

NUBIA VELASCO

Associate Professor | Supply Chain Management & Technology Area

Joined the School in 2015

ACADEMIC BACKGROUND

2006	Ph.D. in Applied Informatics and Automatics, Université de Nantes - Nantes, France.
2000	M.Sc. Industrial Engineering - Universidad de los Andes – Bogotá, Colombia.
1996	B.Sc. Chemical Engineering - Universidad Nacional de Colombia- Bogotá, Colombia.

TEACHING EXPERIENCE

Courses Taught in Recent Years

Graduate

- Operation Management (MBA. Torcuato Di Tella University)
- Stock Management Systems (École des Mines de Nantes)
- Warehousing and material handling (Universidad Tecnológica de Bolívar)
- Logistics (UASM)
- Distribution and Transport (UASM)
- Advanced Operations Management Systems (UASM)
- Topics on Operational Research (UASM)
- Applications in Operational Research (UASM)
- Strategic Sourcing (UASM)

Undergraduate

- Operation Management
- Hospital Logistics (Universidad Tecnológica de Bolívar)
- Decision - making tools I (UASM)
- Decision - making tools II (UASM)

ACADEMIC ACTIVITIES

2015 – to date	Associate professor, School of Management, Universidad de los Andes. Bogotá, Colombia.
2017 – 2022	Director. Doctoral Program in Management and Master of Science in Management. UASM, Bogotá, Colombia.
2011 - 2015	Associate professor, Industrial Engineering Department, Universidad de los Andes. Bogotá, Colombia.

- 2006 - 2011 Assistant professor, Industrial Engineering Department, Universidad de los Andes. Bogotá, Colombia.
- 2002 - 2006 Teaching Assistant, École des Mines de Nantes. Nantes, France.
- 2000 - 2002 Instructor, Industrial Engineering Department, Universidad de los Andes. Bogotá, Colombia.
- 1998 - 2000 Research Assistant, Industrial Engineering Department, Universidad de los Andes. Bogotá, Colombia.

OTHER PROFESSIONAL EXPERIENCE

- 2010 - 2012 Coordinator of ABET accreditation process for Industrial Engineering Department.
- 2002 Coordinator (Interim). Master of Science in Industrial Engineering.

Editorial Services

- Computer and Industrial Engineering
- Journal of Discrete Algorithms - JDA
- European Journal of Operation Research - EJOR
- International Journal of Systems Science - IJSS
- Computers & Operations Research – COR
- International Journal of Logistics Management
- Omega
- International Journal on Production Research – IJPR
- Journal of Cleaner Production
- Production and Operations Management – POM.
- Paradigma
- Revista de la Universidad de Antioquía
- Revista de la Facultad de Ingeniería Universidad de los Andes

PUBLICATIONS

Articles in Academic Journals

- 2022 González-Uribe, C., Yañez, N., Niño, A. O., Velasco, N., Cordovez, J. M., Santos-Vega, M., .. & Martínez-Cabezas, S. (2022). A mixed-methods study on the design of Artificial Intelligence and data science-based strategies to inform public health responses to COVID-19 in different local health ecosystems: A study protocol for COLEV. *F1000Research*, 11(691), 691.
- 2021 Castaño, F. and Velasco, N. (2021), “A network flow-based model for operations planning in home health care delivery”, *The International Journal of Logistics Management*, Vol. 32 No. 1, pp. 68-95. <https://doi.org/10.1108/IJLM-02-2020-0073>
- 2021 Velasco N, Palominos P, Michalski M. (2021) Guest editorial. *International Journal of Logistics Management* (ISSN 0957-4093) 32 (1), pp. 1-4.

