

# Curriculum Vitae et Studiorum

## Cesare Bianchi, *Ph.D.*

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(the most recent version of this document is always available on the website: <http://www.cesarebianchi.com>)

Born: Rome, Italy, February 12th, 1979  
Nationality: Italian  
E-mail: [cesare@cesarebianchi.com](mailto:cesare@cesarebianchi.com)  
Website: <http://www.cesarebianchi.com>  
Current occupation: Project Manager, ICT Consultant.  
Main skills: Analytical, organizational, communication, relational, leadership, motivational, creativity, curiosity.

## Professional Experience

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### Project Management

Current (since Apr 2015) Co-founder of GH srl, start-up of Sapienza University of Rome.

I guided the start-up company in designing, producing and selling services and products based on the academic research. The company was founded as an academic start-up to bring to the market the results of academic research.

I achieved the task of successfully transform "proofs of concept" in nation-wide known products that are used by thousands of people and featured on newspapers and tv. I chose my collaborators to help me in this success and created a team that is now able to continue the job of marketing, research and development.

I liaised with partner companies, for the development and integration of a second-generation bus-tracking system based on the latest GIS technologies, for the accurate prediction of the times of arrival and the integration with global web-based mapping services such as Google Transit and Bing Maps (with which I also liaised), based on optimized algorithms developed in the university. The system is the only one on the market that integrates several features in a single service and that has a 95% accuracy.

Apr 2015 - Mar 2017

Post-doctoral Researcher at the Physics Department of Sapienza University of Rome.

Organization of events and conferences. Participation in the design and co-management of four complex events for the project "Kreyon" involving several multimedia installations and various kind of games, with a hundred people working at their making and maintenance, in "Palazzo delle Esposizioni" in Rome and at the "Maker Faire" in Rome. Organization of the XVII international congress of the AHLM association.

I managed a group composed of software developers, scientists from the Department of Public Health Infectious Diseases and scientists from the Department of Physics, for the design and implementation of the Citizen Science project "ZanzaMapp". The resulting multi-platform app is a national success in Italy, for the report and mapping, using the latest open-source GIS technologies, of the presence of mosquitoes, in order

to produce statistics and geographic models of the distribution of mosquitoes and optimize the response.

I managed a group composed of software developers, sound specialists, musicians and scientists from the Department of Physics, for the design and implementation of the musical experiment/game "LegoRhythm", which allows people to collectively compose music using Lego bricks.

Feb 2013 - Mar 2015

Marketing and Management of lifecycle and development, of a scalable web-based application for Insurance Brokers.

Using Agile methodologies I had the opportunity to better manage multiple customers and harmonize their various requirements.

Jun - Aug 2013

For Almagora, as an external consultant, I have managed a group of 10 people for the development of a Java Enterprise application in a complex business environment, with the stakeholders pertaining to another branch of the same company.

Dec 2009 - Nov 2012

For Computer Aid s.r.l., I have managed, using Agile methodologies like Scrum, a group of 6 people for the development of a module for a complex multi-tier application, and the contacts with the clients and with other stakeholders.

In this context I had the opportunity to improve my organizational and relational skills and the ability to focus on targets and motivate people.

I also managed and improved the internal communication of the company, thanks to my Psychology skills, allowing people to better understand mutual problems, have an overall view of the company, and thus work more like a single team.

I was also responsible of the Recruitment, both for the Psychological and Technical aspects. I developed new aptitude and technical tests in addition to performing personally the interviews.

May 2009 - Dec 2010

I have managed a heterogeneous group of Cognitive Scientists for the creation of the directory/community "AiscBook", for the Italian Association for Cognitive Science. Using mainly virtual meetings and collaboration systems, I had to keep the group focused on the task, cohesive and motivated.

Feb 2004 - Mar 2005

For Ares Tech s.r.l. I have been Manager of the Educational Division. I recruited trainers and organized the internal and external calendar and requests for the courses.

In this experience I acquired a good knowledge of the UNI EN ISO 9001 standards, for the Design and provision of vocational training courses.

