

# Roberto Saia

## Curriculum Vitae

### Education

- 2016 **PhD in Computer Science**, *Department of Mathematics and Computer Science, University of Cagliari, Cagliari, Italy.*  
Doctoral dissertation about "Similarity and Diversity: Two Sides of the Same Coin in the Evaluation of Data Streams", earned on March 07, 2016 with final assessment "very good"
- 2012 **Master's Degree in Computer Science**, *Department of Mathematics and Computer Science, University of Cagliari, Cagliari, Italy.*  
Research thesis about "Implementing a New Soft Real Time Scheduling Class in Linux Kernel", graduated on September 20, 2012 with final mark 103/110
- 2010 **Bachelor's Degree in Computer Science**, *Department of Mathematics and Computer Science, University of Cagliari, Cagliari, Italy.*  
Research thesis about "Collaborative Information Retrieval Algorithm", graduated on February 25, 2010 with final mark 102/110

### PhD areas of specialization

Design and development of new algorithms aimed to improve the quality of user profiling and the effectiveness of the items recommendation. The main areas involved in my research are the data mining, the pattern recognition, the analysis and optimization of sparse matrices, and probability and statistic approaches.

### Publications

#### Academic

#### Published:

- 2015 R. Saia, L. Boratto, S. Carta. "A Semantic Approach to Remove Incoherent Items From a User Profile and Improve the Accuracy of a Recommender System". Accepted for publication in *Journal of Intelligent Information System (JIIS)*
- 2015 R. Saia, L. Boratto, S. Carta. "A Proactive Time-frame Convolution Vector (TFCV) Technique to Detect Frauds Attempts in E-commerce Transactions". *International Conference on Communication and Information Processing (ICCIP-2015)*, Tokyo, Japan. Accepted for publication in *International Journal of e-Education, e-Business, e-Management and e-Learning (IJEEEE)*
- 2015 R. Saia, L. Boratto, S. Carta. "Introducing a Weighted Ontology to Improve the Graph-based Semantic Similarity Measures". *6th International Conference on Networking and Information Technology (ICNIT-2015)*, Tokyo, Japan. Accepted for publication in *International Journal of Signal Processing Systems (IJSPS)*
- 2015 R. Saia, L. Boratto, S. Carta. "Multiple Behavioral Models: a Divide and Conquer Strategy to Fraud Detection in Financial Data Streams". In proceedings of the *7th International Conference on Knowledge Discovery and Information Retrieval (KDIR-2015)*, Lisbon, Portugal.

- 2015 R. Saia, L. Boratto, S. Carta. "Popularity Does Not Always Mean Triviality: Introduction of Popularity Criteria to Improve the Accuracy of a Recommender System". International Conference on Computer Science and Information Technology (ICCSIT-2015), Amsterdam, Netherlands. Accepted for publication in Journal of Computers (JCP)
- 2015 R. Saia, L. Boratto, S. Carta. "Exploiting the Evaluation Frequency of the Items to Enhance the Recommendation Accuracy". In proceedings of the International Conference on Computer Applications & Technology (ICCAT-2015), Rome, Italy.
- 2015 R. Saia, L. Boratto, S. Carta. "A Latent Semantic Pattern Recognition Strategy for an Untrivial Targeted Advertising". In Proceedings of the 4th IEEE International Congress (BigData-2015), New York, United States of America.
- 2014 R. Saia, L. Boratto, S. Carta. "A New Perspective on Recommender Systems: a Class Path Information Model". In Proceedings of the Science and Information Conference (SAI-2015), London, United Kingdom.
- 2014 R. Saia, L. Boratto, S. Carta. "Semantic Coherence-based User Profile Modeling in the Recommender Systems Context". In Proceedings of the 6th International Conference on Knowledge Discovery and Information Retrieval (KDIR-2014), Rome, Italy.
- 2015 R. Saia, L. Boratto, S. Carta, G. Fenu. "Binary Sieves: Toward A Semantic Approach to User Segmentation for Behavioral Targeting".

**Under Review:**

- 2015 R. Saia, L. Boratto, S. Carta. "A Class-based Strategy to User Behavior Modeling". Accepted for publication in Studies in Computational Intelligence (SCI), Springer
- 2015 R. Saia, L. Boratto, S. Carta. "Semantics-Aware Content-Based Recommender Systems: Design and Architecture Guidelines".

**Books**

- 2010 R. Saia. "Programmazione e controllo dei sistemi informatici". FAG publisher, Milan - Italy, ISBN 9788882338633.
- 2009 R. Saia. "Sicurezza wireless e mobile". FAG publisher, Milan - Italy, ISBN 9788882337742.
- 2008 R. Saia. "Reti e sicurezza per sistemi Windows e Linux/Unix". FAG publisher, Milan - Italy, ISBN 9788882336912.

