Amaya Nogales Gómez

Laboratoire d'Informatique, Signaux et Systèmes de Sophia Antipolis (I3S)
2000, route des Lucioles, Les Algorithmes, bât. Euclide B
06900 Sophia Antipolis, France
email: amaya.nogales-gomez@i3s.unice.fr, phone: +33 769736846

EDUCATION	Jan 2012-Feb 2015	PhD in Mathematics, University of Seville. Title: Mixed Integer Nonlinear Optimization: Applications to Competitive Location and Supervised Classification. Supervisors: R. Blanquero, E. Carrizosa and D. Romero Morales.
	Oct 2010-Jan 2012	M.Sc. in Advanced Mathematics, University of Seville.
	Sep 2005-Jun 2010	B.Sc. in Mathematics, University of Seville.
PROFESSIONAL EXPERIENCE	Feb 2020-Jan 2021	Postdoctoral Researcher I3S, Laboratoire d'Informatique, Signaux et Systèmes de Sophia Antipolis.
	Dec 2014-Apr 2019	Research Engineer Mathematical & Algorithmic Sciences Lab Paris Research Center Huawei Technologies.

RESEARCH INTERESTS

Combinatorial Optimization
Machine Learning
Mixed Integer (Non)linear Programming

PUBLICATIONS

Single-facility Huff location problems on networks, Blanquero, R., Carrizosa, E., Nogales-Gómez, A., Plastria, F. *Annals of Operations Research*, 222(1): 175–195, 2014. http://dx.doi.org/10.1007/s10479-013-1445-x

Heuristic approaches for Support Vector Machines with the ramp loss, Carrizosa, E., Nogales-Gómez, A., Romero Morales, D. *Optimization Letters*, 8(3): 1125–1135, 2014. http://dx.doi.org/10.1007/s11590-013-0630-9

Strongly Agree or Strongly Disagree?: Rating Features in Support Vector Machines, Carrizosa, E., Nogales-Gómez, A., Romero Morales, D. *Information Sciences*, 329: 256–273, 2016. https://doi.org/10.1016/j.ins.2015.09.031

p-Facility Huff Location Problem on Networks, Blanquero, R., Carrizosa, E., -Tóth, B.G., Nogales-Gómez, A. *European Journal of Operational Research*, 255(1): 34–42, 2016. https://doi.org/10.1016/j.ejor.2016.04.039

COAP 2016 Best Paper Prize
https://doi.org/10.1007/s10589-017-9959-9

On Handling Indicator Constraints in Mixed Integer Programming, Belotti, P., Bonami, P., Fischetti, M., Lodi, A., Monaci, M., Nogales-Gómez, A., Salvagnin, D. *Computational Optimization and Applications*, 65(3): 545–566, 2016. https://doi.org/10.1007/s10589-016-9847-8

Anticipatory radio resource management for mobile video streaming with linear programming, Tsilimantos, D., Nogales-Gómez, A., Valentin, S. *2016 IEEE International Conference on Communications (ICC)*, 2016. https://doi.org/10.1109/ICC.2016.7511099

Clustering Categories in Support Vector Machines, Carrizosa, E., Nogales-Gómez, A., Romero Morales, D. *Omega*, 66: 28–37, 2017. https://doi.org/10.1016/j.omega.2016.01.008

Traffic profiling for mobile video streaming, Tsilimantos, D., Karagkioules, T., Nogales-Gómez, A., Valentin, S. *2017 IEEE International Conference on Communications (ICC)*, 2017. https://doi.org/10.1109/ICC.2017.7996603

PATENTS

A method Improving QoE of Video Streaming, Shi, X., Chao, Z., Lou, Q., Zhang, J., Valentin, S., Tsilimantos, D., Nogales-Gómez, A., Yang, J. 85016690, 2016.

Unequal error protection for video traffic via adaptive modulation and coding, Chao, Z., Feki, A., Nogales-Gómez, A., Shi, X., Tang, H., Tsilimantos, D., Valentin, S. 85348718, 2017.

System and method for traffic profiling of mobile video streaming, Tsilimantos, D., Valentin, S., Nogales-Gómez, A., Shi, X., Chao, Z. 85372228, 2017.

VISITING POSITIONS

Nov 2013 (31 days)	DEI, University of Bologna. Host: Prof. Andrea Lodi.
Jul 2013 (7 days)	DEI, University of Bologna. Host: Prof. Andrea Lodi.
Feb 2012-Jul 2012 (154 days)	DEI, University of Bologna. Host: Prof. Andrea Lodi.
Sep 2012 (12 days)	Saïd Business School, University of Oxford. Host: Prof. Dolores Romero Morales.
Jun 2011-Sep 2011 (92 days)	Saïd Business School, University of Oxford. Host: Prof. Dolores Romero Morales.
Apr 2011 (9 days)	Saïd Business School, University of Oxford. Host: Prof. Dolores Romero Morales.