- 2020 Castaño, F., & Velasco, N. (2020). Exact and heuristic approaches for the automated design of medical trainee's rotation schedules. *Omega*, 97, 102107
- 2019 Bula, G., Murat Afsar, H., Gonzalez A., Prodhon, C., Velasco N. "Bi-objective vehicle routing problem for hazardous materials transportation". *Journal of Cleaner Production*. Volume 206. Pages 976-986.
- 2019 Castaño, F., Gutierrez, A. F., Velasco, N., & Amaya, C. (2019). Using Open Access Data to Model a Technician Routing and Scheduling Problem in a Congested Urban Setting. *Procedia Manufacturing*, 39, 1129-1138.
- 2019 Castaño, F., Velasco, N., & Carvajal, J. (2019). Content-Based Conference Scheduling Optimization. *IEEE Latin America Transactions*, 17(04), 597-606.
- 2019 Castaño F, Gutierrez A, Amaya C, Velasco N. (2019) Using open access data to model a technician routing and scheduling problem in a congested urban setting. *Procedia Manufacturing (ISSN 2351-9789)* 39 (-), pp. 1129-1138.
- 2018 Gutiérrez, A., Dieulle, L., Labadie N., Velasco, N. A multi-population algorithm to solve the VRP with stochastic service and travel times. *Computers & Industrial Engineering*. Vol 125. Pp 144 – 156.
- 2018 Gutiérrez, A., Dieulle, L., Labadie N., Velasco, N. "A Hybrid metaheuristic algorithm for the vehicle routing problem with stochastic demands". *Computers & Operations Research*. Vol 99. Pp 135 - 147
- 2018 Castaño, F., Rossi, A., Sevaux M., Velasco N. An exact approach to extend network lifetime in a general class of wireless sensor networks. *Information Sciences*. Vol 433 – 434. Pp 274 – 291.
- 2017 Velasco N, Rebolledo C, Moreno J. (2017) Logistics practices in healthcare organizations in Bogotá. *ACADEMIA*, Forthcoming.
- 2017 Villamil M, Barrera O, Velasco N, Bernal O, Fajardo E, Carlos Javier Urango M, Buitrago L. (2017) Strategies for the quality assessment of the health care service providers in the treatment of Gastric Cancer in Colombia. *BMC Health Services Research (ISSN 1472-6963)* 17 (1), pp. 654 - 669.
- 2016 Fontecha J, Cano N, Velasco N, Muñoz F. (2016) Optimal sectioning of hydrocarbon transport pipeline by volume minimization, environmental and social vulnerability assessment. *Journal of Loss Prevention in the Process Industries (ISSN 0950-4230)* 44 (N/A), pp. 681 - 689.
- 2016 Velasco N, Castaño F, Bourreau E, Rossi A, Castaño F. (2016) Partial target coverage to extend the lifetime in wireless multi-role sensor networks. *NETWORKS - An International Journal (ISSN 1097-0037)* 68 (1), pp. 34 - 53.
- 2016 Velasco N, Bula G, Prodhon C, Afsar M, González F. (2016) Variable neighborhood search to solve the vehicle routing problem for hazardous materials transportation. *Journal of Hazardous Materials (ISSN 0304-3894)* 324 (NA), pp. 472 - 480.
- 2015 Guerrero W, Prodhon C, Velasco N, Amaya C. (2015) A relax-and-price heuristic for the inventory - location - routing problem. *International Transactions in Operational Research (ISSN 0969-6016)* 22 (1), pp. 129 - 148.
- 2015 Castaño F, Bourreau E, Velasco N, Rossi A, Sevaux M. (2015) Exact approaches for lifetime maximization in connectivity constrained wireless multi-role sensor

