

Alberto Gil-de-la-Fuente

Research, education, code

- alberto.gilf@gmail.com
- [GitHub](#)
- [CeU Mass Mediator](#)

Profile

Alberto Gil de la Fuente was born in Madrid in 1990. He studied Computer Engineering in San Pablo-CEU Universities. He graduated in 2013 obtaining the extraordinary award to the best academic record. In 2016 he finished his MsC in Computer Engineering in Complutense University, in Madrid. During the MsC he did a period abroad of 6 months in Linköping University, Sweden. I started my PhD in Life and Science Technologies in San Pablo-CEU University in 2015. The project consists in an on-line tool to help with the metabolite identification. I also did a researching stay in the University of Alberta (Wishart Lab) for 6 months during 2018. You can see the results of the PhD development in the web page listed in the header. During my studies I combine both work and education. I worked as a database administrator in one of the biggest Spanish companies (Informatica El Corte Ingles: IECISA). I obtained some of the certifications from Oracle, DB2, MySQL or MongoDB, main database technologies used nowadays. I am currently finishing the project and looking forward to continue the research in the Metabolomics field, which I blindly believe will bring the most significant advances in the systems biology field. At the same time, I recently started to enjoy the synergies of the teaching. I think that the education is key in the formation of independent and autonomous people. In addition, I really enjoy the High Performance Computing. We should help the computers to make their work, and I have develop some projects to apply the High performance computing to life sciences. Personally, I like to create products that help people. I enjoy my free time doing sports, socialising with the family and friends and learning new technologies. I do sports regularly, I form part of the futsal team of the CEU-San Pablo University, and I actively participate in different races, by run or bikes. During my university studies I was football trainer of U-12 and U-15 teams, leading the players to become adults and having a lot of fun :)

Education

San Pablo-CEU University

2009-2012

Computer engineering (Ingeniería Informática de Sistemas). GPA 8.68/10.

Alfonso X el Sabio University

2013-2014

Degree in Information Systems Engineering (Grado en Ingeniería de Sistemas de Información). GPA 8.81/10.

Complutense University

2014-2016

MsC in computer Engineering. GPA 8.69/10.

Linköping University

2015-2016

Erasmus scholarship.

San Pablo-CEU University

2015-current

PhD in Life Sciences and Technologies.

University of Alberta

2018

Researching period in Wishart Lab.

Official Courses

Universidad a Distancia Española (UNED)

2009

Server Administration

Universidad a Distancia Española (UNED)

2009

Java programming

Universidad a Distancia Española (UNED)

2010

Web programming using PHP, JavaScript and HTML

Universidad a Distancia Española (UNED)

2009

.net programming

IBM

2012

DB2 IBM BootCamp. DB210

NVIDIA

2013

CUDA and OpenACC

Oracle

2013

MySQL for Database Administrators Ed 3.1

NVIDIA

2014

CUDA and OpenAcc

IESE Business School

2014

Leadership and Management Program

Oracle

2015

Oracle Database 12c: New features for Administrators

Agilent Technologies

2015

MS multiplatform Metabolomics Workshop

Certifications

IBM 000-N18

2013

Certified Database Associate – DB2 10.1 Fundamentals

IBM 000-610

2013

Information Management DB2 10 Technichal Proffesional v3

Oracle Certified Professional,. 1Z0-873 - 1Z0-874

2013

MySQL 5 Database Administrator part I

Oracle Database 11g Administrator Certified Associate. 1Z0-051 - 1Z0-052

2015

MySQL 5 Database Administrator part II

Oracle Database 11g Administrator Certified Professional. 1Z0-053

2015

MySQL 5 Database Administrator part II

Honors

Comunidad de Madrid

2011

Excellent Academic Performance.