Nov 1999 - Oct 2000

For Engineering Fonderie Multimediali, I have managed a group of 10-15 people, including graphic designers, 3D designers, software developers, testers, storyboarders, writers, sound engineers and speakers, for the development of cd-rom and web multimedia software, courseware and presentations. In this experience I had the opportunity to acquire organizational and relational skills, to keep the team united and manage the relations with the clients. I was also given the task of optimize and rationalize the production system and work organization.

## Software Architect, Application Development, Research

Current (since Dec 2013)

Architectural Design and partial development in Java (Android), Php, JavaScript, jQueryMobile, PostgreSQL, Node.js, Ajax, Leaflet, OpenStreetMap, Cordova (iOS) of a multi-tier second-generation bus-tracking system, based on the latest GIS technologies and APIs, for the accurate prediction of the times of arrival at the bus stops, and the integration with global web-based mapping services, such as Google Transit and Bing Maps.

Apr 2015 - Mar 2017

Research on the complexity and dynamics of creativity. Design and development of web-based experiments and data analysis to investigate the complex patterns of human creativity and to unfold and quantify the underlying mechanisms through

which creativity emerges and innovations diffuse, compete and stabilize. The experiments were implemented with jQueryMobile, Node.js, SVG.js, Midi.js, PhantomJs, PostgreSQL, Java, OpenCV. The developed experiments/games include "LegoRhythm", which allows people to collectively compose music using Lego bricks, and "LegoPixelArt", for the collective drawing of concepts using Lego bricks. Both a touchscreen and a physical version were developed, with a system to recognize the physical drawings made with real Lego bricks and import them in the database. The resulting data was analysed and several papers have been submitted for publication.

Design of the architecture and of the technical and functional analysis of a virtual currency system, to foster the emergence of the micro-economies of refugee centres in Europe. The security and non-deniability of the system were designed using the Bitcoin blockchain system. Particular attention was given to the usability in a multi-cultural multi-language environment, and to the need to create trust in the system and between the members. The need of the locality of transactions and the availability of the service offline were also taken in consideration, with innovative solutions. The multi-tier system included a distributed server array, the multi-platform app and a website.

Design and partial development of a system based on Rfid technology, used to track the physical interactions people-people and people-installation during the Kreyon events.

Research on the complexity of public transport systems. Design and development of systems and algorithms to model the complexity of public transport, using Meteor, Cordova, Node.js, MongoDB, Leaflet, D3, GeoJson, Turf. The result was a platform to simulate the quality of public transport in real cities, which allows the user to modify the existing transport network and see on the map how this affects the quality in the various points and zones.

Architectural Design and partial development of a report and mapping system for the presence of mosquitoes, based on Cordova, jQueryMobile, Leaflet and OpenStreetMap for the implementation of the multi-platform app, and on Node.js, PostgreSQL and other GIS libraries for the implementation of the server.

Dec 2012 - Dec 2014

Architectural Design and Development in Php, JavaScript, jQuery, PostgreSQL, jqGrid, tcPdf and other technologies, of a web application for the management of Insurance Brokers.

Development in Java and Php of an applet to use scanners from web browsers and save the scanned documents on the server.

Development in Java of an applet for the remote control of computers using a portable VNC server.

Jun - Aug 2013

For Almaviva, as an external consultant, I have designed and contributed to the development of a Java Enterprise application for the complete management of the "Governance, Risk Management & Compliance". The application was developed as a suite of portlets for Liferay and many personalizations with hooks and other advanced technologies.

Dec 2009 - Nov 2012

For Computer Aid s.r.l. I have worked on the design and development in C# of a new module for a complex multi-tier application for the management of security companies. I have developed a novel library for the optimized caching of database information, in terms of memory load and responsiveness.

I have worked on the design and development in Java EE, using Weblogic application server and Liferay portal, of a complex multi-tier application for the intranet of ENI (a major multinational energy company).