- networks. *European Journal of Operational Research* (ISSN 0377-2217) 241 (1), pp. 28 - 38.
- 2014 N. Velasco, Amaya C, Prodhon C, Guerrero W. (2014) A relax-and-price heuristic for the inventory – location - routing problem. *International Transactions in Operational Research*. Article first published online: April 24, 2014. DOI: 10.1111/itor.12091.
- 2013 Mejía J, Rojas C, Avellaneda L, Urbina D, Arias B, Velasco N, Cortés M, Vives M, González A. (2013) cysA, cysP, and rpoS mutations increase the power density in *P. aeruginosa* microbial fuel cells: Performing enhancement based on metabolic flux analysis. *Advances in Bioscience and Biotechnology* (ISSN 2156-8456) 4 (1), pp. 103 - 111. 2012.
- 2013 Castaño F, Velasco N, Sevaux M, Rossi A. (2013) On the use of multiple sinks to extend the lifetime in connected wireless sensor networks. *Electronic Notes in Discrete Mathematics* (ISSN 1571-0653) 41 (5), pp.77-84. 2013
- 2013 Guerrero W, Velasco N, Prodhon C, Amaya C. (2013) On the Generalized Elementary Shortest Path Problem A heuristic approach. *Electronic Notes in Discrete Mathematics* (ISSN 1571-0653) 41 (1), pp. 503 - 510. 2013.
- 2013 Castaño F, Velasco N, Rossi A, Sevaux M. (2013). A column generation approach to extend lifetime in wireless sensor networks with coverage and connectivity constraints. *Computers and Operations Research* (ISSN 0305-0548). Article first published online: November 2013.
- 2013 Villegas J, Prins C, Prodhon C, Medaglia A, Velasco N. (2013) A matheuristic for the truck and trailer routing problem. *European Journal of Operational Research* (ISSN 0377-2217) 230 (2), pp. 231 - 244. 2013.
- 2013 Guerrero W, Velasco N, Amaya C, Prodhon C. (2013) Hybrid heuristic for the inventory location-routing problem with deterministic demand. *International Journal of Production Economics* (ISSN 0925-5273) 146 (1), pp. 359 - 370. 2013.
- 2012 O-D. Barrera, N. Velasco, C-A. Amaya A network-based approach to the multi-activity combined timetabling and crew scheduling problem: Workforce scheduling for public health policy implementation. *Computers & Industrial Engineering*. December 2012, Pages 802 – 812. Available on-line 11-05-2012. <http://dx.doi.org/10.1016/j.cie.2012.05.002>.
- 2012 N. Velasco, P. Dejax, C. Guéret, C. Prins. A Non-Dominated Sorting Genetic Algorithm for a bi-objective Pick-up and Delivery Problem. *Engineering Optimization. Special Issue on “Multiobjective Metaheuristics for Multidisciplinary Engineering Applications”*. Vol. 44 Issue 3, pp. 305 - 325. <http://dx.doi.org/10.1080/0305215X.2011.639368>
- 2011 Mendoza, J. E., Castanier, B., Guéret, C., Medaglia, A. L., Velasco, N. Constructive heuristics for the multi-compartment vehicle routing problem with stochastic demands. *Transportation Science*. Vol. 45. August 2011, pp. 346 – 363.
- 2011 J.G.Villegas, C. Prins, C. Prodhon, A. L. Medaglia, N. Velasco. A GRASP with evolutionary path relinking for the truck and trailer routing problem”. *Computers & Operations Research*. Vol. 38 Issue 9, p.p 1319 - 1334, September 2011.

- 2011 Arjona P., Amaya C. A., Velasco N. Reducción de la congestión del departamento de urgencias: mejora del proceso de hospitalización. *Via Salud*. No 55, April 2011.
- 2010 Amaya C.A., Beaulieu M., Landry S., Rebolledo C. and Velasco N. Potenciando la contribución de la logística hospitalaria: tres casos, tres trayectorias. *Management International*. Vol. 14, No. 4. Summer 2010.
- 2010 J.G. Villegas, C. Prins, C. Prodhon, A. L. Medaglia, N. Velasco. GRASP/VND and multi-start evolutionary local search for the single truck and trailer routing problem with satellite depots” *Engineering Applications of Artificial Intelligence*. Vol. 23, Issue 5, August 2010, Pp. 780 - 794 DOI:10.1016/j.engappai.2010.01.013.
- 2010 J. E. Mendoza, B. Castanier, C. Guéret, A. L. Medaglia, N. Velasco. “A memetic algorithm for the multi-compartment vehicle routing problem with stochastic demands”. *Computers & Operations Research*, Vol. 37, Issue 11, November 2010, Pages 1886 - 1898. DOI: 10.1016/j.cor.2009.06.15.
- 2009 Mendoza, J., Medaglia, A., Velasco, N. “An evolutionary-based decision support system for vehicle routing: the case of a public utility”. *Decision Support Systems*, Vol. 46, Issue 3, February 2009, Pages 730 - 742. doi:10.1016/j.dss.2008.11.019.

