



# Walid Saad

## Curriculum Vitae

*Assistant Professor of Computer Science at National Higher Engineering School of Tunis (ENSIT), University of Tunis, Tunisia*

### Education and Degrees

October 2016 **PhD in Computer Science**, LaTICE Laboratory (*University of Tunis, Tunisia*) and LIPN Laboratory (*University of Paris 13, USPC, France*).

- Title: *Data-Intensive management for scientific computing in Grid and Cloud environments*
- Supervisors: Professor Mohamed Jemni (LaTICE Lab) & Professor Christophe Cérin (LIPN Lab)
- Research Topics: *Distributed Computing, Desktop Grid Computing, Data-Intensive applications, Merging Grid and Cloud Technologies, e-Science applications as a service.*

November 2009 **Master in Computer Science**, National Higher Engineering School of Tunis ENSIT, University Of Tunis, Tunisia.

- Title: *Integration of BOINC and CONDOR middleware and fault tolerance in BonjourGrid Desktop Grid*
- Research Topics: *Desktop Grid and Volunteer Computing, Grid Middleware, Peer-To-Peer Systems*

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## Teaching Activities

### Assistant professor (permanent)

September 2016–Present **National Higher Engineering School of Tunis ENSIT**, UNIVERSITY OF TUNIS, Tunisia.

Courses:

- Mobile programming: ANDROID, IONIC, ANGULARJS AND APACHE CORDOVA
- Programming .NET with CSharp and ASP
- Web development: HTML5, JAVASCRIPT, AJAX, JQUERY AND PHP)

September 2013–June 2016 **Higher Institute of Business Administration of Gafsa**, UNIVERSITY OF GAFSA, Tunisia.

Courses:

- Programming with C
- Algorithms and data structures
- Networks and Routing Algorithms
- Computer Architectures
- Java and JEE
- Linux

### Assistant professor (temporary)

September 2014– **National Higher Engineering School of Tunis ENSIT**, UNIVERSITY OF TUNIS, Tunisia.

December 2015 Courses:

- Mobile programming: ANDROID, IONIC, ANGULARJS AND APACHE CORDOVA
- Cloud Computing: PRACTICAL SESSION WITH OPENSTACK AND OPENNEBULA

September 2014–June 2015 **Faculty of Sciences of Tunis**, UNIVERSITY OF EL MANAR, Tunisia.

Courses:

- Services Oriented Architectures(SOA): PRACTICAL SESSION WITH BPM TOOLS (ACTIVITY SOFTWARE)
- Cloud Computing: VIRTUALIZATION XEN; SAAS ET PAAS WITH OPENSIFT; IAAS WITH OPENSTACK AND OPENNEBULA

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## Scientific Publications

### Conference Papers

2016 **SC2 (IEEE)**, THE 6TH IEEE INTERNATIONAL SYMPOSIUM ON CLOUD AND SERVICE COMPUTING, December 7-10 2016, Nadi, Fiji.

Description:

- Title: Data Management for the RedisDG Scientific Workflow Engine
- Authors: Christophe Cerin, Leila Abidi, Souha Bejaoui, Jonathan Lejeune, Yanik Ngoko and Walid Saad

2014 **SBAC-PAD (Rank B)**, THE 26TH INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE AND HIGH PERFORMANCE COMPUTING, October 22-24 2014, Paris, France.

Description:

- Title: Wide Area BonjourGrid as a Data Desktop Grid: modeling and implementation on top of Redis
- Authors: Walid Saad, Leila Abidi, Heithem Abbes, Christophe Cérin, Mohamed Jemni