In this context I had to analyse a complex requirement about data versioning and to write a novel complex library for its management (an academic paper is awaiting

- publication in an important journal).
- I also developed a plugin in Php for the wordpress blog of the Computer Aid company.
- May 2009 - Dec 2010 For the Italian Association for Cognitive Sciences (AISC) I have designed and developed in Php, MySQL, Html, Css, jQuery, a web application for the directory/community "AiscBook".
- Nov 2006 - Nov 2009 For my Phd research in UCD, Dublin, I have developed in C# a machine learning model of analogical reasoning. It was optimized using genetic algorithms to perfectly mimic human learning patterns.
- I also developed in C# a new algorithm for the computation of inter-rater agreement using the Fuzzy Kappa, and the evaluation of its statistical significance using MonteCarlo methods. In C# I developed also other software for the simulation of various statistics and the computation of the results of my research.
- For the learning experiments I developed two game-like tests in Flash and Actionscript, saving data on a MySQL database, with a Php Soap webservice.
- Jun - Jul 2008 For Sincro Consulting s.p.a. I designed and developed in C# a mobile application exchanging data with a Soap backend, for the management of Rfid modules used to record the temperature of perishable goods.
- Jun - Aug 2006 For NdPlanet s.a.s. I designed and developed in Asp.Net, Flash and Soap webservice, the social platform "PeopleGo", including the development from scratch of a Chat application in Flash and Actionscript.
- May 2004 - Jun 2005 For Stas s.r.l. I have designed and developed in VB6 a client-server application for the Fax network management (sending, receiving, forwarding and acknowledge).
- Feb 2004 - Mar 2005 For Ares Tech s.r.l. I have developed in VB6 a Gui client for the simplified management of software versioning with CVS connected with SSH.
- Apr - Nov 2003 For Cogitas s.r.l., outsourced to TSF s.p.a., I have designed and developed in Asp, Javascript, DB2, ActiveX, C# Soap webservice, and VB eMbedded, a complex application for the mobile issuing of ferry tickets in Sicily. The application managed the ticketing and accounting, and allowed to print the tickets with a PocketPC mobile system, recording the data with a C# Soap webservice.
- I also took part in the development of the "Ticketless" Trenitalia system, designing the backend webservice in C#.
- I have also designed and developed in Asp, Oracle, Html, Javascript an application for the management and issuing of Smart Card Train Passes and Tickets.
- Sep - Oct 2002 For Cogitas s.r.l., outsourced to ENEL Sfera, I have developed in VB6, Access, Excel, ActiveX and VBA, an application for the management of course calendars.
- Aug 2002 - Jul 2003 For Doppia Coppia s.n.c., I have developed an accounting application in Access and VBA.
- June 2002 - May 2004 For STAS s.r.l., I have designed and developed in Access and VBA two applications for the management of the Insurance Policies, the accounting and the communication with clients.
- May 2001 For Cogitas s.r.l., outsourced to Trainet, I have completed (and corrected) the development of a multimedia cd-rom in Flash and Director.
- Dec 2000 For T&T Luiss Informatica, I have completed (and corrected) the development of a web application in Asp, Oracle and Javascript.
- Nov 1999 - Oct 2000 For Engineering Fonderie Multimediali, I have designed and developed web and cd-rom multimedia software (courseware and presentations) in Macromedia Director Lingo, VB6, DHtml, Javascript, VbScript, ActiveX, RealMedia, Flash.

I have also designed and developed in VB6 and SqlServer, a tool for the automation and rationalization of the writing of texts and materials for the development of multimedia software, and a tool for the simplified integration of materials in order to automate the production of multimedia software.

## Social Marketing Management, Webmaster, Multimedia

Current (since 2002)	Management of the Web Identity and Social Marketing of various companies, including private schools, insurance brokers, law firms, video producers, psychotherapist centres, research centres, etc.  For these companies I also manage their websites with CMS like Wordpress, including SEO activities and responsive technologies for mobile optimization.
Feb 2004 - Mar 2005	For Ares Tech s.r.l. I have developed in Flash the multimedia company presentation on cd-rom and web.
Nov 1999 - Oct 2000	For Engineering Fonderie Multimediali, I have been the Specialist for Video and Audio Formats, Codecs and Compression. I had the task of choosing the right format and compression for the multimedia software produced, considering the constraints such as cpu power, available disk space or connection speed.