Press Articles

- 2021 Ramirez A, Hernandez L, Velasco N. (2021) Reforma en salud: por un modelo de atención primaria renovada. *Universidad de los Andes (Noticias)*.
- 2020 Villa S, Velasco N, Camacho S, Urrea G. (2020) Cadenas de suministro humanitarias: ¿cómo las afecta la pandemia? *El Espectador*. Mayo 2019
- 2020 Velasco N, Camacho S. (2020) Operaciones y logística hospitalaria: más relevante hoy que ayer. *América Economía (ISSN 1414-2341)*.
- 2020 N. Velasco, O-J. Espinosa Pulido (2020). Las IPS y su crisis frente a la pandemia. *Portafolio*. Mayo 2020.
- 2020 N. Velasco, O-J. Espinosa Pulido (2020) LAS INSTITUCIONES PRESTADORAS DE SALUD, SU CRISIS FRENTE A LA PANDEMIA. *Página COVID-19, Universidad de los Andes*. Mayo 2020.
- 2020 N. Velasco, F. Castaño, A. Burbano, A. Ramírez, C. González Uribe, J-D. Pinzón Ortiz, L. Arévalo Jaimes. ¿Con qué se le hace frente al Covid-19? *Capacidad hospitalaria instalada en Bogotá. Página COVID-19, Universidad de los Andes*. Mayo 2020.
- 2020 Villa S, Velasco N, Camacho S, Urrea G. (2020) Cadenas de suministro humanitarias: ¿cómo las afecta la pandemia? *Página COVID-19, Universidad de los Andes*. Mayo 2020.
- 2020 Carulla, N. Velasco, V. Andonova. (2020) El consumo de productos frescos durante la cuarentena es la línea de oxígeno que el sector agro necesita. *Página COVID-19, Universidad de los Andes*. Mayo 2020.
- 2020 Velasco N, Villa S, Camacho S. (2020) Logística hospitalaria en la era del Covid, más relevante que nunca. *Página COVID-19, Universidad de los Andes*. Mayo 2020.

- 2020 Velasco N, Villa S, Camacho S. (2020). COVID-19: Una mirada a los productos y servicios esenciales. Página COVID-19, Universidad de los Andes. Mayo 2020.
- 2020 V. Andonova, N. Velasco, M. Eslava, D. Bardey, S. Restrepo, C-H. Gómez Castro, J-P. Ramos Bonilla, A. Ramírez Varela, M. Pinilla, G. Otálora, L-J. Hernández Flórez, C. González Uribe. COVID-19: TAREAS LOGÍSTICAS PARA LA SALUD PÚBLICA. Página COVID-19, Universidad de los Andes. Abril 2020.
- 2020 J-P. Ramos Bonilla, N. Velasco, D. Bardey. (2020) Y... si no tengo Covid-19 pero requiero atención médica ¿a quién acudo? Página COVID-19, Universidad de los Andes. Abril 2020.
- 2020 J-P. Ramos Bonilla, N. Velasco, M. Eslava, A. Ramirez Varela, C-H. Gomez Castro, G. Otálora, D. Bardey. (2020) PERMISO PARA CIRCULAR NO ES PERMISO PARA CONTAGIAR. Página COVID-19, Universidad de los Andes. Abril 2020.
- 2020 Velasco N, Villa S, Camacho S. (2020) ¿Cómo afecta el coronavirus a las operaciones logísticas del país? Forbes. 09/04/2020.
- 2020 Carulla, N. Velasco, V. Andonova. (2020) Así se ha visto afectada la cadena de abastecimiento por la cuarentena. Portafolio. Abril 2020.

