

Lucas Perotin, Chercheur postdoctoral

✉ lucas.perotin@ens-lyon.fr

☎ +1 (615) 755-5010



Expériences Professionnelles

- 2024 – actuel **Postdoctorat, Université Vanderbilt** Informatique.
Algorithmes d'ordonnancement en ligne sur divers modèles de graphes de tâches
- 2020 – 2023 **Doctorat, ENS de Lyon** Informatique.
Algorithmes d'ordonnancement pour optimiser la performance, la consommation d'énergie et la robustesse des applications HPC. Encadrants : Anne Benoit et Yves Robert.
- Jan – Juil 2020 **Stage de recherche** Informatique.
Ordonnancement de graphes de tâches avec plusieurs types de ressources. Encadrant : Hongyang Sun.
- Mai – Juil 2018 **Stage de recherche** Informatique.
Génération de partitions musicales utilisant l'apprentissage profond. Encadrant : François Pachet.


Formation

- 2016 – 2020 **Diplôme de l'ENS de Lyon** en Informatique.
Inclus : **Licence** en Informatique (*mention très bien, 2017*), **Master** en Informatique (*mention bien, 2020*), **Licence** en Musicologie (*mention assez bien, 2019*).
- 2014 – 2016 **Classe préparatoire, Lycée Saint Louis** en Mathématiques et Physique.
- 2014 **Baccalauréat scientifique** (*mention très bien*).





Publications

Journaux



- 1 A. Benoit, T. Herault, L. Perotin, Y. Robert, and F. Vivien, "Revisiting i/o bandwidth-sharing strategies for hpc applications," *Journal of Parallel and Distributed Computing*, vol. 188, p. 104 863, 2024, ISSN: 0743-7315. [DOI: https://doi.org/10.1016/j.jpdc.2024.104863](https://doi.org/10.1016/j.jpdc.2024.104863).
- 2 A. Benoit, L. Perotin, Y. Robert, and F. Vivien, "Checkpointing strategies to tolerate non-memoryless failures on hpc platforms," *ACM Trans. Parallel Comput.*, vol. 11, no. 1, Mar. 2024, ISSN: 2329-4949. [DOI: 10.1145/3624560](https://doi.org/10.1145/3624560).
- 3 L. Perotin, S. Kandaswamy, H. Sun, and P. Raghavan, "Multi-resource scheduling of moldable workflows," *Journal of Parallel and Distributed Computing*, vol. 184, p. 104 792, 2024, ISSN: 0743-7315. [DOI: https://doi.org/10.1016/j.jpdc.2023.104792](https://doi.org/10.1016/j.jpdc.2023.104792).
- 4 L. Perotin and H. Sun, "Improved online scheduling of moldable task graphs under common speedup models," *ACM Trans. Parallel Comput.*, vol. 11, no. 1, Mar. 2024, ISSN: 2329-4949. [DOI: 10.1145/3630052](https://doi.org/10.1145/3630052).
- 5 A. Benoit, V. Le Fèvre, L. Perotin, P. Raghavan, Y. Robert, and H. Sun, "Resilient scheduling of moldable parallel jobs to cope with silent errors," *IEEE Transactions on Computers*, vol. 71, no. 7, pp. 1696–1710, 2022. [DOI: 10.1109/TC.2021.3104747](https://doi.org/10.1109/TC.2021.3104747).

- 6 A. Benoit, L. Perotin, Y. Robert, and H. Sun, "Checkpointing workflows à la young/daly is not good enough," *ACM Trans. Parallel Comput.*, vol. 9, no. 4, Dec. 2022, ISSN: 2329-4949.  DOI: 10.1145/3548607.





Conférences

- 1 A. Benoit, L. Perotin, Y. Robert, and H. Sun, "Online scheduling of moldable task graphs under common speedup models," in *Proceedings of the 51st International Conference on Parallel Processing*, ser. ICPP '22, Bordeaux, France: Association for Computing Machinery, 2023, ISBN: 9781450397339.  DOI: 10.1145/3545008.3545049.
- 2 A. Benoit, Y. Du, T. Herault, *et al.*, "Checkpointing à la young/daly: An overview," in *Proceedings of the 2022 Fourteenth International Conference on Contemporary Computing*, ser. IC3-2022, Noida, India: Association for Computing Machinery, 2022, pp. 701–710, ISBN: 9781450396752.  DOI: 10.1145/3549206.3549328.
- 3 L. Perotin, H. Sun, and P. Raghavan, "Multi-resource list scheduling of moldable parallel jobs under precedence constraints," in *Proceedings of the 50th International Conference on Parallel Processing*, ser. ICPP '21, Lemont, IL, USA: Association for Computing Machinery, 2021, ISBN: 9781450390682.  DOI: 10.1145/3472456.3472487.
- 4 A. Benoit, V. L. Fèvre, L. Perotin, P. Raghavan, Y. Robert, and H. Sun, "Resilient scheduling of moldable jobs on failure-prone platforms," in *2020 IEEE International Conference on Cluster Computing (CLUSTER)*, 2020, pp. 81–91.  DOI: 10.1109/CLUSTER49012.2020.00018.


Workshops

- 1 A. Benoit, L. Perotin, Y. Robert, and F. Vivien, "Checkpointing strategies for a fixed-length execution," in *SC24-W: Workshops of the International Conference for High Performance Computing, Networking, Storage and Analysis*, 2024, pp. 508–518.  DOI: 10.1109/SCW63240.2024.00072.
- 2 L. Perotin, C. Zhang, R. Wijayawardana, A. Benoit, Y. Robert, and A. Chien, "Risk-aware scheduling algorithms for variable capacity resources," in *Proceedings of the SC '23 Workshops of The International Conference on High Performance Computing, Network, Storage, and Analysis*, ser. SC-W '23, Denver, CO, USA: Association for Computing Machinery, 2023, pp. 1306–1315.  DOI: 10.1145/3624062.3624194.

Compétences

Langues	 Français , natif ; Anglais , courant, diplôme CAE (189/210) ; Espagnol , notions de base.
Programmation	 Python, C++, OCaml, \LaTeX , ...
Musique	 Piano (niveau avancé), Batterie, Guitare, Composition, Production
Sports	 Ski freeride, judo, tennis, escalade, ...

Récompenses et Réalisations

2022  **Best Paper Award**, à 51st International Conference on Parallel Processing, ICPP '22