## System and Network Administration, Database Administration, Security Management

Current (since 2002)	Administration of the LAN and the Information Security of various companies, including insurance brokers, law firms, psychotherapist centres, etc.  For these companies I am also responsible of the Privacy and security of the Sensitive Data they manage, and of their Business Continuity. I also administer their VPNs, Active Directories/LDAP, Linux and Windows Virtualization systems, etc.
Feb 2004 - Mar 2005	Network Administrator for Ares Tech s.r.l.: I have managed the windows domain and the migration from windows server 2000 to windows server 2003.
May 2002 - Aug 2002	For STAS s.r.l. I have designed and implemented the Windows Domain and Security Policy, using encrypted Tcp traffic and encrypted file systems, to guarantee Sensitive Data Privacy.

## Teaching

Sep 2015 - Feb 2017	Assistant Lecturer of Computer Science at the Physics Department of University Sapienza of Rome.
Oct 2006	For Comtaste s.r.l., "Webmaster with Asp.Net".
Apr 2006	For Bludis s.r.l., "Advanced data management with Access and Excel"
Sep - Dec 2005	For Finsa Tech s.r.l., "Application development in C# and Asp.Net"
Feb 2004 - Mar 2005	For Ares Tech s.r.l., outsourced to other companies like Bludis and Global Knowledge: <ul style="list-style-type: none"><li>• MOC 2124 "Programming with C#"</li><li>• MOC 2373 "Programming with Microsoft Visual Basic.net"</li><li>• MOC 2565 "Developing Microsoft .NET Applications for Windows (Visual Basic .NET)"</li><li>• MOC 2310 "Developing Web Applications Using Microsoft Visual Studio"</li><li>• MOC 2524 "Developing XML Web Services Using Microsoft Asp.Net"</li></ul>

- MOC 2154 "Implementing and Administering Microsoft Windows 2000 Directory Services"
- MOC 2150 "Designing a Secure Microsoft Windows 2000 Network"
- MOC 2072 "Administering a Microsoft SQL Server 2000 Database"
- MOC 2073 "Programming a Microsoft SQL Server 2000 Database"
- "Developing Web Applications with Dreamweaver MX"
- "Designing Multimedia with Director MX"
- "Programming and Animations with Flash MX"
- ECDL

Aug 2002 - Jul 2003

For Doppia Coppia s.n.c., "Application Development in Access and VBA"

May 2001 - June 2002

For Istituto Meschini, Ares Tech s.r.l., Metacom, Bludis, Hotel Sheraton, Silvio Pellico Informatica, "Il Messaggero" newspaper, Global Knowledge Network:

- "Developing web applications with Dreamweaver Ultradev"
- "Data extraction with Excel"
- "Programming Excel with VBA"
- "Designing and printing with Microsoft Publisher 2000"
- "Graphs and advanced analysis with Excel"
- "Developing and administering Web applications with NT server, IIS, Html, Asp, Javascript and Access"
- "Complete Web Design and Development: Html, Dreamweaver, Javascript, Asp, VbScript, Flash, Photoshop"
- "Developing web applications with Microsoft Visual InterDev"

## Education

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### Ph.D.

2006 - 2013

Thesis title: "A Computational Model of the Emergence of Analogical Reasoning in Category Learning".

School of Computer Science and Informatics of the University College Dublin.

Funded by the FP6 NEST Programme of the European Commission (ANALOGY: Humans – the Analogy-Making Species: STREP Contr. No 029088).

### M.Sc.

2001 - 2006

M.Sc. in Experimental Psychology from "La Sapienza" University of Rome.

Thesis on the Complexity and Dimension of Neural Networks. Grade: 109/110.

### Professional Certifications

March 2009

Microsoft Certified Professional "Developing and Implementing Web Applications with Microsoft Visual C# .NET and Microsoft Visual Studio .NET".

October 2004

ECDL

April 2004

Microsoft Certified Professional "Installing, Configuring, and Administering Microsoft SQL Server 2000 Enterprise Edition" (70-228).

## Language Skills

Italian	Mother tongue.
English	Excellent: TOEFL passed with 102/120, lived and studied in Ireland for 3 years.
Spanish	Basic.