Chapters in Books

- 2014 C-A. Amaya, N. Velasco, S. Aguirre. Planning and Scheduling an Emergency Room Workforce Using Linear Programming. In: Linear Programming: Theory, Algorithms and Applications. Editors: Yaromir Truma 2014 - 2nd Quarter.
- 2012 Velasco, N., Barrera, D., Amaya, C. A. Logística Hospitalaria: Qué es y Cómo ha evolucionado. Libro Blanco en Salud, Universidad de los Andes. In: La salud en Colombia: Logros, Retos y Recomendaciones. Eds.: O. Bernal and C. Gutiérrez. Ediciones Uniandes 2012.
- 2012 Guaracao, P., Barrera, D., Velasco, N. and Amaya, C.A. Optimizing Resources Involved in the Reception of an Emergency Call Center. In: Production Systems and Supply Chain Management in Emerging Countries: Best Practices. Springer. Editors: N. Velasco, G. Mejía. 2012.
- 2012 Guerrero, W., Velasco, N. Amaya, C.A. Multi-Objective Optimization for Interfacility Patient Transfer. In: Production Systems and Supply Chain Management in Emerging Countries: Best Practices. Springer. Editors: N. Velasco, G. Mejía. 2012.
- 2010 Amaya C.A., Velasco N., Guerrero W. Logística Hospitalaria: Aplicaciones recientes en la Universidad de los Andes. In: Sistemas avanzados de gestión. Organizaciones inteligentes. Universidad de San Buenaventura, Seccional Cali. Editors: Montoya-Serrano A., Mejía- Giraldo A., Bravo-Castillo M.2010.
- 2009 Lozano, L., Medaglia A. L., Velasco, N. Generation of Pop-Rock Chord Sequences Using Genetic Algorithms and Variable Neighborhood Search. In: Lecture Notes in Computer Science, Applications of Evolutionary Computing. Volume 5484/2009. DOI: 10.1007/978-3-642-01129-0
- 2008 Velasco, N.M., Castagliola, P., Dejax, P., Gueret, C and Prins, C. "A memetic algorithm for a pick-up and delivery problem by helicopter". In: Bio-inspired

algorithms for the Vehicle Routing Problem, Studies in Computational Intelligence. Berlin: Springer, 2008.

Books

- 2022 Orozco L, Velasco N, García J, González-Uribe, Catalina, Hernandez E. (2022) La Covid-19 y cómo algunas organizaciones colombianas respondieron a la pandemia. Ediciones Uniandes. (ISBN 9789587980882) Colombia.
- 2012 Production Systems and Supply Chain Management in Emerging Countries: Best Practices. Springer. Editores: N. Velasco, G. Mejía. 2012 Journal Edition.
- 2020 International Journal of Logistics Management – Special issue: Supply Chain Management in the Latin-American business environment – opportunity or necessity? M. Michalski, N. Velasco, P. Palominos. 2020.
- 2017 ARLA – Special Issue: International Conference on Production Research 2016 – Selected papers. Editores invitados: N. Velasco, G. Mejía. 2017.

Conference Presentations

- 2022 Trujillo-Diaz, J. Amaya, C., González-Uribe, C., Hernandez, E. Herrera, A., Velasco, N. Tracing and measuring the COVID-19 Colombian vaccination network IFAC-PapersOnLine, Forthcoming. Presented in the MIM-IFAC Conference, Nantes-France 2022.
- 2022 Herrera, A., Amaya, C., González-Uribe, C., Hernandez, E., Trujillo-Diaz, J., Velasco, N. A simulation analysis of alternatives to design vaccination centres for massive vaccination programmes: a case study in Colombia. International Conference in Production Research, Americas Chapter, ICPR Americas 2022, Curitiba-Brasil. Forthcoming.
- 2022 Ramírez, C., Amaya, C., Gonzalez Uribe, C., Hernandez, E., Herrera, A., Trujillo-Diaz, J., Velasco, N. Metodología de clasificación de entes territoriales para la toma de decisiones en respuesta a la emergencia por el covid-19. International Conference in Production Research, Americas Chapter, ICPR Americas 2022, Curitiba-Brasil. Forthcoming.
- 2021 Hernández E, Amaya Ciro, González-Uribe, Catalina, Herrera A, Trujillo J, Velasco N. (2021) Multi-level learning from COVID19 vaccination for the design and implementation of future massive programs. World Organisation of Systems and Cybernetics - WOSC Congress Systems approach and cybernetics, engaging the future of mankind (ISBN 978-5-89353-641-6) Moscow, Rusia.
- 2019 Gutierrez A, Castaño F, Amaya C, Velasco N. (2019) The Technician Routing and Scheduling Problem in Congested Urban Areas. POMS 30th Annual Conference Production and Operations Management Society Washington, USA.
- 2018 Torres A. F., Labadi N., Montoya J. R. , Velasco N., A Cluster-First Route-Second approach for the Shared Customer Collaboration Vehicle Routing Problem. ROEDEF 2018, Angers - France.
- 2018 Castaño F., Guitierrez A. F., Amaya C. A. Uso de Datos Abiertos para Pronosticar y Modelar los Tiempos de Desplazamiento en la Ciudad de Bogotá. XI Simposio

