

Curriculum

Personal information

Name	Joaquim L. Viegas
E-mail	joaquim.viegas@tecnico.ulisboa.pt
Nationality	Portuguese and French
Birth date	16/11/1990
Gender	Male

Occupational field

Systems Engineering, Machine Learning, Data Mining, Energy Systems

Education and training

Dates	February 2014 - ...
Course	Sustainable Energy Systems Doctoral Program (SES PhD)
University	Instituto Superior Técnico / Instituto Superior de Economia e Gestão, Universidade de Lisboa
	MIT Portugal Program

Dates	July 2014 – ...
Grant	PhD Studentship in industry from <i>Fundação da Ciência e Tecnologia</i> (FCT)
Institutions	IDMEC and Novabase
Working programme	Predictive models for energy demand forecasting and production planning in the utility industry

Dates	September 2008 – November 2013
Course	Integrated Master Degree (MSc) in Mechanical Engineering
Specialization	Control and Automation of Mechanical Systems (Systems)
University	Instituto Superior Técnico, University of Lisbon
Classification	MSc final grade: 16/20

MSc Thesis

Name	Retail Steel Cutting Optimization – Metaheuristics for Cutting & Packing Problems
Description	Development of algorithms based on metaheuristics (Ant Colony Optimization and Tabu Search) to approach Cutting & Packing type problems, such as the Container Loading, Bin Packing and Cutting Stock problems. Simulation and optimization of the association and cutting processes from a Portuguese retail steel distributor. (Grade: 19/20)
Field	Optimization, Operations Research

Dates	September 2013 – March 2014
Scholarship	Bachelor Research Scholarship
Project	QREN Project Tooling Edge/Instituto Superior Técnico
Description	Optimization and simulation of the association and cutting processes, in partnership with a Portuguese retail steel distribution company (F. RAMADA)

Dates	August 2012 – October de 2012 (Summer Internship)
Function	Intern – LUT Metal Technology
Principal activities	Research related to the automation of aluminum welding, review and correction of students extracurricular works in the subject of welding
Name and address of the employer	Lappeenranta University of Technology – FI-53851 Lappeenranta, Finland

Scientific publications

Conference proceedings

Title	Electricity demand profile prediction based on household characteristics
Authors	J. L. Viegas, S. M. Vieira, R. Melício, V. M. F. Mendes, J. M. C. Sousa
In	Proceedings of the 12th International Conference on the European Energy Market, 2015
Title	Fuzzy clustering and prediction of electricity demand based on household characteristics
Authors	J. L. Viegas, S. M. Vieira, J. M. C. Sousa
In	Proceedings of the 16th World Congress of the International Fuzzy Systems Association (IFSA) and the 9th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT), 2015
Title	Analysing the Segmentation of Energy Consumers Using Mixed Fuzzy Clustering
Authors	H. Schafer, J. L. Viegas, M. C. Ferreira, S. M. Vieira, J. M. C. Sousa
In	Proceedings of the 2015 IEEE International Conference on Fuzzy Systems, 2015
Title	Electricity Usage Efficiency in Large Buildings: DSM Measures and Preliminary Simulations of DR Programs in a Public Library
Authors	H. Algarvio, J. L. Viegas, F. Lopes, D. Amaro, A. Pronto, S. M. Vieira
In	Proceedings of the 13th Conference on Practical Applications of Agents and Multi-Agent Systems: Multi-agent based Applications for Energy Markets, Smart Grids and Sustainable Energy Systems
Title	Metaheuristics for the 3D bin packing problem in the steel industry
Authors	J. L. Viegas, S. M. Vieira, J. M. C. Sousa, E. M. P. Henriques
In	Proceedings of the 2014 IEEE Congress on Evolutionary Computation (CEC), 2014
Title	A tabu search algorithm for the 3D bin packing problem in the steel industry
Authors	J. L. Viegas, S. M. Vieira, E. M. P. Henriques, J. M. C. Sousa
In	Proceedings of the 11 th Portuguese Conference on Automatic Control, 2015

Personal skills	
Mother tongues	Portuguese and French
English	Proficient in terms of understanding, speaking and writing.
Computer skills	
	<ul style="list-style-type: none"> - Operating systems: MS Windows, Linux - Programming: Python (NumPy, scikit-learn, Pandas, matplotlib), MATLAB, C++, R - Tools: MS Office (Word, Excel, PowerPoint), Adobe PhotoShop - CAD Software: SolidWorks
Artistic skills	Musician (Saxophone: Training in conservatory and participation in various orchestras)
Driving license	Class B