## Research activities

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### Research visits

- 06/2023  Laboratoire Bordelais de Recherche en Informatique (LaBRI), Bordeaux, France (3 days)
- 07/2022  Singapore Management University, Singapore (10 days)
- 11/2021  Université Sorbonne Paris Nord, Laboratoire d'Informatique de Paris Nord (LIPN), Paris, France (one week)






### Projects

- 2023 – ...  Member of the AID research program CERES “Cybersecurity Evaluation in Realistic Environments”
- 2020 – 2023  Member of the ANR-NRF French-Singaporean research program ProMiS “Provable Mitigation of Side Channel through Parametric Verification” <https://www.loria.science/ProMiS/> (ANR-19-CE25-0015)



### Reviewer for international conferences

- 2023  The 21st International Symposium on Automated Technology for Verification and Analysis (ATVA 2023)
- 2022  The 25th International Conference on Fundamental Approaches to Software Engineering (FASE 2022)
-  The 16th International Symposium on Theoretical Aspects of Software Engineering (TASE 2022)
- 2021  The 15th International Symposium on Theoretical Aspects of Software Engineering (TASE 2021)


### Artifact evaluation committee, Repeatability evaluation committee

- 2024  The 27th ACM International Conference on Hybrid Systems: Computation and Control (HSCC 2024)
- 2023  The 21st International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2023)
-  The 26th ACM International Conference on Hybrid Systems: Computation and Control (HSCC 2023)
-  The 26th International Conference on Fundamental Approaches to Software Engineering (FASE 2023)
- 2022  The 25th International Conference on Fundamental Approaches to Software Engineering (FASE 2022)



### Presentations in international conferences

- 2023  The 27th International Conference on Engineering of Complex Computer Systems (ICECCS 2023), Toulouse, France
- 2021  The 15th International conference on Tests and Proofs (TAP 2021), online







### Presentations in national conferences

- 2022  21èmes journées Approches Formelles dans l'Assistance au Développement de Logiciels (AFADL 2022), Vannes, France

### Seminar and workshop presentations

- 2023  Journées nationales du GDR Sécurité Informatique, Puteaux, France
-  The 8th International Workshop on Synthesis of Complex Parameters (SynCoP 2023), Paris, France


## Research activities (continued)

- 2022  *Rencontres de la communauté française de compilation*, Grenoble, France
- 2022  MeFoSyLoMa seminar, Évry, France
- 2022  LoVe seminar (LIPN), Villetaneuse, France
- 2022  LORIA formal methods department seminar, Nancy, France
- 2020, 2021, 2022  VeriDis seminar (LORIA), Nancy, France
- 2021  Cyber in Saclay student sessions, online





## Research Publications

For all these publications, I am the main author or one of the main authors. Author names are in alphabetical order.

### Articles in peer-reviewed international journals

- 1 Étienne ANDRÉ, Didier LIME, **Dylan MARINHO**, and Jun SUN. “Guaranteeing Timed Opacity using Parametric Timed Model Checking”. In: *ACM Transactions on Software Engineering and Methodology* 31.4 (2022), 64:1–64:36.  DOI: 10.1145/3502851.


### Articles in the proceedings of peer-reviewed international conferences

- 1 Étienne ANDRÉ, Engel LEFAUCHEUX, and **Dylan MARINHO**. “Expiring opacity problems in parametric timed automata”. In: *Proceedings of the 27th International Conference on Engineering of Complex Computer Systems (ICECCS 2023)* (June 12–16, 2023). Ed. by Yamine AIT-AMEUR and Ferhat KHENDEK. Vol. 13260. Accepted. Toulouse, France: Springer, 2023, pp. 451–469.  DOI: 10.1109/ICECCS59891.2023.00020.
- 2 Étienne ANDRÉ, Shapagat BOLAT, Engel LEFAUCHEUX, and **Dylan MARINHO**. “strategFTO: Untimed control for timed opacity”. In: *Proceedings of the 8th ACM SIGPLAN International Workshop on Formal Techniques for Safety-Critical Systems (FTSCS 2022)* (Dec. 7, 2022). Ed. by Cyrille ARTHO and Peter ÖLVEČZKY. Auckland, New Zealand: ACM, 2022, pp. 27–33.  DOI: 10.1145/3563822.3568013.
- 3 Étienne ANDRÉ, **Dylan MARINHO**, Laure PETRUCCI, and Jaco van de POL. “Efficient Convex Zone Merging in Parametric Timed Automata”. In: *Proceedings of the 20th International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2022)* (Sept. 13–15, 2022). Ed. by Sergiy BOGOMOLOV and David PARKER. Vol. 13465. Lecture Notes in Computer Science. Warsaw, Poland: Springer, 2022, pp. 200–218.  DOI: 10.1007/978-3-031-15839-1\_12.
- 4 Étienne ANDRÉ, **Dylan MARINHO**, and Jaco van de POL. “A Benchmarks Library for Extended Parametric Timed Automata”. In: *Proceedings of the 15th International Conference on Tests and Proofs (TAP 2021), Held as Part of STAF 2021* (June 21–22, 2021). Ed. by Frédéric LOULERGUE and Franz WOTAWA. Vol. 12740. Lecture Notes in Computer Science. Virtual Event: Springer, 2021, pp. 39–50.  DOI: 10.1007/978-3-030-79379-1\_3.

### Articles in the proceedings of peer-reviewed national conferences

- 1 **Dylan MARINHO**. “Étude de propriétés d’opacité temporisée à l’aide de vérification temporisée paramétrée”. fr. In: *Approches Formelles dans l’Assistance au Développement de Logiciels (AFADL’04)* (June 8–10, 2022). Ed. by Christian ATTIOGBÉ and Fatiha ZAIDI. Vannes, France.