Internacional de Ingeniería Industrial- III Simposio Internacional en Ingeniería Industrial. Bogota, Colombia

- 2017 Bula G., Afsar M., Gonzalez F., Prodhon C., Velasco N. Bi-objective Fleet Size and Mix Vehicle Routing Problem for Hazardous Materials Transportation. ROADEF 2017, Troyes, France
- 2017 Gutierrez A. F., Dieullie L., Labadi N, Velasco N. Wind farm maintenance scheduling model and solution approach. IEOM Conference 2017. Bogotá, Colombia.
- 2016 Velasco N, Castaño F. (2016) A Branch and Price approach to solve personnel planning in the context of Home Health Care Delivery. POMS 27th Annual Conference (ISBN 1-945072-01-6) Orlando, FL, United States.
- 2016 Velasco N, Gutiérrez A, Labadi N, Dieullie L. (2016) A Multi Population Memetic Algorithm for the Vehicle Routing Problem with Time Windows and Stochastic Travel and Service Times (I). IFAC MIM2016 IFAC-PapersOnline (ISSN 2405-8963) Troyes, France.
- 2016 Velasco N, Labadi N, Dieullie L, Gutierrez A. (2016) An approximate column generation for the vehicle routing problem with hard time windows and stochastic travel and service times. CLAIO 2016 Santiago, Chile.
- 2016 Velasco N, Castaño F, Rossi A. (2016) An exact approach based on column generation to extend network lifetime in a general class of wireless sensor networks. CLAIO 2016 Santiago, Chile.
- 2016 Velasco N, Gil R, Torres C. (2016) Asignación de médicos internos en el Hospital Universitario Clínica San Rafael de Bogotá. ICPR -Americas Valparaiso, Chile.
- 2016 Velasco N, Zarta A. (2016) Baseline Composition for Alternative Rock using SP and SDS algorithms, a multi-objective approach. Chile.
- 2016 Velasco N, Gonzalo, Aranguiz R, Mejia C. (2016) Estrategias para localización de mercados móviles en ciudades en países de economías emergentes. ICPR -Americas. Valparaiso, Chile.
- 2016 Velasco N, Prodhon C, Afsar M, Bula G, Gonzalez F. (2016) Total Risk Routing Minimization for the Fleet Size and Mix Problem for Hazardous Materials Distribution. VeRoLog Nantes, France.
- 2015 W.-J. Guerrero, N. Velasco, C. Prodhon. Métodos exactos y heurísticos para el problema de camino más corto generalizado. Congreso de la Asociación Colombiana de Investigación de Operaciones – ASOCIO. Bogotá, July 15 – 16. 2015.
- 2015 C. Saavedra, F. Castaño, N. Velasco. Una herramienta para la planeación y programación de cirugías en ambientes con limitada disponibilidad de especialistas. Congreso de la Asociación Colombiana de Investigación de Operaciones – ASOCIO. Bogotá, July 15 – 16. 2015.
- 2014 Velasco N, Guerrero W, Vargas L (2014). Lower Bound estimation for a multi-depot multi-period IRP. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference, (ISBN 978-0-98337624-3-0). Montreal, Canada, June 2014.

