



Aygu JAMAL

Nationality: French ✉ **Email address:** ayguljamal@yahoo.com

in LinkedIn: <https://www.linkedin.com/in/aygul-jamal/> **Website:** <https://www.aygul.fr>

Home: 2 Rue Jean Guiméra, 31300 TOULOUSE (France)

WORK EXPERIENCE

Expert in High Performance Computing

University of Toulouse [01/09/2022 – Current]

City: Toulouse

Country: France

In charge of the ARM supercomputer prototype (Turpan)

Worked as Postdoctoral Fellow

CNRS [01/11/2018 – 30/10/2020]

City: Paris

Country: France

Implementation of High Performance Numerical techniques for Cosmic Microwave Background data analysis

Temporary Research and Teaching Assistant

Paris-Saclay University [15/01/2018 – 15/07/2018]

City: Orsay

Country: France

Teaching 4th year students: Hardware and Parallel Computer Architectures

Teaching 2nd year students: Introduction to Databases

Teaching 1st year students: Imperative Programming and Advanced Imperative Programming

PhD preparation in Computer Science

Paris-Saclay University [01/10/2014 – 30/09/2017]

City: Orsay

Country: France

A parallel iterative solver for large sparse linear systems enhanced with randomization and GPU accelerator, and its resilience to soft errors

Gene Golub Summer School

SIAM [13/06/2015 – 25/06/2015]

City: Delphi

Country: Greece

Randomization in Numerical Linear Algebra (RNLA)

Research Internship

INRIA [01/04/2014 – 30/09/2014]

City: Orsay

Country: France

Implementation of Random Butterfly Transformations in iterative methods for sparse linear systems

EDUCATION AND TRAINING

PhD in Computer Science

Paris-Saclay University [01/10/2014 – 30/09/2017]

City: Orsay

Country: France

Website: www.universite-paris-saclay.fr

Master's Degree in Computer Science

Paris-Saclay University [01/09/2012 – 30/09/2014]

City: Orsay

Country: France

Website: www.universite-paris-saclay.fr

Bachelor's Degree in Network Engineering

North China Electric Power University [01/09/2006 – 30/06/2010]

City: Baoding

Country: China

Website: www.ncepu.edu.cn

High School Graduation in Science

The Affiliated High School to Hangzhou Normal University [01/09/2002 – 30/06/2006]

City: Hangzhou

Country: China

Website: www.hzsdfz.cn

LANGUAGE SKILLS

Mother tongue(s): **Uyghur** | **Chinese** | **French**

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Russian

LISTENING A2 READING A2 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Programming: C, C++, JAVA (J2EE) / programming in Matlab / Programming languages known: Python (proficient), R, SQL / Database: Oracle, MYSQL, SQL +, Access. / OpenMP/MPI / Good knowledge of parallel algorithm patterns using joint MPI - CUDA in HPC (CUDA C) / Assembly x86 / Programming Languages: C, C++, C#(Unity), MATLAB, Ocaml / Computer Graphics (GDI, OpenGL) / Why3 / GUI programming (wxWidgets, MATLAB) / Latex Software / Libre Office / LINUX / UNIX / MAC OSX / WINDOWS

PUBLICATIONS

MAPPRASER: A massively parallel map-making framework for multi-kilo pixel CMB experiments
[2022]

Hamza El Bouhargani, Aygul Jamal, Dominic Beck, Josquin Errard, Laura Grigori and Radek Stompor

In Astronomy and Computing, Volume 39, April 2022

Link: <https://www.sciencedirect.com/science/article/abs/pii/S2213133722000208>

A Comparison of Soft-Fault Error Models in the Parallel Preconditioner Flexible GMRES*

[2017]

Evan Coleman, Aygul Jamal, Marc Baboulin, Amal Khabou and Masha Sosonkina

In 12th International Conference on Parallel Processing and Applied Mathematics (PPAM), Poland

Link: <https://hal.archives-ouvertes.fr/hal-01768773/document>

A hybrid CPU/GPU approach for the parallel algebraic recursive multilevel solver pARMS

[2016]

Aygun Jamal, Marc Baboulin, Amal Khabou and Masha Sosonkina

In 18th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC) pp. 411-416, Romania

Link: <https://hal.archives-ouvertes.fr/hal-01486191/document>

Using Random Butterfly Transformations in Parallel Schur Complément-Based Preconditioning

[2015]

Marc Baboulin, Aygul Jamal and Masha Sosonkina

In Federated Conference on Computer Science and Information Systems (FedCSIS) pp. 661-666, Poland

Link: <https://annals-csis.org/proceedings/2015/pliks/177.pdf>
