



Corentin Dupont

Senior Researcher

Education

- On-Going **PhD**, *University of Trento*, Trento.
(3rd year) Thesis on energy management in data centres
- 2003 **MsD**, *Institut Supérieur de l'Electronique et du Numérique*, Toulon.
Specialisation on Real Time computing

Experience

Research experience

- 2010–present **Work Package manager & research team leader**, *Create-Net*, Trento.
Leader of Work Package 4 (FIT4Green) and 5 (DC4Cities). Research and design the algorithms and policies for energy-aware optimization of data centre operations.
- leader of a team of 4 persons,
 - WP management,
 - Algorithmic research, specification and design,
 - Implementation of FIT4Green & DC4Cities prototypes.
- 2010–present **Research funding**, *Create-Net*, Trento.
Grants won: DC4Cities EU project (WP leader)
Proposal writing:
- Light4Cloud EU project (Proposal coordinator, under review)
 - DC4Cities EU project (WP leader, won)
 - 5 other EU proposals in IoT and Cloud computing (support/WP leader)
- 2011–2012 **Researcher**, *Create-Net*, Trento.
Research in the area of Internet of Things. Leader of the iCore platform.
- Research on DSLs to address the diversity of real-world objects,
 - Implementation of the iCore platform prototype,
 - Coordination of the implementation of the platform.

Industrial experience

- 2003–2008 **Project Leader**, *DCNS/EADS*, Aix en Provence, France.
Projects for the Norway frigates SKJOLD and the Franco-Italian frigates HORIZON
- Technical leader and project leader (CMMi 3), with a team of 4 persons for the realization of the Real Time Simulator (DCNS)
 - Specification, Conception and development of 5 simulators (calculator in Ada and GUI in C++/Qt) : Fire Control Tracker, Decoy Launcher System, Torpedo Launch System, Air Transceiver, Principal Anti-Air Missile System.
 - Evolution of NeVis, a 3D demonstrator for urban warfare (EADS).
C++, Ada, Qt, Linux, CMMi tools, OWB, Doors, Vega Prime, Delta 3D

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2009–2010 **Software Leader**, PSA Peugeot-Citroën, Paris, France.

Supplier's management for the automatic gearbox AL4/AT8 for PSA Peugeot Citroën

- Specification writing
 - Management of the supplier (evolutions, technical issues, project management).
- MS-Project, project management tools, SQL.

Languages

English **Fluent**

647/700 TOEFL, 980/990 TOEIC, work & everyday language

Italian **Fluent**

living in Italy since 2010

French **Native**

Spanish, **Beginner**

Czech

Computer skills

OSes: Linux, Windows, Solaris, HP-UX

Languages: Haskell, Java, C++, Ada, R

Prog. Constraint Programming, Big Data Development: Eclipse, Linux tools, Qt, Doors
techniques: (Hadoop)

Project CMMi 3 level, MS Project, OWB

Managmnt:

Publications

- Sonja Klingert, Florian Niedermeier, Corentin Dupont, Giovanni Giuliani, Thomas Schulze, and Hermann de Meer. Renewable energy-aware data centre operations for smart cities - the dc4cities approach. In *SMARTGREENS 2015*. ACM, 2015
- Corentin Dupont, Fabien Hermenier, Thomas Schulze, Robert Basmadjian, Andrey Somov, and Giovanni Giuliani. Plug4green: A flexible energy-aware vm manager to fit data centre particularities. *Ad Hoc Networks*, pages 505–519, 2014
- Corentin Dupont, Thomas Schulze, Giovanni Giuliani, Andrey Somov, and Fabien Hermenier. An energy aware framework for virtual machine placement in cloud federated data centres. In *Proceedings of the 3rd International Conference on Future Energy Systems: Where Energy, Computing and Communication Meet*, e-Energy '12, pages 4:1–4:10. ACM, 2012
- Dang Minh Quan, Robert Basmadjian, Hermann de Meer, Ricardo Lent, Toktam Mahmoodi, Domenico Sannelli, Federico Mezza, Luigi Telesca, and Corenten Dupont. Energy efficient resource allocation strategy for cloud data centres. In Erol Gelenbe, Ricardo Lent, and Georgia Sakellari, editors, *Computer and Information Sciences II*, pages 133–141. Springer London, 2012
- Somov Andrey, Dupont Corentin, and Raffaele Giaffreda. Supporting smart-city mobility with cognitive internet of things. In *Future Network and Mobile Summit*, pages 1–10, Lisbon, Portugal, 2013. IEEE, IEEE
- Dang Minh Quan, Andrey Somov, and Corentin Dupont. Energy usage and carbon emission optimization mechanism for federated data centers. In *Proceedings of the First International Conference on Energy Efficient Data Centers*, E2DC'12, pages 129–140, 2012
- Corentin Dupont. Renewable energy aware data centres: The problem of controlling the applications workload. In Sonja Klingert, Xavier Hesselbach-Serra, MariaPerez Ortega, and Giovanni Giuliani, editors, *Energy-Efficient Data Centers*, volume 8343 of *Lecture Notes in Computer Science*, pages 16–24. Springer Berlin Heidelberg, 2013
- Corentin Dupont. Building application profiles to allow a better usage of the renewable energies in data centres. In *Energy-Efficient Data Centers*, Lecture Notes in Computer Science, 2014
- Corentin Dupont. Energy aware infrastructure for green cloud data centres. University of Trento

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Doctoral School, 2014
Reviewer for Journal of Grid Computing, E-Energy, FGCS and others.

Hobbies

Paragliding Flying since 20 years, licenced for taking passengers

Hacking Author of a unique game called Nomyx: www.nomyx.net