- 2014 Velasco N, Guerrero W, Fajardo E (2014). A Pairing Matching Model for CKD Patients in Colombia. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference, (ISBN 978-0-98337624-3-0). Montreal, Canada, June 2014
- 2011 Guerrero, W. J., Velasco, N., Amaya, C.A., Prodhon, C. The Inventory Location Routing Problem with Deterministic Demand. Production and Operations Management Society POMS Conference, Reno, NV, United States. 2011.
- 2010 Villegas, J. G., Medaglia, A. L., Prins, C., Prodhon, C. Velasco, N. Solving the Truck and Trailer Routing Problem with a Route-first, Cluster-second Framework. -INFORMS Joint International Meeting. Buenos Aires, Argentina. June 2010.
- 2010 Velasco, N., Amaya, C. A., Barrera, D. Improving the Health Care Services using Simulation. ALIO-INFORMS Joint International Meeting. Buenos Aires, Argentina. June 2010.
- 2010 Velasco, N., Amaya, C.A., Barrera, D., Figueroa, D., Staff Routing and Scheduling for a School Healthcare Program in Ciudad Bolivar. ALIO-INFORMS Joint International Meeting. Buenos Aires, Argentina. June 2010.
- 2010 Mendoza, J. E., Medaglia, A. L., Castanier, B., Gueret, C., Velasco, N. Constructive Heuristics for the Multi-compartment Vehicle Routing Problem with Stochastic Demands. ALIO-INFORMS Joint International Meeting. Buenos Aires, Argentina. June 2010.
- 2010 W. Guerrero, N. Velasco, C. Amaya, C. Gueret, T. Yeung. Centralized Distribution System of Infusion Solutions on a Network of Health Care Units. European Conference on Operational Research. Lisbon, Portugal. July 11 - 14 2010.
- 2010 Romero, J. C., Amaya, C. A., Velasco, N., Barrera, D. Measuring the efficiency for a public health policy implementation. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2010 Cancun - Mexico, June 2010.
- 2009 J. Mejía, F. Racines, M. Vives-Flores, N. Velasco, M. T. Cortés, A. González. Genome scale modeling of Pseudomonas aeruginosa in a microbial air-cathode single chamber microbial fuel cell. 2009 AIChE Annual Meeting.
- 2009 A. Trillos, F. Ramírez, D. Londoño, J. Walteros, N. Velasco. Optimization of a Stop Strategy of an Elevator Group: A Case Study in a University Building. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2009 Miami, FL, United States, June 2009.
- 2009 N. Velasco, C. A. Amaya, A. Jiménez, C. Serrano. Optimization Model to Minimize the Makespan in a Hospital Gastroenterology Service. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2009. Miami, FL, United States. June 2009.
- 2009 N. Restrepo, M. P. Zubieta, C. A. Amaya, N. Velasco. Study of Services Production Lines in a Hospital. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2009 Miami, FL, United States. June 2009.
- 2008 Guerrero, J., González, O., Amaya, A., Torres, F., Velasco, N. Allocation Problem: Case of a warehouse in a public hospital. Institute of Industrial Engineering (IIE),

- Annual Conference IERC Research Sessions of the IIE Annual Conference 2008. Vancouver, BC, Canada, May 2008.
- 2008 Gutiérrez, S., Flórez, D., Amaya, C. A., Velasco, N. Optimización del servicio de lavandería en un hospital público de Bogotá D.C. XIII Escuela Lationamericana de Verano en Investigación de Operaciones, 2008. Lima – Peru, February 2008.
- 2008 Villegas, J., Medaglia, A., Prins, C., Prodhon, C., Velasco, N. A Split-Based Framework for the Vehicle Routing Problem. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2008. Vancouver; BC, Canada, May 2008.
- 2008 Flórez, D., Gutiérrez, S., Amaya, A., Velasco, N. “Optimization of the Laundry Service in a Public Hospital in Bogotá, D.C. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2008 Vancouver, BC, Canada, May 2008.
- 2007 Mendoza Giménez, J. E, Medaglia, A. L., Velasco, N. Design and implementation of a decision support system for vehicle routing in a public utility. Institute of Industrial Engineering (IIE), Annual Conference IERC Research Sessions of the IIE Annual Conference 2007. Nashville, TN, United States, May 2007.
- 2007 Mendoza Giménez, J. E, Medaglia, Andrés L., Velasco, N. Diseño de un sistema de soporte a la decisión para el ruteo de vehículos en una empresa de servicios públicos. XII Escuela Lationamericana de Verano en Investigación de Operaciones, 2007. Petropolis – Brazil, February 2007.
- 2004 Velasco, N., Dejax, P., Gueret, C. Vehicle Routing Optimization for the Pick-up and Delivery: Application to the transport of personnel on oil platforms. European Conference on Operational Research EUROXX Rhodes, Greece, July 2004.

