

BRAYAN GONZÁLEZ-HERNÁNDEZ

CONTACT INFORMATION

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Citizenship: Colombia
ORCID: 0000-0003-0440-817X
Professional Engineer License: 70202-197522 TLM, Colombia (2010)

EDUCATION

- Nov. 2018–current* **Sapienza Università di Roma, Italy**
Doctor of Philosophy (PhD) Student, Transportation Engineering
Fields: *Road Safety, Sustainable Mobility, Transport Planning and Policy*
Thesis: Development of Simplified Road Assessment Programme Methodology
Tutor: Prof. Luca Persia – Cotutor: Dr. Davide Shingo Usami
- Sep. 2016–Feb. 2018* **Universitat Politècnica de València, Spain**
Master's Degree (MSc), Transportation, Land and Urban Planning with Honors. Thesis:
Speed prediction models for trucks on horizontal curves and tangents of two-lane rural roads. GPA: 8.8/10
- Jan. 2014–May 2015* **Pontificia Universidad Javeriana, Colombia**
Post-graduate Diploma (Specialist), Local Government and Public Management. GPA: 4.4/5.0
- Ago. 2005–Nov. 2010* **Universidad de Ibagué, Colombia**
Bachelor of Engineering (BEng), Civil Engineering. GPA: 4.1/5.0

ACADEMIC EXPERIENCE

- Nov. 2018–current* **Graduate Research Assistant** for Prof. Luca Persia and research activities on Transportation and Road Safety at the Research Center for Transport and Logistics (CTL), La Sapienza Università di Roma, Italy
- Mar. 2018–Feb. 2019* **Research Fellow** Collaboration in research activities on Highway Design and Road Safety at the Highway Engineering Research Group (HERG), Universitat Politècnica de València, Spain
- Feb. 2017–Feb. 2018* **Graduate Research Assistant** for Prof. Alfredo García and research activities on Highway Design and Road Safety at the Highway Engineering Research Group (HERG), Universitat Politècnica de València, Spain

TEACHING EXPERIENCE

- Feb. 2019–current* **Teaching Assistant** for Prof. Luca Persia, *Road Safety* (Graduate level), Sapienza Università di Roma, Italy
- Feb. 2019–current* **Teaching Assistant** for Prof. Luca Persia, *Transport Policies* (Graduate level), Sapienza Università di Roma, Italy

Aug. 2007–Nov. 2009 **Course Assistantship** for Prof. Paola Tibaquirá. *Hydraulic Laboratory* (Undergraduate level), Universidad de Ibagué, Colombia

FUNDED PROJECTS

Sep. 2020- current *Italian National Road Safety Plan – Horizon 2030*
Road Safety Specialist. The study seeks to prepare the National Road Safety Plan of Italy for the decade 2021-2030. Based on the results of the National Road Safety Plan Horizon 2020 and the policy orientations on road safety of the European Commission, the objective is to review and update the strategies and objectives in terms of road safety at the national level with a long-term horizon. Funding entity: Ministry of Infrastructure and Transport of Italy. Duration: Sep. 2020-Dec. 2020

Jun. 2020- current *Study on the Implications of the African Continental Free Trade Area for Demand of Transport Infrastructure and Services*
Transport Modeller. The objectives of the project are: Forecast of demand for different modes of transport as a result of AfCFTA; estimates of infrastructure investment requirements for different modes of transport; estimates of the impact of improvements in transport infrastructure and services on the volume of intra-African trade; and forecast of the demand of equipment for different modes of transport - road (trucks), railway (rolling stock), air (aircraft), and maritime (ships). Funding entity: United Nations Economic Commission for Africa (UNECA). Duration: Jun. 2020-Mar. 2021

Mar. 2020- current *Mobility Management and Optimization Plan for the Regional Road Network Managed by ASTRAL*
Transport Engineer. The project seeks to design and develop procedures that are capable of defining: a supply model (transport characterization of the geo-referenced road graph), representative of the main road network of Lazio; a mobility demand model, with reference to the zoning level defined for the Lazio road network; a reconstruction of the O / D matrix and calibration of the transport model through the interrelation between supply and demand; a hierarchical classification of roads and sections in relation to their functional importance and service level; creation of specific integrated software for data transformation and simulation, with map representations of dedicated layers and graphs for the representation of all the different analyzes and related results of the project. Funding entity: Azienda Strade Lazio (ASTRAL). Duration: Mar. 2020-Feb. 2021