TEACHING ACTIVITY

Feb 2014-Jun 2014 (36 hours)	Statistics. B.Sc. in Computer Engineering. University of Seville.
Oct 2013-Jan 2014 (24 hours)	Applied Statistics for Biology. B.Sc. in Biology. University of Seville.
Jul 2013 (12 hours)	Solvers for Mixed Integer Programming problems. Workshop. Mathematics University Institute of Seville.
Oct 2012-Jan 2013 (32 hours)	Applied Statistics for Biology. B.Sc. in Biology. University of Seville.

TALKS	Seminar	Two Competitive Huff Location Models on Networks, Blanquero, R., Carrizosa, E., **Nogales-Gómez, A.**, Plastria, F., I3S, Laboratoire d'Informatique, Signaux et Systèmes de Sophia Antipolis, 2019.
	ICC 2017	Traffic profiling for mobile video streaming, **D. Tsilimantos**, Karagkioules, T., A. Nogales-Gómez, S. Valentin, IEEE International Conference on Communications, Paris, 2017.
	PGMO days	Clustering Categories in Support Vector Machines, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., GASPARD MONGE PROGRAM FOR OPTIMIZATION AND OPERATIONS RESEARCH ,Paris, 2016.
	ICC 2016	Anticipatory Resource Allocation for Wireless Media Streaming with Linear Programming, D. Tsilimantos, **A. Nogales-Gómez**, S. Valentin, IEEE International Conference on Communications, Malaysia, 2016.
	BD5G 2015	Anticipatory Radio Resource Management for Mobile Video Streaming with Linear Programming, D. Tsilimantos, **A. Nogales-Gómez**, S. Valentin, 1st Workshop on Big Data for the 5G RAN, Huawei Paris, 2015.
	LINCS 2015	Anticipatory Resource Allocation for Wireless Media Streaming, D. Tsilimantos, **A. Nogales-Gómez**, S. Valentin, Seminar on modeling, optimization and control in wireless networks, Telecom ParisTech, 2015.
	ISMP 2015	Increasing Sparsity in Support Vector Machines in the Presence of Categorical Data, Carrizosa, E., Nogales-Gómez, A., **Romero Morales, D.**, 22nd International Symposium on Mathematical Programming, Pittsburgh, USA, 2015.
	EURO 2015	Clustering Categories in Support Vector Machines, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., 27th European Conference on Operational Research, Glasgow, United Kingdom, 2015.
	SCIP 2014	Indicator Constraints in Mixed-Integer Programming, Belotti, P., Bonami, P., Fischetti, M., **Lodi, A.**, Monaci, M., Nogales-Gómez, A., Salvagnin, D., SCIP Workshop 2014, Berlin, Germany, 2014.
	MAGO'14	Clustering Categories in Support Vector Machines, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., XII Global Optimization Workshop, Málaga, Spain, 2014.
	MIP 2014	Indicator Constraints in Mixed-Integer Programming, Belotti, P., Bonami, P., Fischetti, M., **Lodi, A.**, Monaci, M., Nogales-Gómez, A., Salvagnin, D., 2014 Mixed Integer Programming Workshop, Columbus, Ohio, USA, 2014.
	IFORS 2014	Dimensionality reduction of categorical data in Support Vector Machines, Carrizosa, E., Nogales-Gómez, A., **Romero Morales, D.**, 20th Conference of the International Federation of Operational Research Societies, Barcelona, Spain, 2014.