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- 2014 **Grid5000 Spring School**, THE 6TH EDITION OF GRID5000 SCHOOL, June 16-20 2014, ENS of Lyon, France.  
Description:  
  - Paper 1: BOINC as a Service in Grid'5000 using SlapOS
  - Paper 2: A Cloud-Hosted SaaS with SlapOS for BLAST Benchmark on Grid5000
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Alain Takoudjou, Mohamed Jemni
- 2013 **ISPA (Rank B)**, THE 11TH IEEE INTERNATIONAL SYMPOSIUM ON PARALLEL AND DISTRIBUTED PROCESSING WITH APPLICATION, July 16-18 2013, Melbourne, Australie.  
Description:  
  - Title: A Data Prefetching Model for Desktop Grids and the Condor Use Case
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Mohamed Jemni
- 2013 **ICEESA (IEEE)**, THE INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND SOFTWARE APPLICATIONS, March 21-23 2013, Hammamet, Tunisie.  
Description:  
  - Title: Toward A Data Desktop Grid Computing Based On BonjourGrid Meta-Middleware
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Mohamed Jemni
- 2012 **3PGCIC (Rank B)**, THE 7TH INTERNATIONAL CONFERENCE ON P2P, PARALLEL, GRID, CLOUD AND INTERNET COMPUTING, November 12-14 2012, Victoria, Canada.  
Description:  
  - Title: A Self-Configurable Desktop Grid System On-Demand
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Mohamed Jemni
- 2010 **Grid (Rank A)**, THE 11TH ACM/IEEE INTERNATIONAL CONFERENCE ON GRID COMPUTING, October 24-29 2010, Brussels, Belgium.  
Description:  
  - Title: Fault tolerance based on the Publish-subscribe Paradigm for the BonjourGrid Middleware
  - Authors: Heithem Abbes, Christophe Cérin, Mohamed Jemni, Walid Saad

### Journal Papers

- 2015 **JSC (IF 1.088, 2015)**, JOURNAL OF SUPERCOMPUTING, First Online: 16 November 2015, Springer Publishers.  
Description:  
  - Title: A self-organized volunteer cloud for E-Science
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Mohamed Jemni
- 2014 **IJBDI (Entry Reviewed 2013-11-20)**, INTERNATIONAL JOURNAL OF BIG DATA INTELLIGENCE, Volume 1 No. 1/2, pages 18-35, 01/01/2014, Inderscience Publishers.  
Description:  
  - Title: Designing and Implementing a Cloud-Hosted SaaS for Data Movement and Sharing with SlapOS
  - Authors: Walid Saad, Heithem Abbes, Christophe Cérin, Mohamed Jemni

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2010 **JIT (IF 0.533, 2016)**, JOURNAL OF INTERNET TECHNOLOGY, Volume 11 No.1, Pages 55-68, 01/2010.

Description:

- Title: Toward A Meta-Grid Middleware
- Authors: Heithem Abbes, Christophe Cérin, Mohamed Jemni, Walid Saad

### Book Chapters

2012 **Desktop Grid Computing**, CHRISTOPHE CÉRIN AND GILLE FEDAK, 25/06/2012, CRC Press Publishers.

Description:

- Chapter 6: How to work with XtremWeb, Condor, BOINC on Top of BonjourGrid
- Authors: Christophe Cérin, Heithem Abbes, Walid Saad

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## Scientific Events

October 2016 **ITU-ALECSO International Forum on the use of Cloud Computing Technologies for Education in Arab countries**, ALECSO organization, Tunis, Tunisia.

May 2016 **Scientific Computing Days of Sorbonne Paris Cité SPC**, University of Paris 13, France.

Avril 2016 **Numerical reliability and data modelisation of computation codes in medical imaging**, INSERM Institute, Paris, France.

February 2016 **Grid5000 Winter School**, INRIA, Grenoble, France.

July 2015 **OpenNebula Cloud TechDays**, Paris, France.

October 2014 **SBAC-PAD Conference**, *University Pierre et Marie Curie*, France.

December 2014 **Arab Cloud Computing Study Days**, Esprit School and Technology Center of El Ghazala , Tunisia.

June 2014 **Grid5000 Spring School**, Paris, France.

July 2013 **ISPA Conference**, Melbourne, Australia.

March 2013 **Scientific Computing Days of LIPN Laboratory**, University of Paris 13, France.

November 2012 **3PGCIC Conference**, *University of Vectoria BC*, Canada.

