

Publications  
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**Soumission en cours**

- [1] Armando Castañeda, Aurélie Hurault, Philippe Quéinnec, and Matthieu Roy. Tasks in modular proofs of concurrent algorithms. *Information and Computation*, submitted April 2020.

**Thèse & HDR**

- [1] Philippe Quéinnec. *Techniques de réPLICATION de données pour les systèmes réPARTIS à grande échelle*. Thèse de doctorat, Institut National Polytechnique de Toulouse, March 1994.
- [2] Philippe Quéinnec. *Variété de la cohérence dans les systèmes répartis*. Habilitation à diriger les recherches, Institut National Polytechnique de Toulouse, May 2011. URL: <http://queinnec.perso.enseeiht.fr/publis/hdr-memoire.pdf>.

**Revues internationales avec comité de lecture**

- [1] Adam Shimi, Aurélie Hurault, and Philippe Quéinnec. Characterization and derivation of heard-of predicates for asynchronous message-passing models. *Logical Methods in Computer Science*, 17(3):1–43, September 2021. doi:[10.46298/lmcs-17\(3:26\)2021](https://doi.org/10.46298/lmcs-17(3:26)2021).
- [2] Sara Houhou, Souheib Baarir, Pascal Poizat, Philippe Quéinnec, and Laid Kahloud. A first-order logic verification framework for communication-parametric and time-aware BPMN collaborations. *Information Systems*, pages 1–31, 2021. doi:[10.1016/j.is.2021.101765](https://doi.org/10.1016/j.is.2021.101765).
- [3] Florent Chevrou, Aurélie Hurault, and Philippe Quéinnec. A modular framework for verifying versatile distributed systems. *Journal of Logical and Algebraic Methods in Programming*, 108:24–46, November 2019. doi:[10.1016/j.jlamp.2019.05.008](https://doi.org/10.1016/j.jlamp.2019.05.008).
- [4] Florent Chevrou, Aurélie Hurault, and Philippe Quéinnec. On the diversity of asynchronous communication. *Formal Aspects of Computing*, 28(5):847–879, September 2016. doi:[10.1007/s00165-016-0379-x](https://doi.org/10.1007/s00165-016-0379-x).
- [5] Serial Rayene Boussalia, Allaoua Chaoui, Aurélie Hurault, Meriem Ouederni, and Philippe Quéinnec. Multi-objective quantum inspired cuckoo search algorithm and multi-objective bat inspired algorithm for the web service composition problem. *International Journal of Intelligent Systems Technologies and Applications*, 15(2):95–126, 2016. doi:[10.1504/IJISTA.2016.076493](https://doi.org/10.1504/IJISTA.2016.076493).

- [6] Florent Chevrou, Aurélie Hurault, and Philippe Quéinnec. Automated verification of asynchronous communicating systems with TLA<sup>+</sup>. *Electronic Communications of the EASST (special issue: 15th International Workshop on Automated Verification of Critical Systems)*, 72:1–15, 2015. doi:[10.14279/tuj.eceasst.72.1019](https://doi.org/10.14279/tuj.eceasst.72.1019).
- [7] Nadège Pontisso, Philippe Quéinnec, and Gérard Padiou. Analysis of distributed multi-periodic systems to achieve consistent data matching. *Concurrency and Computation: Practice and Experience*, 25(2):234–249, February 2013. doi:[10.1002/cpe.2803](https://doi.org/10.1002/cpe.2803).
- [8] Tanguy Le Berre, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. Real time behavior of data in distributed embedded systems. *Scalable Computing: Practice and Experience*, 10(3):229–239, September 2009. URL: <http://www.scpe.org/index.php/scpe/article/view/615>.
- [9] Michel Charpentier, Mamoun Filali, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. The observation: An abstract communication mechanism. *Parallel Processing Letters*, 9(3):437–450, September 1999.

#### **Revues nationales avec comité de lecture**

- [1] Gérard Padiou, Mamoun Filali, and Philippe Quéinnec. Les modèles d'exécution répartie. *Calculateurs Parallèles, Systèmes Répartis et Réseaux*, 10(5):477–492, 1998.
- [2] Philippe Quéinnec and Gérard Padiou. Diffusion hiérarchisée fiable pour une mémoire répliquée à grande Échelle. *Revue Électronique sur les Réseaux et l'Informatique Répartie*, 2, October 1995.

