PERSONAL INFORMATION

Francesca Mele

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POSITION

Computer Science Researcher

WORK EXPERIENCE

17/07/2019–Present

Junior Research Associate at the Euro-Mediterranean Center for Climate Change Foundation, Advanced Scientific Computing Division

CMCC Foundation, Lecce (Italy)

Main activities:

- Analysis and improvement of the numerical simulation models computational performance
- Adoption of parallelization techniques on distributed and shared memory architectures (Hybrid MPI and OpenMP parallel programming)
- Performance analysis of climate models
- Analysis of the computationally aspects that limit performance and affect scalability of the climate models
- Adoption of optimization strategies aiming to improve memory hierarchy exploitation and vectorization level of the code and to increase the computational efficiency of each core/node (cache blocking and loop fusion techniques)
- NEMO Consortium activities as member of the HPC working group and NEMO System Team

14/04/2016–30/06/2019

Post Degree at the Euro-Mediterranean Center for Climate Change Foundation, Advanced Scientific Computing Division

CMCC Foundation, Lecce (Italy)

Main activities:

- Activities of optimization and parallelization on weather and climate models

01/04/2015–31/03/2016

Research fellow, at University of Salento

Department of Innovation Engineering, University of Salento (Lecce)
SP6 Lecce-Monteroni, ECOTEKNE complex, 73100 Lecce (Italy)
www.dii.unisalento.it

Main activities:

- Services development for advanced data management in cloud computing environment
- Use of parallel architectures and virtualization technologies
- Installation, set up and management of private cloud systems based on open-source technology OpenNebula
- Composition of project deliverables focused on Cloud Computing and Cloud Federation topics within the research project DiCeT - LivingLab of Culture and Technology

Business or sector ING-INF/05 Information Processing Systems

EDUCATION AND TRAINING

23/04/2018–27/04/2018

Certificate of attendance at the International Spring School on High Performance Computing

Donostia International Physics Center (DICP), San Sebastián / Donostia (Spain)

Update and follow-up activities on the advances in the critical and fast developing area of high performance computing.

| 05/2013–12/2014 | Training course in "Innovation manager for the development of sustainable entrepreneurial engineering" | EQF level 7 |

University of Salento, Lecce (Italy)

- Business management skills
- Entrepreneurial skills
- Communication skills
- Planning and management of complex research projects
- Work in IT team during the stage period of the course as web/mobile developer using Java Spring open-source framework, Joomla and WordPress content management system, PHP programming, LDAP database server as OpenLDAP and Apache directory Server, MySQL and PostegreSQL

| 20/02/2014 | Qualification to the profession of Information Engineer - Section A |

University of Salento, Lecce (Italy)

| 18/04/2012 | Master's Degree in Computer Engineering | EQF level 7 |

University of Salento (Lecce)

Final grade: 110 / 110

| 28/04/2006 | Bachelor's Degree in Computer Engineering | EQF level 6 |

University of Salento, Lecce (Italy)

Final grade: 103 / 110

PERSONAL SKILLS

Mother tongue(s)   Italian

Foreign language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English				
B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages - Self-assessment grid

ADDITIONAL INFORMATION

Publications   Vecchio P., Mele F., De Paolis L.T., Epicoco I., Mancini M. and Aloisio G. (2015) "Cloud Computing and Augmented Reality for Cultural Heritage", Lecture Notes in Computer Science, Springer Verlag, 9254, pp. 51-60, ISSN: 0302-9743, 2015

Mainetti L., Mele F., Patrono L., Simone F., Stefanizzi M.L., Vergallo R. (2013) "The impact of RF technologies and EPC standard on the fresh vegetables supply chain", International Journal of RF Technologies: Research and Applications, Vol. 5, pp. 1-40, ISSN: 1754-5730

Mainetti L., Mele F., Patrono L., Simone F., Stefanizzi M.L., Vergallo R. (2013) "An RFID-Based Tracing and Tracking System for the Fresh Vegetables Supply Chain", International Journal of Antennas and Propagation Volume 2013, Article ID 531364, 15 pages, ISSN:1687-5869