## Committee and Board Memberships

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- President of the Association "Europa Scuola Futura"
- Member of the Board of Directors (2010 - 2013) of the Italian Association for Cognitive Science (AISC)
- Organizing Committee for the AHLM international Conference 2017
- Scientific Organizing Committee for the Aisc 2012 conference, held in Rome, Italy, in December 2012
- Scientific Organizing Committee for the "Pratiche della Cognizione" Aisc VII conference, held in Trento, Italy, in December 2010
- Member of Artificial Intelligence Association of Ireland
- Review Committee for the 29th International Psychology Congress, held in Berlin, in July 2008
- Review Committee for the VI Aisc conference, held in Naples, in November 2009

## Publications

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### Academic

- Bianchi C. (2012). "An Alternative Account on the Origin of Analogical Reasoning". *Cognitive Systems* 7-3, November 2012, 261 – 273
- Bianchi C. (2010). "Colmare il gap cognitivo tra committenza e software developers". *Aisc 2010*
- Bianchi C. (2010). "An Alternative Account on the Origin of Analogical Reasoning". Book chapter in "Practices of Cognition: Recent Researches in Cognitive Sciences", University of Trento, Italy, ISBN 978-88-8443-350-3
- Bianchi C. (2009). "Complessità Cerebrale ed Intelligenza: uno studio di Robotica Evolutiva". *Proceedings of the Sixth Conference of the Italian Association for Cognitive Science*.
- Bianchi C., Costello F. (2009). "An Interactive Test to Study the Relevance of Analogical Reasoning and Concept Separability in Category Learning". *Proceedings of the 2nd International Analogy Conference*
- Costello F., Bianchi C. (2009). "A Two-Process Account of Analogical Category Learning". *Proceedings of the 2nd International Analogy Conference*
- Bianchi C. (2009). "Brain Complexity and Intelligence: a study of Evolutionary Robotics". *CogSci 2009*
- Bianchi C., Costello F. (2008). "Un Modello dell'Emergenza ed Uso del Ragionamento Analogico nell'Apprendimento di Categorie". *Proceedings of the Fifth Conference of the Italian Association for Cognitive Science; Sistemi Intelligenti 2009* (3), 405-416
- Bianchi C., Costello F. (2008). "Analogical Reasoning helps learning of Similar Unknown Concepts: the use of Analogies between Categories in Category Learning". *Proceedings of the 19th Irish Conference on Artificial Intelligence and Cognitive Science*
- Bianchi C., Costello F. (2008). "The role of analogical reasoning in category learning". *Proceedings of the 29th International Congress of Psychology*

## Magazines

October 2005	Editorial coordination, revision, layout and photographs for the book "Un correttore a Roma" by Carlo Sisti, edizioni Eucos, Rome 2005, ISBN 88-88294-20-1.
October 2004 - January 2005	Columnist on the "DEV" computer magazine: monthly column "IT-aliano". Articles published: <ul style="list-style-type: none"><li>• "Capitolo 1"</li><li>• "Capitolo 2"</li><li>• "Capitolo 3"</li><li>• "Da un altro mondo"</li></ul>
October 2003 - March 2005	Columnist on the "DEV" computer magazine: monthly column "Palm's Letter". Articles published: <ul style="list-style-type: none"><li>• "Palm &amp; database"</li><li>• "Scrivere un Web Service client per Palm"</li><li>• "JavaScript per Palm"</li><li>• "Nuovi ambienti di sviluppo per Palm"</li><li>• "NS Basic/Palm 4.0"</li><li>• "Guide a portata di mano"</li><li>• "Rivoluzioni", "Musica Maestro!"</li><li>• "Sviluppatori DOC"</li><li>• "E-Book in tasca"</li><li>• "Jump, SuperWaba &amp; Co."</li><li>• "Notizie dalla casa madre"</li></ul>
October 2004	"Trasformata di Fourier: realizziamo un codec audio in VB", DEV.
September 2004	"Fast Fourier Transform in pratica: un wave player in VB", DEV.
July 2004	"Trasformata di Fourier", DEV.
December 2003	"Video sui cellulari di terza generazione con QuickTime", Computer Programming
October 2003	"Un salvaschermo personale in Flash", DEV
June 2003	"Flash MX: una panoramica", DEV "VB: ottenere l'icona predefinita per un tipo di file", DEV