Sep. 2019- current *ESRA*
Researcher. E-Survey of Road user's Attitudes. Aim of the project is to provide scientific support to road safety policy making at the national and international levels. By using a uniform sampling method and an identical questionnaire, comparability of results across all participating countries is assured. Funding entity: Joint international initiative of research organizations and road safety institutes. Duration: Jun. 2015-current

Jan. 2020- Mar. 2020 *Pilot Study to Collect More Robust Accident Data for Sierra Leone*
Road Safety Engineer. The study aims to set up a methodology for road traffic crash data collection using sample data on a pilot basis, and to develop and implement an electronic data management system for road traffic crash data storage, analysis and retrieval for Low Volume Roads. Funding entity: ReCAP – Ukaid. Duration: Feb. 2018-Aug. 2018 / Jan. 2020 – Mar. 2020

Nov. 2018–Sep. 2019 *SAFERAFRICA*
Road Safety Specialist. SaferAfrica project aims at establishing a Dialogue Platform between Africa and Europe focused on road safety and traffic management issues. It will represent a high-level body with the main objective of providing recommendations

to update the African Road Safety Action Plan and the African Road Safety Charter, as well as fostering the adoption of specific initiatives, properly funded. Funding entity: The European Commission. Duration: Oct. 2016-Sep. 2019

Nov. 2018–Jul. 2019 *Road Safety Assessment in Mozambique & Liberia*
Road Safety Engineer. Development of new simplified methodology on road safety assessment using automated image analysis and pilot assessment study of national highways in Mozambique and Liberia. Funding entity: The World Bank. Duration: Jan. 2018-Jul. 2019

Feb. 2017–Feb. 2018 *CASEFU*
Researcher. Empirical study of the functionality and safety of two-lane rural roads. Funding entity: Spanish Ministry of Economy, Industry, and Competitiveness and the European Social Fund. Duration: Jan. 2014-Dec. 2016

PROFESSIONAL EXPERIENCE

Jun. 2018–Oct. 2018 *National Federation of Coffee growers of Colombia*
Highway Engineer. Coordinate of the construction process of the two-lane rural roads in 12 towns in the Cauca Region, under the OCAD-PAZ project.

Nov. 2010–Jul. 2011
Road Construction Supervisor. Control and supervise the construction process of the two-lane rural roads in the southern Tolima Region, under the Vías para la Paz (Rural Roads for Peace) project.

Jan. 2012–Jul. 2015 *Dolores Town Council, Colombia*
Secretary of Infrastructure and Urban Planning. Coordinate the formulation and elaboration of the master plan of the municipality with the different actors involved in the process. Prepare the technical specifications and budgets of the infrastructure projects for contracting purposes.

ARTICLES IN JOURNALS

González-Hernández, B., Usami, D. S., Prasolenko, O., Burko, D., Galkin, A., Lobashov, O., & Persia, L. (2020). The driver's visual perception research to analyze pedestrian safety at twilight. *Transportation Research Procedia*, 45, 827-834.

González-Hernández, B., Llopis-Castelló, D., & García, A. (2020). Operating speed models for heavy vehicles on tangents of two-lane rural roads. *Advances in Transportation Studies*, 50, 5-18.

Persia, L., **González-Hernandez, B.,** Carroccia, R., Saporito, M. R. and Shingo Usami, D. (2019). Lo sviluppo dei sistemi di trasporto stradale e dell'incidentalità nei paesi a basso e medio reddito [Development of road transport systems and road traffic crashes rates in developing countries]. *Methodology & Education for Clinical Innovation*, 27(2), 81-87.

Llopis-Castelló, D., **González-Hernández, B.,** Pérez-Zuriaga, A.M., & García, A. (2018). Speed prediction models for trucks on horizontal curves of two-lane rural roads. *Transportation Research Record*, 2672(17), 72-82.