#### **Conférences internationales avec comité de lecture**

- [1] Sara Houhou, Souheib Baarir, Pascal Poizat, and Philippe Quéinnec. A direct formal semantics for BPMN time-related constructs. In *16th Int'l Conf. on Evaluation of Novel Approaches to Software Engineering (ENASE 2021)*, pages 138–149, April 2021. doi:[10.5220/0010462901380149](https://doi.org/10.5220/0010462901380149).
- [2] Adam Shimi, Aurélie Hurault, and Philippe Quéinnec. Derivation of Heard-Of predicates from elementary behavioral patterns. In *40th Int'l Conf. on Formal Techniques for Distributed Objects, Components, and Systems (FORTE 2020)*, volume 12136 of *Lecture Notes in Computer Science*, pages 133–149. Springer, June 2020. URL: <https://arxiv.org/abs/2004.10619>, doi:[10.1007/978-3-030-50086-3\\_8](https://doi.org/10.1007/978-3-030-50086-3_8).
- [3] Armando Castañeda, Aurélie Hurault, Philippe Quéinnec, and Matthieu Roy. Tasks in modular proofs of concurrent algorithms. In *21st Int'l Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2019)*, volume 11914 of *Lecture Notes in Computer Science*, pages 69–83. Springer, October 2019. doi:[10.1007/978-3-030-34992-9\\_6](https://doi.org/10.1007/978-3-030-34992-9_6).

- [4] Aurélie Hurault and Philippe Quéinnec. Proving a non-blocking algorithm for process renaming with TLA<sup>+</sup>. In *13th International Conference on Tests and Proofs*, volume 11823 of *Lecture Notes in Computer Science*, pages 147–166. Springer, October 2019. doi:[10.1007/978-3-030-31157-5\\_10](https://doi.org/10.1007/978-3-030-31157-5_10).
- [5] Florent Chevrou, Aurélie Hurault, Shin Nakajima, and Philippe Quéinnec. A map of asynchronous communication models. In *19th Refinement Workshop, World Congress on Formal Methods FM’19*, volume 12233 of *Lecture Notes in Computer Science*, pages 1–16, October 2019.
- [6] Sara Houhou, Souheib Baarir, Pascal Poizat, and Philippe Quéinnec. A first-order logic semantics for communication-parametric BPMN collaborations. In *17th Int'l Conf. on Business Process Management (BPM 2019)*, volume 11675 of *Lecture Notes in Computer Science*, pages 52–68. Springer, September 2019. **Best paper award.** doi:[10.1007/978-3-030-26619-6\\_6](https://doi.org/10.1007/978-3-030-26619-6_6).
- [7] Adam Shimi, Aurélie Hurault, and Philippe Quéinnec. Characterizing asynchronous message-passing models through rounds. In *22nd Int'l Conf. on Principles of Distributed Systems (OPODIS 2018)*, volume 125 of *LIPICS*, pages 18:1–18:17. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, December 2018. doi:[10.4230/LIPIcs.OPODIS.2018.18](https://doi.org/10.4230/LIPIcs.OPODIS.2018.18).
- [8] Florent Chevrou, Aurélie Hurault, and Philippe Quéinnec. A modular framework for verifying versatile distributed systems. In *16th Int'l Conf. on High Performance Computing & Simulation (HPCS 2018) - Int'l Symposium on Formal Approaches to Parallel and Distributed Systems (4PAD 2018)*, pages 748–755. IEEE, July 2018. doi:[10.1109/HPCS.2018.00121](https://doi.org/10.1109/HPCS.2018.00121).
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- [10] Nathanaël Sensfelder, Aurélie Hurault, and Philippe Quéinnec. Inference of channel priorities for asynchronous communication. In *14th Int'l Conf. on Distributed Computing and Artificial Intelligence (DCAI'17)*, volume 620 of *Advances in Intelligent Systems and Computing*, pages 262–269. Springer, June 2017. doi:[10.1007/978-3-319-62410-5\\_32](https://doi.org/10.1007/978-3-319-62410-5_32).
- [11] Florent Chevrou, Aurélie Hurault, Philippe Mauran, and Philippe Quéinnec. Mechanized refinement of communication models with TLA<sup>+</sup>. In *5th Intl. Conf. Abstract State Machines, Alloy, B, TLA, VDM, and Z (ABZ 2016)*, volume 9675 of *Lecture Notes in Computer Science*, pages 312–318. Springer-Verlag, May 2016. doi:[10.1007/978-3-319-33600-8\\_27](https://doi.org/10.1007/978-3-319-33600-8_27).
- [12] Florent Chevrou, Aurélie Hurault, and Philippe Quéinnec. Automated verification of asynchronous communicating systems with TLA<sup>+</sup>. In *15th*

*International Workshop on Automated Verification of Critical Systems (AV-OCS)*, September 2015. doi:10.14279/tuj.eceasst.72.1019.