### Other publications (papers subject to lightweight reviews)

- 1 Étienne ANDRÉ, Engel LEFAUCHEUX, Didier LIME, **Dylan MARINHO**, and Jun SUN. “Configuring Timing Parameters to Ensure Execution-Time Opacity in Timed Automata”. In: *Proceedings of the First Workshop on Trends in Configurable Systems Analysis (TiCSA@ETAPS 2023)* (Apr. 23, 2023). Ed. by Maurice H. ter BEEK and Clemens DUBSLAFF. Vol. 392. EPTCS. Paris, France, 2023, pp. 1–26.  DOI: 10.4204/EPTCS.392.1.

## Bachelor and master theses

- 1 **Dylan MARINHO**. "Defeating Opaque Predicates". Master thesis. Inria Nancy - Grand Est, 2020. [URL: https://hal.science/hal-04134856](https://hal.science/hal-04134856).
- 2 **Dylan MARINHO**. "Toward Semantic-Based Android Malware Detection Using Model Checking". Master thesis. Université Laval, 2019.
- 3 **Dylan MARINHO**. "Study of Common Sub-graphs of System Call Dependency Graphs for Malware Classification". Bachelor thesis. Inria Rennes Bretagne Atlantique, Aug. 2018. [URL: https://hal.inria.fr/hal-03147651](https://hal.inria.fr/hal-03147651).

## Skills

Certifications	<ul style="list-style-type: none"><li>First-aider certification ("Sauveteur Secouriste du Travail"), Dec. 2021</li><li>"Higher Education" Label from the University of Lorraine, Jul. 2022</li></ul>
Coding	<ul style="list-style-type: none"><li>OCaml, C/C++, Java, PHP, Python, IsabelleHOL, Lisp, Scala, PL/SQL</li></ul>
Tools	<ul style="list-style-type: none"><li>LaTeX, Git</li></ul>
Languages	<ul style="list-style-type: none"><li>French (mother tongue), Portuguese (mother tongue), English (fluent)</li></ul>

## Teaching

### IUT Nancy-Charlemagne, Université de Lorraine, Nancy, France

2022 – 2023	<ul style="list-style-type: none"><li><b>Network Architecture</b> Lessons and tutorials for undergraduate students (second year). 36 hours.</li><li><b>Efficient Programming</b> Lessons and tutorials for undergraduate students (second year). 28 hours.</li></ul>
2021 – 2022	<ul style="list-style-type: none"><li><b>Operating a Database</b> Lessons, tutorials, practical and projects sessions for undergraduate students (first year). 64 hours.</li></ul>
2020 – 2021	<ul style="list-style-type: none"><li><b>Algorithm initiation</b> Lessons and tutorials for undergraduate students (first year). 32 hours.</li><li><b>Programming and Database Administration</b> Lessons and tutorials for undergraduate students (first year). 32 hours.</li></ul>

## Summer school attendance

28 Nov.-02 Dec. 2021	<ul style="list-style-type: none"><li><b>REDOCS'22</b>, Marseille, France. Meeting of Companies and PhD-students in Security – CNRS Security GDR CyberDetect project: "<i>MalAware: Behavioral malware detection</i>"</li></ul>
25-31 Aug. 2022	<ul style="list-style-type: none"><li><b>Doctoral symposium on software technology</b>, Campos Tures, Italy.</li></ul>
25-29 Oct. 2021	<ul style="list-style-type: none"><li><b>REDOCS'21</b>, Marseille, France. Meeting of Companies and PhD-students in Security – CNRS Security GDR Airbus project: "<i>WannaFly: Dummy Ransomware for Red Team Exercises</i>"</li></ul>
8-12 Feb. 2021	<ul style="list-style-type: none"><li><b>Cyber in Saclay</b>, online. Winter School in Cybersecurity. CNRS Security GDR</li></ul>

## Software development

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- 2020 - ...
  - Participation in the development of **IMITATOR**, OCaml  
Open-source model checker for (extensions of) parametric timed automata  
<https://imitator.fr>
  - Maintainer of the **IMITATOR** benchmark library  
<https://imitator.fr/library2>
- 2022
  - Developer of **STRATEGFTO**, Java  
Open-source software tool to perform the exhibition of a controller for opacity  
<https://github.com/DylanMarinho/Controlling-TA>

## Collective Responsibilities

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### Member of the organization committee of an international conference

- 2023
  - European joint conferences on theory and practice of software (ETAPS 2023), > 550 participants (April 22-27, 2023), Paris, France.

### Responsibilities

- 2021 – 2023
  - Maintainer of the website of the departement of formal methods of LORIA
- 2020 – 2023
  - Elected representative of the council of the IAEM Doctoral School
  - Elected representative of the council of the AM2I scientific division
  - Elected representative of the Lorrainer Council of Doctoral Schools (*Conseil Lorrain des Écoles Doctorales*)  
Steering Committee for the “Skills for the Company” Label (*Comité de Pilotage du Label “Compétences pour l’entreprise”*)
- 2017 – 2020
  - Elected representative student to the Governing Board of the École normale supérieure de Rennes (2 terms), Social Aid Commission (2 terms) and International Mobility Commission (1 term)
- 2018 – 2019
  - Treasurer of the Arts Office (Bureau des Arts de l’ENS de Rennes) and of the “InterENS Culturelles” organizing committee

## References

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Available on Request