CONFERENCE PAPERS

González-Hernández, B., Usami, D. S., & Persia, L. (2020). Road safety issues addressed by Africa Road Safety Plan: Are still relevant? *World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium-WMCAUS*, Prague. September 1-5, 2020.

Usami, D.S., **González-Hernández, B.,** Persia, L., Kunsoa, N. B., Meta, E., Saporito, M. R., Schermers, G., Carnis, L., Yerpez, J., Bouhamed, N., Cardoso, J., Kluppels, L., & Vandemeulebroek, F. (2020). Defining suitable Safe System Projects in Africa. *World*

Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium-WMCAUS, Prague. September 1-5, 2020.

González-Hernández, B., Meta, E., Persia, L., Usami, D.S., & Cardoso, J. Identifying barriers to the potential implementation of road safety good practices in Africa. *99th Annual Meeting of Transportation Research Board, Washington, DC. January 12-16, 2020.*

Usami, D.S., Kunsoa, N. B., Persia, L., **González-Hernández, B.**, Meta, E., Saporito, M. R., Schermers, G., Carnis, L., Yerpez, J., Bouhamed, N., Cardoso, J., Kluppels, L., & Vandemeulebroek, F. Developing Safe System Projects in Africa. *26th World Road Congress - PIARC, Abu Dhabi, UAE. October 6-10, 2019.*

González-Hernández, B., Llopis-Castelló, D. & García, A. Operating Speed models for heavy vehicles on tangents of Spanish two-lane rural roads. *98th Annual Meeting of Transportation Research Board, Washington, DC. January 13-17, 2019.*

Llopis-Castelló, D., **González-Hernández, B.**, Pérez-Zuriaga, A.M. & García, A. Speed prediction models for trucks on horizontal curves of two-lane rural roads. *97th Annual Meeting of Transportation Research Board, Washington, DC. January 7-11, 2018.*

BOOKS & CHAPTERS

Sicurezza dei Trasporto Stradale. Sistemi Informativi di Supporto (*Safety in Road Transport. Support Information Systems*) (2019). Chapter authors: Persia, L., & **González-Hernández, B.** In Sicurezza nei Trasporti. Teoria e gestione (*Safety in Transportation. Theory and management*). Editor(s): Malavasi, G. Egaf Edizioni. ISBN: 978-88-8482-971-9.

TECHNICAL REPORTS

2020

Robibaro M., **González-Hernández B.**, Usami D.S., Centro di ricerca per il Trasporto e la Logistica - FRED Engineering S.r.l. *Pilot study to collect more robust accident data for Sierra Leone, Training Report, SLE2129A.* London: ReCAP for DFID.

2019

Usami, D. S., & **González-Hernández, B.** Deliverable 8.15: Report about Crowdsourcing on road safety in Africa. *SaferAfrica project.*

Deliverable 7.8: Identification of potential local projects. Welsh, R., Kourantidis, K., Cardoso, J., Meta, E., & **González-Hernández, B.** *SaferAfrica project.*

Meta, E., Usami, D. S., **González-Hernández, B.**, Kluppels, L., Viera-Gomes, S., Nkeng, G. E., & Wounba, F. Deliverable 6.5: Report on twinning program in Cameroon. *SaferAfrica project.*

Fava, A. & **González-Hernández, B.** Deliverable 2.7: Network expansion report 2. *SaferAfrica project.*

Goldenbeld, C., Kluppels, L., Carnis, L., Cardoso, J., **González-Hernández, B.**, Mignot, D., Usami, D. S., & Schermers, G. Deliverable 3.3: Road Safety and Traffic Management Initiatives. *SaferAfrica project.*

Fava, A. & **González-Hernández, B.** Deliverable 2.5: Activities Report 4. *SaferAfrica project.*

Tripodi, A., **González-Hernández, B.** & Shevchenko, A. Final Report. *Development of a new simplified methodology for road infrastructures' safety assessment based on the automated analysis of video images.*

Goldenbeld, C., Carnis, L., Kluppels, L., Usami, D. S., **González-Hernández, B.**, & Schermers, G. Deliverable 3.2: Road Safety Policy Initiatives. *SaferAfrica project.*

González-Hernández, B. Deliverable 8.13: Report about Crowdsourcing - SaferAfrica Webinars.

