PERSONAL INFORMATION

Gabriella Ceci

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Gender F | Nationality Italian

WORK EXPERIENCE

04/2023 - ongoing

CMCC Foundation - REgional Models and geo-Hydrological Impacts Division (REMHI), Institute for Climate Resilience (ICR) - HPC and software development

Active participation in multiple national and international projects on topics of strategic relevance for the Division, contributing to the achievement of objectives through multidisciplinary collaboration: CORDEX (https://cordex.org/), EURO-CORDEX, IRIDE (https://www.cmcc.it/projects/iride), SILVANUS (https://silvanus-project.eu/), MULTICLIMACT (https://multiclimact.eu/), CARMINE (https://carmine-project.eu/), SYST (https://cordis.europa.eu/project/id/101212761/en), GLORI4DE (https://leonardo-supercomputer.cineca.eu/glori4de/).

Partecipation to Machine Learning project for GPU porting of a code related to the lightning forecast over Italy based on Random Forest technique.

Deputy coordinator of the Working Group SUPTECH of CLM-Community (https://www.clm-community.eu) devoted to documentation, User Support, web site management and training courses.

09/2015 - ongoing

Tenured teacher at Ministero dell'Istruzione e del Merito

Full professor.

07/2013 - 09/2015

CSCS (Centro Svizzero Calcolo Scientifico) – ETH Zurich, Lugano, Switzerland. HPC and Supercomputing Dept. System admin and sw developer

Focal point for Cray Program Environment (PE) on Cray hosts (XC30, XE6 and XK7), env-customization and software installation/upgrade by module interface.

Huge contribution to the “holistic regression suite” to validate the hw/sw of the operative system Piz Daint (Hybrid Cray XC30); bug fix. Reference person for porting the regression suite on Hybrid Cray CS-Storm (MeteoSwiss's cluster); profiling and performance evalutation;

GPU benchmarking (latency and bandwidth) to compare different hybrid systems performance;

RUR configuration and plug-ins upgrade to gather the amount of R/W bytes from Lustre stats files on compute nodes;

Code validation (DDT Allinea debugger for parallel codes (MPI, MPI+OpenMP), hybrid codes (CUDA/OpenACC; C/C++ and Fortran), memory issue; compilers (GCC, Intel, PGI and CCE), profiling (CrayPat, Scorep, Cube) and tracing (Vampir);

ScaleMP virtual hybrid environment evaluation: test case setup by using Magma library and benchmarking among different hybrid systems;

Contribution to GridTools library for the: 1. Integration of Python interface in CMake infrastructure; implementation of scripts for installing Python bindings and running Gridtools tests in Python environment. 2. Optimization of the Python interface to check if required environment variables have been correctly set, depending on the specified backend. Test case implementation.

05/2009 - 06/2013

Airbus – EADS CASA, Getafe (Madrid), Spain. CAE (Computer-Aided Engineering) – HPC (High Performance Computing) Sys-admin and programmer

Sys-admin: supercomputers maintenance, infrastructure monitoring, processes management, software/compilers installation/upgrade; development/optimization of codes for departmental applications (backup request mng, server status, batch data processing);

Managment of backup procedures (CLI); development, optimization and validation of a GUI to submit backup requests from a user's PC to CAE front-end; knowledge of Veritas NetBackup utility;

Installation, customization and management of tools for load sharing (SGE and PBS); CLE upgrade on Cray XT4 and OS upgrade on Linux workstations; Licensing management (also by FlexLm) – first experiences; Access Control List (ACL) customization and quota management on Solaris ZFS file system. Focal point for technical documentation.

09/2008 - 05/2009

TUYU® Technology, Madrid, Spain. IT Serv., Analyst Programmer

Project in collaboration with IBM and Telefonica (Madrid) dealing with (I) UNIX shell script and Oracle PL/SQL Data-Warehousing and (ii) the optimization/porting of a software implemented in C/C++.

09/2005 - 09/2008 **CIRA, Centro Italiano Ricerche Aerospaziali, Capua (CE), Italy. IT and Supercomputing Dept. Researcher, programmer and systems administrator; project coordinator**

Optimization of the NWP model COSMO-LM in collaboration with COSMO European Consortium (cosmo-model.cscs.ch), in the framework of CMCC Project (www.cmcc.it).

Partecipation to the USV Project (Unmanned Space Vehicle) to develop pre-processing data tools and perform statistical analysis in order to characterize the site launch for the USV mission.

Technical documentation reporting for both international and national projects;

Activity as tutor in collaboration with Universities;

Sys-admin (user accounts, processes management, software installation and upgrade, supercomputers shutdown/boot).

01/2005 - 12/2005 **Scholarships in Computational Numerics and HPC applied to Meteorology, Earth Simulator Center (ESC), Yokohama, Japan.**

Research scientist in Earth science applications, with focus on geodynamics and NWP. Evaluation of parallel performances of ESC meteorological model.

11/2002 – 10/2003 **Research grant in Applied Numeric: "High performance computing and applications", Dept of Mathematics, Sec. Univ. di Napoli, CE, Italy**

Analysis of Krylov subspace methods and domain decomposition preconditioning techniques for solving large sparse linear systems on MIMD DM systems applied to thermo-fluid-dynamics phenomena occurring inside diesel motor cylinder FIAT HSDI.

A software upgrade, as system administrator, has been required, often performed by developing remote procedures to reach clients from the NFS server.

04/2001 - 07/2001 **Internship on "Tools for Grid Computing environment", CIRA, Capua (CE) Italy**

Implementation of a WindowsNT/Linux/Unix cluster by using Platform's LSF (Load Sharing Facility) batch scheduling software for a good load balancing in distributed systems.

EDUCATION AND TRAINING

2014 **Winner of a public teaching competition published by D.D.G. 82/2012.**

Full professor

2001 - 2005 **Ph.D. in Computational Biology - Dept of Mathematics, Sec. Univ. di Napoli, CE**

Project title: *"Ab-initio simulation methods for in-silico protein folding process"*

1997 – 2001 **Degree in Mathematics - Dept of Mathematics, Sec. Univ. di Napoli, CE, Italy**

Specialization: Computational Mathematics;
Marks: 110/110 cum laude;
Project title: *"Conjugate Gradient-like Methods for solving linear systems"*

1996 - 1997 **Liceo Pedagogico-Sociale - Ist. Mag. "A. Manzoni" CE, Italia**

Marks: 60/60

PERSONAL SKILLS

Language skills

Italian: Mother tongue

Other languages: English and Spanish: indipendent user

Digital competence (self-assessment)

Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Independent user	Independent user	Independent user	Proficient user

ADDITIONAL INFORMATION

Publications
Presentations

Full publication list available in long curriculum vitae format

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.

Firenze, 29/12/2025 **GABRIELLA CECI**