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- [14] Nadège Pontisso, Philippe Quéinnec, and Gérard Padiou. Analysis of distributed multi-periodic systems to achieve consistent data matching. In *10th Annual Int'l Conf. on New Technologies of Distributed Systems NOTERE 2010*, pages 81–88. IEEE, May 2010. doi:10.1109/NOTERE.2010.5536799.
- [15] Tanguy Le Berre, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. A data oriented approach for real-time systems. In *17th Int'l Conf. on Real-Time and Network Systems RTNS09*, pages 147–158, October 2009.
- [16] Nadège Pontisso, Philippe Quéinnec, and Gérard Padiou. Temporal data matching in component based real time systems. In *IEEE Symposium on Industrial Embedded Systems SIES2009*, pages 62–65, July 2009.
- [17] Tanguy Le Berre, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. Real time behavior of data in distributed embedded systems. In *Int'l Workshop on Real Time Software (RTS'08)*, pages 569–575. Polish Information Processing Society, October 2008.
- [18] Tanguy Le Berre, Philippe Quéinnec, and Gérard Padiou. Ensuring timed validity of distributed real time data. In *4th European Congress on Embedded Real Time Software (ERTS 2008)*, January 2008.
- [19] Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. Separability to help parallel simulation of distributed computations. In *11th Int'l Conf. On Principles Of DIstributed Systems*, volume 4878 of *Lecture Notes in Computer Science*, pages 358–371. Springer-Verlag, December 2007.
- [20] Cezar Pleșca, Romulus Grigoraș, Philippe Quéinnec, Gérard Padiou, and Jean Fanchon. A coordination-level middleware for supporting flexible consistency in CSCW. In *14th Euromicro Conf. on Parallel, Distributed and Network-based Processing*, pages 316–321. IEEE, February 2006.
- [21] Cezar Pleșca, Romulus Grigoraș, Philippe Quéinnec, and Gérard Padiou. Streaming with causality: A practical approach. In *ACM Multimedia*, pages 283–286, November 2005.
- [22] Mamoun Filali, Valérie Issarny, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. Maximal group membership in ad hoc networks. In *6th Int'l Conf. on Parallel Processing and Applied Mathematics*, volume 3911 of *Lecture Notes in Computer Science*, pages 51–58. Springer-Verlag, September 2005.

- [23] Michel Charpentier, Gérard Padiou, and Philippe Quéinnec. Cooperative mobile agents to gather global information. In *4th IEEE Int'l Symposium on Network Computing and Applications (NCA05)*, pages 271–274, July 2005.
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- [26] Mamoun Filali, Philippe Mauran, Gérard Padiou, and Philippe Quéinnec. The reconstruction of a mobile agent computation and its validation. In *Int'l Workshop on Formal Methods for Parallel Programming: Theory and Applications (FMPPTA2003)*. IEEE, April 2003.
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- [32] Philippe Quéinnec and Gérard Padiou. Derivation of fault tolerance properties of distributed algorithms. In *13th ACM Symposium on Principles of Distributed Computing*, short paper, August 1994.
- [33] Philippe Quéinnec and Gérard Padiou. UNITY as a tool for design and validation of a data replication system. In *9th Int'l Conf. on Systems Engineering*, July 1993.
- [34] Philippe Quéinnec and Gérard Padiou. Flight plan management in a distributed air traffic control system. In *Int'l Symposium on Autonomous Decentralized Systems*, pages 323–329, March 1993.

### **Workshops peu sélectifs**

- [1] Philippe Mauran, Gérard Padiou, Philippe Quéinnec, and Bernard Delatte. Using separability to enable time-consistent distributed space simulation. In *DASIA09 DAta Systems In Aerospace*, pages 281–284. International Space System Engineering Conference, May 2009.
- [2] Nadège Pontisso, Philippe Quéinnec, Gérard Padiou, and Guillaume Véran. Data consistency in a component based space system. In *DASIA09 DAta Systems In Aerospace*, pages 277–280. International Space System Engineering Conference, May 2009.
- [3] Cezar Pleșca, Romulus Grigoraș, Philippe Quéinnec, and Gérard Padiou. Adaptive multimodal communication for multimedia. In *11th Euromedia*, pages 183–189, April 2005.
- [4] Philippe Quéinnec and Gérard Padiou. Design of a highly available replicated memory. In *European Research Seminar on Advances in Distributed Systems*, April 1995.

### **Conférences invitées**

- [1] Philippe Quéinnec. Describing asynchronous communications in distributed algorithms. In *4th Workshop on Formal Reasoning in Distributed Algorithms (FRIDA 2017)*, October 2017. Invited presentation. URL: <https://forsyte.at/events/frida2017/>.
- [2] Philippe Quéinnec. Transactional memory. Séminaire ONERA, September 2011.
- [3] Philippe Quéinnec. Un modèle d'exécution répartie tolérant aux fautes : Isis, Horus. 3<sup>e</sup> École d'Informatique des Systèmes Parallèles et Répartis (ISYPAR 98), March 1998.

### **Conférences nationales avec comité de lecture**

- [1] Florent Chevrou, Aurélie Hurault, Philippe Mauran, Meriem Ouederni, Philippe Quéinnec, and Xavier Thirioux. La composition de services dans le monde asynchrone – formalisation et vérification en TLA<sup>+</sup>. In Frédéric Dadeau and Pascale Le Gall, editors, *Approches Formelles dans l'Assistance au Développement de Logiciels (AFADL)*, pages 34–39. CNRS - GDR GPL, June 2015. URL: <http://events.femto-st.fr/sites/femto-st.fr.afadl-2015/files/content/proceedings/afadl2015.pdf>.
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