## Computer Skills

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### Programming

Languages	C#, Java EE, Java (Android), Php, C, HTML, CSS, JavaScript, jQuery, Node, VB6, VB.Net, VBA, Flash ActionScript, Matlab, SOAP, Web Services, Asp2, Asp.Net, Mono, VBScript, Dojo, JSON, Director's Lingo, MIDI, XML, XSL, Jsp
Frameworks	jQueryMobile, Meteor, Cordova, Struts2, Hibernate, EJB, .Net, ADO.Net, AdoDB, ActiveX, COM+, ODBC, JUnit, NUnit, MVC, Portlets, Servlets, Liferay, Wordpress, OpenGraph, JDBC, JMS, Log4j, Log4net, multi-tier application servers, Google Maps Api, GIS libraries Leaflet and OpenStreetMap, Ajax, REST
Modelling	UML, E/R (logical and physical)



IDE Eclipse, Visual Studio, MonoDevelop, FlashDevelop, Dreamweaver

## Management

- Agile methodologies (e.g. Scrum)
- Microsoft Project, GanttProject
- Redmine and other CRM, Activity Management, Issue-tracking and Collaboration systems (e.g. Launchpad, Mantis, etc.)

## Systems, Networking and Security Administration

OS Linux and Windows servers and clients, MsDos, Apple OS, Android

Services Active Directory, LDAP, distributed authentication and file systems, SMB, NFS, FTP, SSH, Apache, IIS, Weblogic, routing, mail servers (e.g. Postfix), VoIP and SIP (e.g. Asterisk), fax servers (e.g. Hylafax), version control (e.g. SVN, CVS, GIT, SourceSafe), OwnCloud, REST

Remoting OpenVPN, Microsoft VPN, Hamachi, Remote Desktop (RDP), VNC, NoMachine NX, Radius

Virtualization Microsoft Virtual Server, VMware Server, Sun Virtual Box, KVM, Xen

Security Symmetric and Asymmetric encryption systems (AES, SHA, Blowfish, Twofish, RSA, etc.), blockchain systems, encFS, TrueCrypt, LUKS, public key infrastructures (PKI) and certification authorities management, GnuPG, IpSec, SSL, TSL, SSH, firewalling, VPN security enforcement, backup and recovery technologies

Protocols knowledge LDAP (i.e. ASN.1/BER), HTTP, SMTP, POP3, Tcp-Ip, MIDI, SOAP, FTP

## Database Design and Administration

DBMS Oracle, MySql, PostgreSQL, Firebird, SQL Server, Access, SQLite, DB2, MongoDB

Languages SQL, PL-SQL, T-SQL, OLAP systems

Programs PowerDesigner, Toad, MySql Workbench, phpMyAdmin, pgAdmin, PowerArchitect, IBExpert, ARGO

## Statistics and Mathematics

Programs SPSS, Matlab, Stata, SAS

Methods Descriptive, Inferential and Multivariate Statistics, Regression Analysis, MonteCarlo methods, Inter-rater reliability

## Multimedia

- Premiere, Kdenlive, Flash, Flv, Mpeg-1, Mpeg-2, Mpeg-4, H.264, H.265, Windows Media, RealMedia, Macromedia Director (Shockwave), QuickTime, 3D Panoramas, Audacity, DivX, XviD, Flash Media Live Encoder, Adobe SoundBooth, SoundForge, streaming technologies, DVD mastering, Jack, ALSA, Fluidsynth, MIDI

## Graphics and Design

Raster Photoshop, Gimp, Paint Shop Pro, Corel Draw, Fireworks

Vector Flash, Illustrator, Inkscape

3D Blender, MakeHuman, Hugin

Publishing QuarkXPress, Scribus

## Office Automation

- Microsoft Office, OpenOffice/LibreOffice, Acrobat Distiller, PDF Creator, Outlook Express, Thunderbird, Outlook, Eudora, Lotus 123

## Other data

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Driving licence	Italian "B" licence (normal cars)
Other interests	Literature, cinema, writing, playing piano, crafting, photography, cooking, oenology, travels, classical, jazz and electronic music.