

Alberto Garcia-Robledo, Ph.D.

Email: alberto.garob@gmail.com

Nationality: Mexican

Location: Queretaro, Mexico

Date of birth: May 12, 1985

Languages: Spanish, English



Education

January 2012 – May 2016

Ph.D. in Computer Science

Distinguished as a CONACyT scholarship holder

Center for Research and Advanced Studies of the IPN

August 2008 – December 2010

Master in Computer Science

Distinguished as a CONACyT scholarship holder

Highest grade in the 2008 class

Center for Research and Advanced Studies of the IPN

August 2003 – December 2007

Computer Systems Engineer

Degree automatically awarded due to academic merits

Higher Technological Institute of Poza Rica

Research Interests

High Performance Computing, Big Data, Data Science, Graph Analytics, Network Science, and Reinforcement Learning

Experience

November 2018 - Present

National Council of Science and Technology – CONACyT

- **Full-time researcher** at the **Consortium for the Study of Metropolitan Zones** – CentroMET
- **Full-time researcher** at the **Center for Research in Geography and Geomatics** – CentroGeo

January 2017 – November 2018

Polytechnic University of Victoria

- **Full-time lecturer and researcher** at the Department of Information Technology Engineering
- **Secretary** of the Information Technology Engineering Academy

June 2016 – December 2016

Center for Research and Advanced Studies of the IPN

- **Publication** of scholarly papers and preparation of a book proposal

September 2013 – August de 2014

Massachusetts Institute of Technology

- **Tech lead** of the project "Safari: Situational Awareness Framework for Risk Ranking," a graph analytics platform for the detection of financial fraud, developed for the **MIT Geospatial Data Center** in cooperation with **Accenture**

October 2010 – September 2011

Center for Research and Advanced Studies of the IPN

- **Research assistant** in charge of writing a technical report on the state-of-the-art of parallel computing for the **Jalisco Information Technology Institute**

April 2010 – June 2010

EBCOMM

- **Developer** for the Android mobile banking client project.

August 2007 – March 2008

National Laboratory of Advanced Informatics

- **Intern** in charge of developing the Scholar Management System of the Learning Center

June 2006 - August 2006

Monterrey Institute of Technology and Higher Education

- **Intern** in charge of developing the Web Collaboration Opportunity Characterization platform of the international European COllaborative Networked LEADership ECOLEAD project during the XVI Summer of Scientific Research of the Mexican Academy of Sciences

March 2004 – June 2005

Higher Technological Institute of Poza Rica

- **Intern** in charge of developing the Web Research System for the Research Department

Languages

English

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| 2018 | • iTEP Level 5.0 (Advanced) - CEFR: C1 |
| 2012 | • TOEFL ITP Score: 617 |

Publications

Book

- | | |
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| 2018 | • Alberto Garcia-Robledo , Arturo Diaz-Perez, Guillermo Morales-Luna. Creativity in load-balance schemes for multi/many-core heterogeneous graph computing: emerging research and opportunities. 217 pages. IGI Global. ISBN 9781522537991 |
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Papers in journals with Impact Factor

- 2020 • Mahboobeh Zangiabady, **Alberto Garcia-Robledo**, Christian Aguilar-Fuster and Javier Rubio-Loyola. A holistic framework for virtual network migration to enhance embedding ratios in network virtualization environments, **Journal of Network and Systems Management (2018 IF 1.676)**. Vol. 28(2020), pp. 502–552
- 2019 • Mahboobeh Zangiabady, **Alberto Garcia-Robledo**, Juan-Luis Gorricho, Joan Serrat-Fernandez, and Javier Rubio-Loyola. Self-adaptive online virtual network migration in network virtualization environments. **Transactions on Emerging Telecommunications Technologies (2018 IF 1.258)**. Vol. 30, No. 9: e3692
- 2015 • Jose Torres-Jimenez, Idelfonso Izquierdo-Marquez, **Alberto Garcia-Robledo**, Aldo Gonzalez-Gomez and Javier Bernal, Raghu N. Kacker. A dual representation simulated annealing algorithm for the bandwidth minimization problem on graphs. **Information Sciences (2018 IF 5.524)**, Vol. 303, pp. 33-49