Award for students with a GPA higher than 9.25 during an academic year

San Pablo-CEU University

2013

Distinction in grade Thesis called "Characterization of heartbeats by Hermite Polynomials using GPUs"

San Pablo-CEU University

2013

Best Academic Record of the year

Alfonso X el Sabio University

2014

Distinction in grade Thesis called "Heartbeats clustering using GPUs"

Spanish ministry of Education and Science

2015

Erasmus Scholarship

San Pablo-CEU university

2015

FPI scholarship for PhD studies

Santander Scholarships

2018

Scholarship to help the mobility of researchers. Funding to do a period abroad in the University of Alberta

Publications

BioTransformer: a comprehensive computational tool for small molecule metabolism prediction and metabolite identification

2019

Yannick Djoumbou-Feunang, Jarlei Fiamoncini, Alberto Gil-de-la-Fuente, Russell Greiner, Claudine Manach and David S. Wishart
Journal of cheminformatics

CEU Mass Mediator 3.0: a metabolite annotation tool

2018

Alberto Gil-de-la-Fuente, Joanna Godzien, Sergio Saugar, Rodrigo Garcia-Carmona, Hasan Badran, David S Wishart, Coral Barbas, Abraham Otero
Journal of proteome research

Characterization and annotation of oxidized glycerophosphocholines for non-targeted metabolomics with LC-QTOF-MS data

2018

Alberto Gil de la Fuente, Federico Traldi, Jitka Siroka, Adam Kretowski, Michal Ciborowski, Abraham Otero, Coral Barbas, Joanna Godzien
Analytica Chimica Acta

Knowledge-based metabolite annotation tool: CEU Mass Mediator

2018

Alberto Gil de la Fuente, Joanna Godzien, Mariano Fernández López, Francisco J. Rupérez, Coral Barbas, Abraham Otero
Journal of Pharmaceutical and Biomedical Analysis

Differentiating signals to make biological sense - a guide through databases for MS-based non-targeted metabolomics

2017

Alberto Gil de la Fuente, Emily Grace Armitage, Abraham Otero, Coral Barbas, Joanna Godzien
Electrophoresis

GPU-based Acceleration of ECG Characterization using High-Order Hermite

Polynomials

2016

A. Gil, D. G. Márquez, G. Caffarena, A. Iriarte and A. Otero
Current Bioinformatics

Conferences

A fast and reliable spectral quality assessment in metabolomics studies

2018

Gil de la Fuente, A., Traldi, F., Kowalczyk, T., Ciborowski, M., Otero, A., Barbas, C., Godzien, J.
14th Annual Conference of the Metabolomics Society

CMM workshop: Improving Metabolit ID Approaches - Confidence and CASMI

2018

S., Sumner, L.W., Gil de la Fuente, A., Godzien, J., Barbas, C.
14th Annual Conference of the Metabolomics Society

Ceu Mass Mediator: a knowledge-based tool for metabolite annotation

2017

Gil de la Fuente, A., Godzien, J., Barbas, C., Otero
28th Pharmaceutical and Biomedical Analysis Conference

Low-power, Low-Latency Hermite Polynomial Characterization of Heartbeats Using a Field-Programmable Gate Array

2016

K. Lakhotia, G. Caffarena, A. Gil de la Fuente, DG. Márquez, A. Otero, MP. Desai
International Conference on Bioinformatics and Biomedical Engineering

Polynomial Characterization of Heartbeats with Graphics Processing Units

2014

Alberto Gil de la Fuente, Gabriel Caffarena, David G. Marquez and Abraham Otero.
International Conference on Bioinformatics and Biomedical Engineering

Career

PhD Student

2015-current

San Pablo-CEU University

Developing a software tool for metabolite annotation called Ceu Mass Mediator. The project of the thesis project is design, validation and implementation of a software tool for metabolite identification.

Research Assistant

2018

University of Alberta

Scholarship to integrate new knowledge into the expert system developed during the thesis in Ceu-San Pablo University. I integrated into a new international environment and I am obtaining experimental knowledge that could be subsequently applied

for the metabolites annotation. I support younger researchers regarding the IT architecture and the technological issues occurred.

Database Administrator

2009-2015

Informatica El Corte Ingles (IECISA)

The job in IECISA was my first experience related with IT. I started at the same time than the university. Since my first year I conciliated two tasks and honestly it was an amazing experience. I could use everything I learnt in the mornings in real work environments in the afternoon! It motivated me a lot and I think that it was one of the main reasons I got quite good academic results, ending with the award to the best academic record of my promotion. The environment was friendly so I shared such great moments with my workmates there.

Skills

- Adaptability
- Multi-task
- Teaching
- CUDA
- Java
- C,C++
- PrimeFaces
- AWS
- HTML
- SQL
- PL/SQL
- ORM
- LaTeX