Conference Proceedings

- 2019 Castaño F, Gutierrez A, Amaya C, Velasco N. (2019) Using open access data to model a technician routing and scheduling problem in a congested urban setting. ICPR 2019 - International Conference on Productions Research Procedia Manufacturing (ISSN 2351-9789) Chicago, USA.
- 2019 Castaño F, Velasco N. Planificación de las rotaciones de los estudiantes de medicina en una institución de salud mediante Variable Neighborhood Search. International Conference on Production Research Americas 2018 Proceedings of the International Conference on Production Research, Americas Region (ISSN 2619-1865) Bogota, Colombia.
- 2016 Velasco N, Prodhon C, Bula G, Afsar M, Gonzalez F. (2016) Mixed Integer Linear Programming Model for Vehicle Routing Problem for Hazardous Materials Transportation (I) . IFAC MIM2016 IFAC-PapersOnline (ISSN 2405-8963) Troyes, France.
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SCHOLARSHIPS AND ACADEMIC DISTINCTIONS

- 2018 Outstanding mention to the Project: Impact of the use of technological tools in the hospitalization rooms and the decentralization of the nursing position in the care of hospitalized patients in the Fundación Santafé de Bogotá – 2018. Project submitted to the Joint Call (FSFB – Uniandes) 2018.

2017	Best track paper award in IEOM (Industrial Engineering and Operations Management): Wind farm maintenance scheduling model and solution approach.
2012	Sabbatical Semester, Engineering School, Universidad de los Andes.
2012	Invited Professor at Université de Technologie de Troyes. Troyes – France.
2008	Outstanding Assistant professor Distinction, Engineering School, Universidad de los Andes.
2003 - 2006	Boursier de Mines Scholarship, École de Mines de Nantes.
2002 - 2003	Academic Development Program” Scholarship, Universidad de los Andes.

ORGANISATION AND / OR MEMBER OF COMMITTEE PROGRAM OF CONFERENCES

2020 – 2022	ICPR Américas 2020 - 2022.
2018	ICPR 2018 International Conference on Production Research, ICPR Américas 2018. “Improving Supply Chain Management through Sustainability”.
2017	Doctoral School on Operations Management and Decision Sciences 2017 “Supply Chains and Decision Tools”, Facultad de Administración, Universidad de los Andes.
2012 – 2022	IEOM from 2012 to 2022.
2010	5th International Conference on Production Research, ICPR – Americas 2010. V seminario internacional en ingeniería biomédica y procesamiento y análisis de imágenes médicas.
2008	XIV Congreso Latino Ibero Americano de Investigación de Operaciones (CLAIO 2008).

PARTICIPATION IN BOARDS, COMMITTEES AND ASSOCIATIONS

2022 – to date	Member of the committee of “Cursos Básicos Uniandinos. University of the Andes.
2020 – to date	Professor representative. Faculty Ordination Committee, School of Administration, Universidad de los Andes.
2019 – to date	Board member de International Foundation on Production Research - IFPR
2019 – 2021	President of Colombian Network of Doctoral Programmes in Management – Redac.
2018	Ad-hoc committee “Doctoral Programmes admission requirements”. Universidad de los Andes.
2018	Ad-hoc committee “Doctoral Programmes fees”. Universidad de los Andes.
2017 – 2020	Performance Evaluation Committee of the School of Management.
2017 – 2022	Member of the Research Committee, School of Management, Universidad de los Andes.

- 2017 – 2021 Member of the Academic Committee of the Asociación Colombiana de Facultades de Administración - ASCOLFA.
- 2015 – 2017 Participation in the Disciplinary Committee of the School of Management. Universidad de los Andes.
- 2010 – 2012 Coordinator of the ABET accreditation process for the Industrial Engineering program at Universidad de los Andes.