JAIME ARIAS

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Personal Information

Given Name: Jaime Eduardo **Last Name:** Arias Almeida **Birth Date:** 15/04/1989 **Citizenship:** Colombian

Research Interests

Formal specification and verification of timed and reactive concurrent systems; interactive multimedia systems.

Experience

- **Research Engineer** at *CNRS, Laboratoire d'Informatique de Paris Nord (LIPN), France.* **2018 - Present**
- **R&D Engineer** at *Inria Grenoble Rhône-Alpes, France.* **2016 - 2018**
- **R&D Engineer** at *Inria Bordeaux Sud-Ouest, France.* **2015 - 2016**

Education

- **Ph.D. in Computer Science** at *Université de Bordeaux, France.* **2012 - 2015**
- **Engineering Degree in Computer Science** at *Universidad Javeriana, Colombia.* **2005 - 2012**
- **Electronics Engineering Degree** at *Universidad Javeriana, Colombia.* **2005 - 2012**

Research Projects (5 Last Years)

- PHC Aurora project with the University of Oslo (Norway) – **Member** **2023 – Present**
- IEA project, CNRS/PAN, with the Polish Academy of Sciences (Poland) – **Member** **2019 – Present**
- Project funded by CNRS, with the University of Oslo (Norway) – **Member** **2022 – 2022**
- Project funded by USPN, with Javeriana University (Colombia) and LaBRI (France) – **Member** **2022 – 2022**
- IFD collaborative project with the University of Århus (Denmark) – **Member** **2020 – 2021**

Responsibilities

- **Responsible** of the development committee of the LIPN since January 2023.
- **Responsible** of the development team of the LIPN since February 2021.
- **Board** member of the Galilée Doctoral School since July 2021.
- **Ambassador** of Software Heritage since June 2021.
- **Programme Committee** member of *SciPy 2018-2020*, *Microservices 2022*, *SLTC 2022* and *15CCC*.
- **Artifact Evaluation** member of *FORMATS 2023*, *POPL 2023*, *ICFP 2022-2023*, *FormaliSE 2022-2023*.
- **Tool Award Committee** member of *Petri Nets 2020-2021*.
- **Jury** of the "Applications and Softwares" session of the APSA Challenge - Ethiopia 2018.

Tools

The reader can visit my Git repository (https://bit.ly/2ZktcHg) to see the full list of my developments.

- **ADT2AMAS (C++):** Tool that allows (1) transforming ADTrees into multi-agent systems and (2) computing an optimal schedule with the minimal number of agents. **Demo:** https://bit.ly/2N6w2wV
- **CosyDraw (JS):** Web-based graphical interface for the formal specification and verification of dynamic systems. It is the GUI for the CosyVerif platform. **Demo:** https://bit.ly/3hPrE1P
- **PMC-SOG (C++):** Parallel and distributed model checking using the Symbolic Observation Graph (SOG).
- **Solidity2CPN (python):** Platform for the formal verification of smart contracts using Coloured Petri Nets.
- **SyMoN (OCaml):** Symbolic model checker for a non-deterministic timed concurrent constraint calculus.

Publications

Author of 27 conference papers and 1 journal paper. The reader can find all my publications on my website.

1. J. Arias, W. Jamroga, W. Penczek, L. Petrucci, and T. Sidoruk. Strategic (timed) computation tree logic. In *AAMAS 2023*, pages 382–390. ACM, 2023.
2. J. Arias, K. Bae, C. Olarte, P. Ölveczky, L. Petrucci, and F. Rømming. Symbolic analysis and parameter synthesis for time petri nets using maude and smt solving. In *Petri Nets*, volume 13929 of *LNCS*, pages 369–392. Springer, 2023.
3. J. Arias, M. Knapik, L. Petrucci, and W. Penczek. Modular analysis of tree-topology models. In *ICFEM*, volume 13478 of *LNCS*, pages 36–53. Springer, 2022.
4. J. Arias, Łukasz Maśko, W. Penczek, L. Petrucci, and T. Sidoruk. Minimal schedule with minimal number of agents in attack-defence trees. In *ICECCS 2022*, pages 1–10. IEEE, 2022.
5. Étienne André, J. Arias, L. Petrucci, and J. van de Pol. Iterative bounded synthesis for efficient cycle detection in parametric timed automata. In *TACAS*, volume 12651 of *LNCS*, pages 311–329. Springer, 2021.