

YASSER GONZALEZ

Resume – Feb/2015

Phone – (+1) 647 767 0942

Email – contact@yassergonzalez.com

Home Page – <http://yassergonzalez.com>

EDUCATION

- 2013—present **MA, Information Systems & Technology.** York University, Canada.
Coursework: Advanced Topics in Information Technology – Mining of Massive Datasets, Advanced Information Retrieval Systems, Introduction to Computational Linguistics, Software Product Lines, Research Methods in Information Technology.
- 2011—2012 **Graduate-Level Coursework, Mathematics.** University of Havana, Cuba.
Coursework: Multivariate Statistics, Nonparametric Tests – Methods Based on Ranks, Linear Models, Stochastic Simulation, Linear & Integer Programming, Heuristic & Metaheuristics Algorithms, Introduction to Parallel Computing.
- 2006—2011 **BSc, Computer Science.** University of Havana, Cuba.
Grade Point Average: 5.0/5.0 (Summa Cum Laude).
Coursework: Algebra, Mathematical Analysis, Probability & Statistics, Discrete Mathematics, Theory of Programming Languages, Design & Analysis of Algorithms, Compiler Construction, Numerical Methods, Operating Systems, Database Systems, Software Engineering, Computer Networks, Artificial Intelligence, Information Systems, ... (from a total of 58 courses).
Thesis: Estimation of Distribution Algorithms Based on Copulas and Vines.
Thesis Supervisor: Marta Soto.

TECHNOLOGIES

Python – R – C/C++ – Java – C# (.NET and Mono) – MATLAB/Octave
MapReduce – Hadoop – SQL – JavaScript – HTML(5) – CSS – ~~TeX~~
Git – Subversion – Shell scripting – GNU/Linux system administration.

EXPERIENCE

- Sep/2013—present **Research & Teaching Assistant.** York University, Canada.
 - Research on the use of threshold convergence to improve the performance of search heuristics on multi-modal optimization problems.
 - Teaching assistant for the courses AP/ITEC 1620 Object-Based Programming (four sessions), AP/ITEC 2620 Introduction to Data Structures (one session), and AP/ITEC 1000 Introduction to Information Technologies (one session).
- Sep/2011—Aug/2013 **Research Assistant.** Institute of Cybernetics, Mathematics and Physics, Cuba.
 - Designed new EDAs based on copulas and vines (VEDAs).
 - Created software in MATLAB/Octave, a collection of R packages available on CRAN, and a C library for dependence modeling using vines.
 - Co-supervised a BSc thesis in Computer Science.
- Oct/2011—Apr/2013 **Software Developer.** Julio Menendez LLC, USA.
 - Developed Django back-ends exporting REST APIs for mobile/web apps. The system provided data to the apps and performed time-consuming tasks asynchronously.
 - Front-end developer of JavaScript intensive web apps by making use of libraries such as RequireJS, jQuery, Backbone.js, mustache.js, among others.
 - Other projects including WordPress plug-in development and web scraping.
- Aug/2012—Dec/2012 **Software Developer.** Abalt Ltd., Spain.
 - Developed a web application in Python & Django to process a large volume of scanned documents (OCR, text segmentation and extracting relevant information).

PUBLICATIONS

Journal Papers & Book Chapters

M. Soto, Y. Gonzalez-Fernandez, and A. Ochoa. Modeling with Copulas and Vines in Estimation of Distribution Algorithms. *Investigación Operacional*, 36(1):1–23, 2015. http://rev-inv-ope.univ-paris1.fr/IMG/pdf_36115-01.pdf.

Y. Gonzalez-Fernandez and M. Soto. *copulaedas*: An R Package for Estimation of Distribution Algorithms Based on Copulas. *Journal of Statistical Software*, 58(9):1–34, 2014. <http://www.jstatsoft.org/v58/i09>.

M. Soto, A. Ochoa, Y. Gonzalez-Fernandez, Y. Milanés, A. Álvarez, D. Carrera, and E. Moreno. Vine Estimation of Distribution Algorithms with Application to Molecular Docking. In S. Shakya and R. Santana, editors, *Markov Networks in Evolutionary Computation*, volume 14 of *Adaptation, Learning, and Optimization*, pages 209–225. Springer-Verlag, 2012. http://link.springer.com/chapter/10.1007/978-3-642-28900-2_13.

Peer-Reviewed Conference Proceedings

Y. Gonzalez-Fernandez and S. Chen. Identifying and Exploiting the Scale of a Search Space in Particle Swarm Optimization. In *Genetic and Evolutionary Computation Conference 2014 (GECCO '14)*, pages 17–24. ACM, 2014. <http://doi.acm.org/10.1145/2576768.2598280>.

J. Montgomery, S. Chen, and Y. Gonzalez-Fernandez. Identifying and Exploiting the Scale of a Search Space in Differential Evolution. In *IEEE Congress on Evolutionary Computation 2014 (CEC '14)*, pages 1427–1434. IEEE, 2014. <http://dx.doi.org/10.1109/CEC.2014.6900579>.

Y. Gonzalez-Fernandez, D. Carrera, M. Soto, and A. Ochoa. Vine Estimation of Distribution Algorithms. In *VIII Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados (MAEB '12)*, 2012. http://simd.albacete.org/maeb2012/papers/paper_99.pdf.

Technical Reports & Preprints

Y. Gonzalez-Fernandez and M. Soto. A Survey of Estimation of Distribution Algorithms Based on Copulas. Technical Report ICIMAF 2012-679, Institute of Cybernetics, Mathematics and Physics, Cuba, 2012. ISSN 0138-8916. http://www.researchgate.net/publication/256441696_A_Survey_of_Estimation_of_Distribution_Algorithms_Based_on_Copulas.

(See http://researchgate.net/profile/Yasser_Gonzalez-Fernandez for other publications.)

SOFTWARE

copulaedas – R package for Estimation of Distribution Algorithms based on copulas. <http://cran.r-project.org/package=copulaedas>

vines – R package for multivariate dependence modeling with vines. <http://cran.r-project.org/package=vines>

cec2013 – R package with the benchmark functions for the IEEE CEC 2013 Special Session and Competition on Real-Parameter Single Objective Optimization. <http://cran.r-project.org/package=cec2013>

dml – C library for dependence modeling using C-vines, D-vines and R-vines. <http://github.com/yasserglez/dml/>

Arachne – A Python search engine for files shared via FTP and similar protocols. <http://github.com/yasserglez/arachne/>

diglib – A personal digital document management software written in GTK+ and Python. <http://github.com/yasserglez/diglib/>

(See <http://github.com/yasserglez/> for other open-source software.)