May 2010 **Workshop "Grid Computing : Research and Applications"**, *Tozeur*, Tunisia.  
In conjunction with the international conference NOTERE'10

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## Contributions in Grid and Cloud Projects

**BonjourGrid Meta-Middleware** BonjourGrid is based on Redis publish-subscribe protocol, in which multiple DesktopGrid computing systems and data management frameworks are orchestrated in a transparent and decentralized manner over Internet. [BonjourGrid](#) can also offer 'Desktop Grid as a Service' in a cloud context.

**SlapOS Cloud** Simple Language for Accounting and Provisioning Operating System is a distributed Cloud Computing system designed by Paris 13 University and Nexedi. Marketed in Europe, Japan and China, [SlapOS](#) comprises deployment functions and automatic orchestration used in production by SANEF, Mitsubishi and Airbus Defence.

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RedisDG Workflow Engine	RedisDG is inspired by Desktop Grid systems that represent an alternative to supercomputers and parallel machines. It relies on 'ad-hoc' standards coming from the Web communities such as the publish-subscribe paradigm.
GTRS Project	Development of SDAD (System of Distributed Applications Deployment) for <a href="#">GTRS</a> grid users.
Tunisian National Grid	New release of GTRS . <a href="#">TNGrid</a> is based on <a href="#">BonjourGrid</a> meta-middleware.
TNGrid Certification Authority	Establishment of a certification authority named "TNGrid CA". This project has been accredited by the international certification organization EUGridPMA.

## Research Internships

February 2016 – August 2016	Post-doc for 7 months, LIPN Laboratory (University of Paris 13, France)
June 2015 (15 Days)	LIPN Laboratory (University of Paris 13, France)
June 2014 (15 Days)	LIPN Laboratory (University of Paris 13, France)
March 2013 (1 Month)	LIPN Laboratory (University of Paris 13, France)

## Computer and scientific skills

Operating Systems	Linux: SCIENTIFIC LINUX, FEDORA, SUSE, UBUNTU, DEBIAN
Grid Computing	DesktopGrid Middlewares: GLOBUS, CONDOR, BOINC, PEGASUS AND XTREMWEB; Data Management: BITDEW, SRM, GRIDFTP, BLAST AND MONTAGE WORKFLOW; Grids testbed: GRID5000
Cloud Computing	SLAPOS, OPENSTACK, OPENNEBULA, OPENSIFT and HEROKU
Virtualization	XEN, KVM , VIRTUAL BOX and VMWARE
DevOps and Containers	DOCKER, GIT , ANSIBLE, BUILDOUT, PUPPET, and VAGRANT
SOA and BPM	Open Source Tools: ACTIVITI and ORECHESTRA
ERP and CRM	Open Source Tools ERP5 and VTIGERCRM
Security and Certification	OPENSSSH, OPENSSSL, Infrastructures with Public Key PKI (OpenCA tools)
Publish-Subscribe Technologies	Bonjour Protocol of Apple (MDNSRESPONDER), REDIS Protocol

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Programming languages ASSEMBLEUR, C, C++, CSHARP, JAVA SDE, JEE, JAVABEANS, PYTHON, SHELL  
 Mobile development JQuery Mobile, Ionic, AngularJS, Android, Apache Cordova, Firebase  
 IDE Tools Android Studio, Visual Studio, Eclipse, NetBeans Platform  
 Web development Languages: PHP5, JSP, SERVLET, HTML, XML, SVG, JAVASCRIPT; MVC Tools: Zend and Joomla Framework  
 Data Bases SQL Databases: SQL, Oracle, MySQL, ACCESS, JDBC, ODBC; NoSQL Databases: Firebase, MongoDB  
 Parallel programming MPI, LAM MPICH, Bag of Tasks and Direct Acyclic Graph  
 Software engineering MERISE, UML, Unified Process, SCRUM methodology, DevOps (development and Operation) approach, Petri Networks, Neural Networks  
 Network and Communication Network Data Transmissions, LAN, WAN and WLAN, Security with SSL, Network Administration, TCP/IP, SSH and FTP  
 Image processing MATLAB, Multimedia design, Synthesis and image processing, Recognition of shapes, Characters and documents, Natural language processing

## Languages

Arabic **Mothertongue**  
 French **Near native / fluent**  
 English **Basic communication skills / working knowledge**

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