Alberto Gil-de-la-Fuente
Research, education, code

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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
Excellent Academic Performance.
Award for students with a GPA higher than 9.25 during an academic year
2011

San Pablo-CEU University
Distinction in grade Thesis called "Characterization of heartbeats by Hermite Polynomials using GPUs"
2013

San Pablo-CEU University
Best Academic Record of the year
2013

Alfonso X el Sabio University
Distinction in grade Thesis called "Heartbeats clustering using GPUs"
2014

Spanish ministry of Education and Science
Erasmus Scholarship
2015

San Pablo-CEU university
FPI scholarship for PhD studies
2015

Santander Scholarships
Scholarship to help the mobility of researchers. Funding to do a period abroad in the University of Alberta
2018

Publications

BioTransformer: a comprehensive computational tool for small molecule metabolism prediction and metabolite identification
Yannick Djoumbou-Feunang, Jarlei Fiamoncini, Alberto Gil-de-la-Fuente, Russell Greiner, Claudine Manach and David S. Wishart
Journal of cheminformatics
2019

CEU Mass Mediator 3.0: a metabolite annotation tool
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
2018

Characterization and annotation of oxidized glycerophosphocholines for non-targeted metabolomics with LC-QTOF-MS data
Alberto Gil de la Fuente, Federico Traldi, Jitka Siroka, Adam Kretowski, Michal Ciborowski, Abraham Otero, Coral Barbas, Joanna Godzien
Analytica Chimica Acta
2018

Knowledge-based metabolite annotation tool: CEU Mass Mediator
Alberto Gil de la Fuente, Joanna Godzien, Mariano Fernández López, Francisco J.Rupérez, Coral Barbas, Abraham Otero
Journal of Pharmaceutical and Biomedical Analysis
2018

Differentiating signals to make biological sense - a guide through databases for MS-based non-targeted metabolomics
Alberto Gil de la Fuente, Emily Grace Armitage, Abraham Otero, Coral Barbas, Joanna Godzien
Electrophoresis
2017

GPU-based Acceleration of ECG Characterization using High-Order Hermite Polynomials
A. Gil, D. G. Márquez, G. Caffarena, A. Iriarte and A. Otero
Current Bioinformatics
2016

Conferences

A fast and reliable spectral quality assessment in metabolomics studies
Gil de la Fuente, A., Traldi, F., Kowalczyk, T., Ciborowski, M., Otero, A., Barbas, C., Godzien, J.
14th Annual Conference of the Metabolomics Society
2018

CMM workshop: Improving Metabolit ID Approaches – Confidence and CASMI
S., Sumner, L.W., Gil de la Fuente, A., Godzien, J., Barbas, C.
14th Annual Conference of the Metabolomics Society
2018

Ceu Mass Mediator: a knowledge-based tool for metabolite annotation
Gil de la Fuente, A., Godzien, J., Barbas, C., Otero
28th Pharmaceutical and Biomedical Analysis Conference
2017

Low-power, Low-Latency Hermite Polynomial Characterization of Heartbeats Using a Field-Programmable Gate Array
K. Lakhotia, G. Caffarena, A. Gil de la Fuente, DG. Márquez, A. Otero, MP. Desai
International Conference on Bioinformatics and Biomedical Engineering
2016

Polynomial Characterization of Heartbeats with Graphics Processing Units
Alberto Gil de la Fuente, Gabriel Caffarena, David G. Marquez and Abraham Otero.
International Conference on Bioinformatics and Biomedical Engineering
2014

Career

PhD Student
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.
2015-current

Research Assistant
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.
2018

Database Administrator

Informatica El Corte Ingles (IECISA)

2009-2015

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