**Articles**

- 2012 R. Saia. "Hping il coltellino svizzero della sicurezza". "Linux Pro" journal, Italy
- 2012 R. Saia. "Metti al sicuro la tua LAN". "Win Magazine" journal, Italy
- 2012 R. Saia. "Tecniche di mappatura delle reti wireless". "Linux Pro" journal, Italy
- 2012 R. Saia. "Deceiving Networks Defenses with Nmap Camouflaged Scanning". "Hakin9 Exploiting Software" journal, Warsaw - Poland
- 2012 R. Saia. "Creating a Fake Wi-Fi Hotspot to Capture Connected Users Information". "Hakin9 Exploiting Software" journal, Warsaw - Poland
- 2012 R. Saia. "Proactive Network Defence through Simulated Network". "Hakin9" journal, Warsaw - Poland
- 2012 R. Saia. "From the Theory of Prime Numbers to Quantum Cryptography". "Hakin9" journal, Warsaw - Poland
- 2011 R. Saia. "Rsyslog: funzioni avanzate e grande affidabilità". "Linux&C" journal, Italy

- 2011 R. Saia. "La rete è sotto controllo - Regolamentazione e filtraggio dei contenuti". "Linux Pro" journal, Italy

### Awards/Honors

- 2015 Best paper award, "Exploiting the Evaluation Frequency of the Items to Enhance the Recommendation Accuracy", International Conference on Computer Applications & Technology (ICCAT).

### Research Projects

- 2013–now Member of the Trustworthy "Computational Societies", in the context of the "Social Glue" project, which aims at studying and experimenting new specification, analysis and development techniques for Web communities.

### Teaching

- 2015–2016 Tutoring in "Operating Systems I" (full semester of the Bachelor's Degree course).  
2015–2016 Tutoring in "Operating Systems II" (full semester of the Master's Degree course).  
2014–2015 Tutoring in "Operating Systems I" (full semester of the Bachelor's Degree course).  
2014–2015 Tutoring in "Operating Systems II" (full semester of the Master's Degree course).  
2013–2014 Tutoring in "Operating Systems I" (full semester of the Bachelor's Degree course).  
2013–2014 Tutoring in "Operating Systems II" (full semester of the Master's Degree course).  
2001–2004 Teaching activity related to several Information Technology topics, such as "IT Fundamental Theory", "Data Security", "Networking", "Internet", "Office Automation", "Microsoft Word", "Microsoft Excel Basic and Advanced Level" (courses for the civilian staff of the Italian Army, with a total commitment of 310 hours).

### Ad Hoc Reviewer

- IEEE Transactions on Circuits and Systems for Video Technology
- Mobile Information Systems

### Committee Service

- 2015 Member of the technical committee at "4th IEEE International Congress, New York, United States of America." (BigData-2015).  
2014 Session chair at "6th International Conference on Knowledge Discovery and Information Retrieval, London, United Kingdom" (KDIR-2014).

### Professional Experiences

- 2013–now Currently enrolled in the PhD program in Computer Science at the "Department of Mathematics and Computer Science" of the "University of Cagliari" in Italy.  
2013–2013 I worked from January 2013 to July 2013 for the "North Atlantic Treaty Organization" (NATO) in the balkan area. My tasks were to ensure the confidentiality, integrity and availability of the electronic information related with a defined area, as well as the administration of many network services based on several Oracle RDBMS servers.

1998–2012 Still working in the “Italian Army”, at the end of the nineties I started to operate in the field of Network Administration and Security, with the task to administer a big network based on servers and clients of the Windows and Linux families. My main duty was to ensure reliable network services, maintain the network security and provide a quick response in the emergency cases.

1983–1997 I began my career in the “Italian Army”, where I worked as a “Electronic Technician” in the branch of the optoelectronic. My duties were to verify, maintain and repair several kinds of optoelectronic devices.

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## Various skills

### Computer Forensics

In several occasions I worked as a “Computer Forensic Consultant” in criminal trials, where I operated to retrieve, analyse and present, the electronic evidence. During this activities I learnt many state-of-the-art techniques and tools used in this particular field to recover, safeguard, analyse, and present data extracted from various computer storage devices.

### Programming

C, C++, Java, Android, HTML, SQL, Bash, Matlab and L<sup>A</sup>T<sub>E</sub>X.

### Operating Systems

Fluent in Microsoft Windows family and Linux distros.

### Hardware

Good knowledge of Intel based hardware architectures and numerous categories of network devices, such as routers, switches, and firewalls.

### Applications and Presentations

Good knowledge of many software applications, including Microsoft Office applications, Adobe Photoshop, Adobe Dreamweaver, NetBeans, Eclipse, QT Creator and Matlab. High standard of verbal communication, technical writing, and presenting using L<sup>A</sup>T<sub>E</sub>X, Microsoft PowerPoint and LibreOffice Impress.

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## Languages

Italian Native proficiency

Spanish Elementary proficiency

English Professional working proficiency

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## Resume revisions

March 10, 2016