Book chapters

- 2018 • Arturo Diaz-Perez, **Alberto Garcia-Robledo** and Jose-Luis Gonzalez-Compean. Graph processing frameworks. In **Encyclopedia of Big Data Technologies**. Sherif Sakr, Albert Zomaya (Eds.) **Springer**
- 2016 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. Characterization and coarsening of autonomous system networks: measuring and simplifying the Internet. In **Advanced Methods for Complex Network Analysis**. Natarajan Meghanathan (Ed.) **IGI Global**
- 2016 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna, Characterization and traversal of large real-world networks. In **Big Data: Principles and Paradigms**. Rajkumar Buyya, Rodrigo Calheiros, Amir-Vahud Dasterjerdi (Eds.) **Morgan Kaufmann / Elsevier**
- 2016 • Jeditiah Yanez-Sierra, **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Gilberto Garcia-Bernon. Una metodología para obtener el consenso de métricas en el análisis de redes de citación. In **Técnicas Computacionales y TIC**. Jose-Arturo Olvera-Lopez, Ivan Olmos-Pineda, Claudia Zepeda-Cortes (Eds.) **Benemérita Universidad Autónoma de Puebla**

International conference papers

- 2017 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. Accelerating all-sources BFS metrics on multi-core clusters for large-scale complex network analysis. In High Performance Computing: CARLA 2016. pp. 148-179. **Springer**
- 2016 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. Partitioning of complex networks for heterogeneous computing: a methodological approach. **13th IEEE International Conference on Networking, Sensing, and Control**. Mexico City, Mexico. **Indexed in IEEE Xplore Digital Library. Best Student Paper Award**
- 2015 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. Exploring the feasibility of heterogeneous computing of complex networks for big data analysis. 12th International Conference and Expo on Emerging Technologies for a Smarter World. Melville NY, USA. **Indexed in IEEE Xplore Digital Library**

- 2013 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. Correlation analysis of complex network metrics on the topology of the Internet. 10th International Conference and Expo on Emerging Technologies for a Smarter World. Melville NY, USA. **Indexed in IEEE Xplore Digital Library**
- 2011 • **Alberto Garcia-Robledo** and Arturo Diaz-Perez. Familia de circuitos para resolver el problema de plegamiento del RNA. Jornadas de Computación Reconfigurable y Aplicaciones 2011. Tenerife, Spain

International conference abstracts

- 2014 • **Alberto Garcia-Robledo**, Arturo Diaz-Perez and Guillermo Morales-Luna. An experimental study of algebraic all-sources BFS for GPU and multicore on complex networks. 8th International Workshop on Parallel Matrix Algorithms and Applications. Lugano, Switzerland

Scholarly Reviews (per invitation)

- 2019 • 1 review for the **ACM Computing Surveys (2018 IF 6.131)**
- 1 review for the **Transactions on Emerging Telecommunications Technologies (2018 IF 1.258)**
- 2018 • 2 reviews for the **2018 IEEE Autumn Meeting on Power, Electronics and Computing**

Distinctions & Awards

- 2018 • Distinguished as a **Candidate to [SNI National Researcher](#)** by the National Council of Science and Technology of Mexico – CONACyT for the period 2019-2021.
- Distinguished and appointed as a **[Cátedra CONACyT Research Fellow](#)**.
- Distinguished as a **[PRODEP](#)** lecturer by the Secretariat of Public Education of Mexico.
- 2016 • Awarded with the **Best Student Paper Award** during the 13th IEEE International Conference on Networking, Sensing and Control.
- 2015 • Since 2015 I have been an **[Erdős Author Number 3](#)**.
- 2011 • Reception of my Master of Science diploma from the Secretary of Public Education of Mexico, Alonso Lujambio-Irazabal, in recognition for obtaining the **highest grade of the 2008 Computing Science class** at Cinvestav Tamaulipas, during the celebration of the Cinvestav 50th Anniversary.
- 2006 • Awarded with a **scholarship** to participate in the **XVI Summer of Scientific Research** at the Monterrey Institute of Technology and Higher Education.
- Awarded with the **Academic Achievement Stimulus Award 2006** by the Higher Technological Institute of Poza Rica for obtaining the highest grade in the August 2005–January 2006 term.
- 2005 • Awarded with the **Academic Achievement Stimulus Award 2005** by the Higher Technological Institute of Poza Rica for obtaining the highest grade in the February–July 2005 term.
- 2003 • **1st place award project of the X National Entrepreneurship Contest**, local stage.