Julien Adam

Junior HPC Expert Applicant

Professional experience

09/2015–Today   **HPC Junior Consultant**, *Paratools SAS*, Bruyères-le-Châtel (91), France.
- Portals 4 driver development for a thread-based MPI implementation ;
- Thread model integration inside a MPI+X runtime ;
- Design of a new TLS support for data privatization support in user-thread engine ;
- Deployment of NUMA-Aware CUDA driver in an MPI runtime ;
- HPC-aware Validation framework designed for large-scale clusters ;
- The setup of a Checkpoint/Restart solution for thread-based MPI runtime ;
- Git-lecture teacher, all levels ;
- Involvemnt in MPI standardization committee (MPI Forum) ;

2019   **Teaching Assistant**, *UVSQ*, Versailles (91), France.
As part of *High Performance Computing and Simulation* Master degree (CHPS), I actively contributed to the *OS architecture* lectures and tutorials (AISE). The program widely spans from system calls, and Shell basic usage to process scheduling and advanced memory management.

09/2012–08/2015   **Apprenticeship as part of Engineering Scholarship**, *CEA, DAM, DIF*, Arpajon (91), France.
- JCHRONOSS implementation and extra modules suited for HPC contexts ;
- Formal studies of checkpoint-restart tool for specific HPC use cases ;
- Administration with validation process tools bound to open-source research project ;
- Repositories syncing deployment under data and networks constraints ;

Publications

2019   J. Adam, M. Kermarquer, J.-B. Besnard, L. Bautista-Gomez, M. Pérache, P. Carribault, J. Jaeger, A. D. Malony, and S. Shende. Checkpoint/restart approaches for a thread-based MPI runtime. *Parallel Computing*, 2019.

2018   J. Adam, J.-B. Besnard, A. D. Malony, S. Shende, M. Pérache, P. Carribault, and J. Jaeger. Transparent high-speed network checkpoint/restart in MPI. In *Proceedings of the 25th European MPI Users' Group Meeting*, EuroMPI'18, p. 12:1–12:11. ACM.

2016   J.-B. Besnard, J. Adam, S. Shende, M. Pérache, P. Carribault, J. Jaeger, and A. D. Malony. Introducing task-containers as an alternative to runtime-stacking. In *Proceedings of the 23rd European MPI Users' Group Meeting*, EuroMPI'16, p. 51–63. ACM.

2016   J. Adam and M. Pérache. A parallel and resilient frontend for high performance validation suites. In *International Conference on Vector and Parallel Processing*, p. 248–255. Springer.

Skills

HPC	MPI, OpenMP, CUDA, Docker, Spack, SLURM, Spark, Portals4
Langages	C/C++, Bash/Zsh, Python2/3, Perl5/6, Java, Web Technologies, LaTeX
Génie logiciel	Git, Svn, CMake, Autotools, Jenkins, Gitlab, SonarCube, SCRUM, UML
English level	Proficient use in professional situations

Education

2012–2015   **Engineering school by apprenticeship**, *ECE Paris*, Paris (XV), France.
2010–2012   **IT university diploma by apprenticeship**, *IUT Orsay*, Orsay (91), France.

Certifications

07/2015   **CS190.1x : Scalable Machine Learning**, UC BerkeleyX.
04/2015   **DEV203x : Introduction to Bootstrap**, *78%*, MicrosoftX.
01/2015   **LFS101x.2 : Introduction to Linux**, *97%*, LinuxFoundationX.

Miscellaneous

- Driving license ;
- Photography lover ;
- Civil Aviation Passionate ;
- Former piano player (10+) ;

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28 years old (06/1991)