Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Ivan Girotto**
Address(es)	Via Scala Santa, 133/8 - 34135 Trieste - Italy (IT)
Telephone(s)	Office: +39 0402240484 Mobile: +39 348 9794233
E-mail	igirotto@ictp.it
Nationality	Italian
Date of birth	25.12.1980
Gender	Male

Desired employment / Occupational field	**High Performance Computing**

Work experience

Dates	April 2012 – Current
Position held	High-Performance Computing Specialist
Main activities and responsibilities	From ordinary consulting activity to world-class computational challenges at large scale, at the ICTP I am employed as UNESCO International Professional Staff for supporting and advice the scientific community on a wide range of subjects related to HPC: education and training, code development, code enabling and optimization, HPC facility management and consulting. I'm Director of the Master in HPC program. I am PI and ICTP representative of the Max (European center of excellence for MAterials design at the eXascale) project. I am responsible of the scientific production of the ICTP community at CINECA and other world-class facilitates for HPC.
	My main task at the ICTP it is to contribute building an HPC-ecosystem within the ICTP scientific community, including activities of training and education, liaison with the IT section and active contribution in scientific projects targeting large-scale computational challenges. At the ICTP I have co-directed about 40 initiatives included in the ICTP scientific calendar. A complete list of those activities and publications is available upon request.
Name and address of employer	The Abus Salam, International Centre for Theoretical Physics, Strada Costiera 11, 34151 Trieste, Italy (IT) http://www.ictp.it
Type of business or sector	ICTP operates under a tripartite agreement between the Italian government, the International Atomic Energy Agency (IAEA), and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Dates	April 2009 – April 2012
Position held	Computational Scientist
Main activities and responsibilities	Main commitment in activities of research enablement, technical consulting, education and training, parallel code development and optimization, for Irish research institutions from all around the country and business partners (i.e. Tullow Oil and Paddy Power). Responsible for ICHEC of the Irish's Geophysics community, major involvement with Prof. Chris Bean's group from the University College Dublin (UCD). In charge within ICHEC of PRACE for the WP7 "Enabling Petascale Applications: Efficient Use of Tier-0 Systems" and for the WP9 "Future Technologies" packages. Leader of the PRACE's 7.5e Sub-Task, "Accelerators". As head of the ICHEC GPU computing Team, I was involved in research activities for porting application on hybrid CPU-GPU system. The group has been a pioneer about exploiting accelerators applied to scientific computing in Europe.
	Co-author of FP7 project proposals Autotune funded through "Small or medium-scale focused research action (STREP) proposal ICT Call 7 FP7-ICT-2011-7" program**.**

Name and address of employer	Irish Centre for High-End Computing - ICHEC, 7th Floor Tower Building, Trinity Technology & Enterprise Campus, Grand Canal Quay, Dublin 2, Ireland, http://www.ichec.ie
Type of business or sector	No profit research organization - Supercomputing Centre
Dates	April 2006 – April 2009
Position held	Computational Scientist (Supercomputing Group)
Main activities and responsibilities	User support – technical consulting for HPC resources exploitation and production management for both scientific and industrial (BMW-Oracle racing) CINECA's users. Assistance during the phase of enabling, porting, profiling and debugging of supercomputing applications. Management of software environment for HPC infrastructures. Main tasks were also number of teaching actives, member of DEISA EU project as well as code programming, parallelization and optimization.
Name and address of employer	CINECA, via Magnanelli 6/3, 40033 Casalecchio di Reno, Bologna. www.cineca.it
Type of business or sector	University Consortium - Supercomputing Centre

Education and training

Dates	Nov 2016 – 2021
Title of qualification awarded	Joint PhD in Computational Physics and Applied Math (University of Modena & Reggio Emilia, Italy - Eindhoven University of Technology, The Netherlands)
Principal subjects/occupational skills covered	We employed highly optimized computational codes, based on the multicomponent Lattice Boltzmann model (LBM), to explore the physics of complex fluid emulsions: from their production, via turbulent stirring, to their (statistical) behavior under flowing as well as resting conditions. To accomplish this challenge two PRACE projects named "TurEmu – The physics of (turbulent) emulsions" where allocated on CINECA (call 17th) and BSC (call 19th), respectively.
	Thesis: "Physics of Dense Emulsions via High-Performance Fully Resolved Simulations"
Dates	September 2000 – March 2006
Title of qualification awarded	BSc and MSc in Computer Science (University of Ferrara – Italy)
Principal subjects/occupational skills covered	Database systems, Network architecture, Computer architecture (VHDL), Imperative programming languages (Pascal, C), Object – oriented programming languages (Java, C++), Software engineering (UML), Operative systems and system programming in Unix environment, Web programming & architecture, Distributed & parallel systems, Advanced data structures and algorithm, Simulation & approximation methods
	Thesis (BSc): "Lamp: Linux, Apache, MySql, Php, JavaScript for E.R.P. management" (www.deltacommerce.com).
	Thesis (MSc): "Performance evaluation of parallel systems: use of scientific kernels to build a suite of benchmark" (www.cineca.it).

Personal skills & competences

Mother tongue(s)	**Italian**
Other language(s)	**English (Professional)** **Spanish (Intermediate Speaking & Comprehension, Basic Writing)**
Organisational skills and competences	For the ICTP I directed number of international events for education in HPC and scientific programming (see the attached document). My professional profile it is fully related to the HPC computing and parallel applications environment. With almost ten years of experience in this field I had the opportunity to collaborate with personnel from Academy, Industry and R&D as well as Governmental and International Organizations. I faced a large number of challenges and interacted with a wide range of professional figures from the lowest level to the to really high.
	I was responsible for ICHEC's first and second exhibition at the International Supercomputing Conference (ISC2010/11). I have directed and participated as lecturer at number of International Schools and Workshops for education in HPC with participants from all over the world. A complete list is provided to the attached document.

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Other skills and competences	NVIDIA CUDA Certificated programmer. PRINCE2 project management certified.
	While working at the Irish Centre for High-End Computing I have been responsible for GPU related activities at both Irish National and International level developing extensive networks within the international GPU community.
	I am particularly suitable for positions requiring leadership and staff management. I have years of experience in management of ICTP activities both locally and remotely being hosted world-wide in developing countries. I have long term experience of staff management at all levels.
Technical skills and competences	Skills in the most advanced programming and optimization techniques and advanced knowledge on a wide range of profiling and debugging professional tools. Management experience in both HPC resources and software environments (compiler, scientific library, development tools, and applications). Skill to evaluate and analyze problem on number of different architectures based on direct work experience: IBM-BG, Cray, IBM-SP, NEC, SGY, Cluster Linux and hybrid GPU cluster.
	I have years of direct experience in HPC completed by a constant activity of knowledge update based on world-class journals and publications. This gives me today the necessary confidence and experience to lead an HPC production environment, including education related activities. I can face and tackle strategic decisions toward HPC technologies and applications for both current and further development, having the essential knowledge for understanding risks and being aware of the high level of responsibility this requires.
	I have been Certified Ethical Hacker, and I have relevant knowledge of Cyber Security.

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