Adrian Garcia Garcia

Curriculum vitae

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Description

I am a highly curious and passion driven individual that is always looking to grow as a professional and as a person. My dream job offers interesting technical challenges that are faced through teamwork and allow me to learn new technologies, where my researching and learning skills could be useful. No matter the place I can find a way there, specially if the software we create actually makes a difference.

Education

2017–2021 **PhD in Computer Science Engineering**, *Complutense University of Madrid, cum laude mention* Thesis manuscript.

2016–2018 **Master's Degree in Computer Science Engineering**, *Complutense University of Madrid, Current average: 9,12.* Academic Report.

2011–2016 **Bachelor's Degree in Computer Science Engineering**, *Complutense University of Madrid, Average: 7,82 over 10.* Academic Report.

Employment history

Apr'18-Dec'21 **PhD scolarship (UCM)**, *Department of Compuer Architecture and Automatics*, Madrid.
"Contention-aware scheduling and resource management for emerging multicore architectures": the main proposals were implemented in C Linux kernel modules, but most of the experimental analysis and performance metrics was done in python (pandas/matlotlib), as well as some cluster parallelization (ipyparallel)

Oct'17-Oct'18 **System Administrator**, *UCM: Department of Compuer Architecture and Automatics*, Madrid.
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Administrated multiple Linux systems and maintained the physical and virtualized infraestructure (kvm).

Nov'16-Jun'17 **Collaboration fellowship by Spanish MECD**, *Seven months researching and working for the Department of Computer Architecture and Automatics*, Madrid.

Apr'16-Aug'16 **Internship in Software Developement**, *SATEC*, Madrid.
Developed web applications in C# (.NET MVC), Razor and jQuery UI. Specifically, I contributed to build a web application for the government car management system.

Research articles

○ Garcia-Garcia, A., Saez, J.C., Prieto, M.: "Delivering Fairness on Asymmetric Multicore Systems via Contention-Aware Scheduling". 5th Workshop on Runtime and Operating Systems for the Many-core Era. Euro-Par 2017: Parallel Processing Workshops. Springer International Publishing 2018. 610—622.

○ Garcia-Garcia, A., Saez, J.C., Prieto, M.: "Contention-Aware Fair Scheduling for Asymmetric Single-ISA Multicore Systems". IEEE Transactions on Computers, 67 (12): 1703-1719. (2018). IF (JCR): 3.131. ISSN: 0018-9340; DOI: 10.1109/TC.2018.2836418. Impact index of **JCR Q1** by Computer Science, Hardware and Architecture (2018).

○ Presented this article in the ICPP 2019 that took place in Kyoto: Garcia-Garcia, A., Saez, J.C., Castro, F. Prieto-Matias, M.: "LFOC: A Lightweight Fairness-Oriented Cache Clustering Policy for Commodity Multicores". In Proceedings of the 48th International Conference on Parallel Processing (ICPP '19): 14:1-14:10. (2019). ISBN: 978-1-4503-6295-5; DOI: 10.1145/3337821.3337925. **Ranked Class II** in GII-GRIN-SCIE (2018)

○ Garcia-Garcia, A., Saez, J.C., Risco-Martin, J.L., Prieto, M.. "PBBCache: An open-source parallel simulator for rapid prototyping and evaluation of cache-partitioning and cache-clustering policies". Journal of Computational Science, 42:101102, 2020. https://doi.org/10.1016/j.jocs.2020.101102. Impact index of **JCR Q1** by Computer Science, Theory and Methods (2020). Available on https://github.com/pbbcache/cachesim

Achievements

December, 2021	**Obtained my PhD with cum laude mention**.
June, 2016	**Graduated with special mention in the Final Project of my Bachelor's Degree**.
2011–2016	**Subjects passed with honors on the Bachelor's Degree in Computer Science Engineering**.

- Operating Systems
- Advanced Operating Systems and Networks
- Computer Architecture
- Linux and Android Internals
- Computer Networks Security
- Mobile and multicore parallel programming
- Databases
- Evaluation of Computer Systems

Additional information

12-30-1993	**Spanish**, *Native*.
Sept. 2016	**English**, *Level: C1*.

- Cambridge certificates:
  - First Certificate in English (FCE), Madrid, April 2012.
  - Certificate in Advanced English (CAE), Madrid, September 2016.

Nov. 2016	**Big Data: analysis with python**, *Complutense University of Madrid*.

Continious formation course of the UCM that teached to gather data from web pages, Twitter and different file formats (csv, xls, txt, etc.) in order to parse them and work with them using python libraries: numpy, matplotlib and pandas. Certificate.

Other skills

Programming languages.

- **Python**: scikit-learn, pandas, numpy, matplotlib, ipyparallel.
- **C/C++**: Kernel modules (drivers/scheduling), OpenGL, OpenMP/MPI, Sockets.
- **Java**: Android app developement (TheFridge), Hibernate, JSP, Maven.
- **Web**: PHP, C# ASP.NET MVC (Razor), JavaScript, CSS (Boostrap).
- **Functional Programming**: Erlang, Maude.

Other technologies.

- **Databases**: SQL, MongoDB, Neo4J.
- **Big Data**: Spark, Map Reduce, Hadoop File System.
- **Machine Learning** (python implementations):
  - Classification trees (ID3).
  - Complete Index (data compression: variable-bytes, elias-gamma or elias-delta).
  - Vectorial Index.
  - Naive Bayes.
- **Network management and virtualization**
  - Persistent network configuration IPv4/IPv6 (*vtysh*).
  - Virtual machine management in servers with kvm (*virsh* y *virt-manager*).
  - Basic usage of docker to create and deploy images.
  - Firewall deployment and network analysis skills (wireshark/IDS)

References

Manuel Prieto Matías, *Associate Professor at Complutense Univerity of Madrid*, mpmatias@ucm.es, Research group website (ArTeCs).

Juan Carlos Sáez Alcaide, *Associate Professor at Complutense Univerity of Madrid*, jc-saezal@ucm.es, Research group website (ArTeCs).