18th COW	Indicator Constraints in Mixed-Integer Programming, Belotti, P., Bonami, P., Fischetti, M., **Lodi, A.**, Monaci, M., Nogales-Gómez, A., Salvagnin, D., 18th Combinatorial Optimization Workshop, Aussois, France, 2014.
INFORMS 2013	Strongly Agree or Strongly Disagree?: Rating Features in Support Vector Machines, Carrizosa, E., Nogales-Gómez, A., **Romero Morales, D.**, INFORMS Annual Meeting, Minneapolis, USA, 2013.
IWLA 2013	Two competitive location models on networks, Blanquero, R., Carrizosa, E., **Nogales-Gómez, A.**, Plastria, F., International Workshop on Locational Analysis and Related Problems, Málaga, Spain, 2013.
CONGFORMODEL 2013	Algunos problemas de optimización global en modelos de localización sobre grafos, Blanquero, R., **Carrizosa, E.**, Nogales-Gómez, A., Plastria, F., V Congreso Internacional de Formación y Modelación en Ciencias Básicas, Medellín, Colombia, 2013.
RSME 2013	Some Mixed Integer Nonlinear Programs in Data Analysis, **Carrizosa, E.**, Nogales-Gómez, A., Romero Morales, D., Congreso Bienal de la Real Sociedad Matemática Española, Santiago de Compostela, Spain, 2013.
CO 2012	Matheuristics for Ψ-learning, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., International Symposium on Combinatorial Optimisation 2012, Oxford, United Kingdom, 2012.
ISMP 2012	Matheuristics for Ψ-learning, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., 21st International Symposium on Mathematical Programming, Berlin, Germany, 2012.
EURO XXV	Solving a Huff-type location model on networks, **Blanquero, R.**, Carrizosa, E., Nogales-Gómez, A., Plastria, F., 25thEuropean Conference on Operational Research, Vilnius, Lithuania, 2012.
SEIO 2012	Optimización global continua en problemas de localización sobre redes, **Blanquero, R.**, Carrizosa, E., Nogales-Gómez, A., Plastria, F., XXXIII Congreso Nacional de Estadística e Investigación Operativa, Madrid, Spain, 2012.
Seminar	MIP formulations for Ψ-learning, Carrizosa, E., **Nogales-Gómez, A.**, Romero Morales, D., University of Bologna, Bologna, Italy, 2012.
EWGLA XIX	Single-facility Huff location problems on networks. A DC approach, Blanquero, R., Carrizosa, E., **Nogales-Gómez, A.**, Plastria, F., EURO Working Group on Locational Analysis, Nantes, France, 2011.
EWLA 2011	Huff Location Problems on Networks, Blanquero, R., Carrizosa, E., **Nogales-Gómez, A.**, Plastria, F., Exploratory Workshop on Locational Analysis, Seville, Spain, 2011.
ORP^3 2011	Single-facility Huff location problems on networks. A DC approach, Blanquero, R., Carrizosa, E., **Nogales-Gómez, A.**, Plastria, F., Operational Research Peripatetic Post-Graduate Programme, Cádiz, Spain, 2011.

WORKSHOPS AND COURSES ATTENDED	Sep 2015	Combinatorial Optimization at work, Zuse Institute Berlin.
	Oct 2013	Metaheuristics, University of Seville.
	Apr 2011	Andalucía Study Groups with Industry, *math-in*, University of Seville.
	Feb 2011	Workshop on Locational Analysis and Related Problems, Las Palmas de Gran Canaria, Spain.
	Dec 2010	Exploratory Workshop on Mixed Integer Non-Linear Programming, University of Seville.
ORGANIZING ACTIVITIES	Dec 2013	**Pre-doc Course on Operations Research**, Mathematics University Institute of Seville, http://www.imus.us.es/PDCOR13.
	Jan 2013	**Pre-doc Symposium on Mathematical Optimization 2013**, Mathematics University Institute of Seville, http://www.imus.us.es/PDSMO13.
RESEARCH FUNDING	Oct 2010-Sep 2014	PhD scholarship, Formación de Personal Investigador (FPI), Spanish Ministry of Science and Innovation, BES-2010-03668.
	Nov 2013	Short Term Scientific Mission grant (3 weeks), ICT COST Action TD1207, Mathematical Optimization in the Decision Support Systems for Efficient and Robust Energy Networks, European Union.
	July 2013	Short Term Scientific Mission grant (1 week), ICT COST Action TD1207, Mathematical Optimization in the Decision Support Systems for Efficient and Robust Energy Networks, European Union.
	Sep 2010	IMUS beginners research grant, Mathematics University Institute of Seville.
RESEARCH PROJECTS AND GROUPS	Mar 2013-Feb 2015	Global Optimization. New Algorithms and Applications, Junta de Andalucía excellence research project, P11-FQM-7603.
	Jan 2013-Apr 2015	Mathematical Programming models, methods and applications, Spanish Ministry of Science and Innovation, MTM2012-36163-C06-03.
	Oct 2010-to present	Optimization, FQM-329, Junta de Andalucía research group.
	Oct 2010-Dec 2013	Mathematical Programming models, methods and applications, Spanish Ministry of Economy and Competitiveness, MTM2009-14039-C06-06.
COMPUTING SKILLS	Advanced level:	AMPL, C, Couenne, Fortran, IBM ILOG Cplex, Matlab.
	Basic level:	Bonmin, Gurobi, Ipopt, Python.