Meta, E., **González-Hernández, B.**, Cardoso, J. & Welsh, R. Deliverable 7.2: Transferability Audit. *SaferAfrica project.*

2018

Usami, D.S. & **González-Hernández, B.** Deliverable 2.3: Activities Report 2. *SaferAfrica project.*

SERVICE

2019–current

Journal Peer Reviewer, Transportation Research Record (TRR); Advances in Transportation Studies (ATS)

2019–current

Conference Peer Reviewer, Transportation Research Board (TRB)

2019–current

Reviewer, Drive to the Future project's deliverables

FELLOWSHIPS AND AWARDS

Nov. 2018–current

Scholarship on doctoral studies, Sapienza Università di Roma, Italy

COURSES AND CONTINUING EDUCATION

Leveraging Urban Mobility Disruptions to Create Better Cities. Online course. MITx, 40 Hr., 2020. **BIGRS IndiaRAP Webinar: World Bank and iRAP helping save lives on Indian roads.** Online course. BIGRS and IndiaRAP, 16 Hr., 2020. **Road Traffic Injury Prevention and Control in Low- and Middle-Income Countries.** Online course. The Johns Hopkins International Injury Research Unit, 35 Hr., 2019. **Road Safety in LATAM: from theory to action.** Online course. IDB, 35 Hr., 2019. **Leadership in the Public Policy Process.** Federación Colombiana de Municipios and The Leadership Institute, New York, Philadelphia and Washington, USA. 30 Hr. 2015. **Urban Development and Housing in Latin America,** online course. IDB, 36 Hr. 2015. **Diploma in State Contracting.** Pontificia Universidad Javeriana, Colombia. 116 Hr., 2011. **Costs and Budgets for Buildings,** online course. SENA. 40 Hr., 2009. **Microsoft Excel application in topographic surveys,** online course. SENA. 40 Hr., 2009. **Environmental Impact Assessment,** online course. IDB, 20 Hr., 2008

ACTIVITIES

Associations & Groups

Member of International Transport Forum (ITF) and World Bank (WB) Working group on Implementing the Safety System approach. Apr. 2020-Current.

Friend of TRB Committees: Transportation Safety Management Systems (ANB10), and Transportation in the Developing Countries (ABEgo). Jan. 2020-Current.

Member of Transport and Accessibility in Low Income Communities – Latin America Chapter (INTALInC-LAC). Sep. 2019-Current.

Member of National Association of Civil Engineering Students (ANEIC). Nov. 2007-Mar. 2010. **Academic Director** of ANEIC. Apr. 2009-Mar. 2010

Co-founder and Member of Tolimense Association of Civil Engineering Students (ATEIC). Sep. 2007-Nov. 2010. **Director** of ATEIC. Sep. 2008-Sep. 2009. **Deputy Director** of ATEIC. Sep. 2007-Sep. 2008. **Director** of the I Seminario Nacional de Avances y Tecnologías en Ingeniería Civil, Colombia, 2010

Boards of Directors

Dolores Public Utility Company – SERVIDOLORES E.S.P., Colombia. Jan. 2012–Jul. 2015

Political

Programmatic advisor volunteer, Colombia presidential campaign of Sergio Fajardo. Mar. 2017–May 2018. **Campaign manager**, Dolores mayoral campaign of Nictor Trujillo, Colombia, Jul. 2015–Oct. 2015. **Programmatic advisor volunteer**, Dolores mayoral campaign of Carlos Alberto Torres, Colombia, May 2011–Oct. 2011. **Youth Coordinator of Tolima Region**, Colombia presidential campaign of Antanas Mockus & Sergio Fajardo, Nov. 2009 – Jun. 2010

Interest

Traveling, Running, Cultures and Cities. Write and maintain my personal blog: www.opinionmultimodal.wordpress.com

LANGUAGES

Spanish, native
English, professional proficiency
Italian, professional proficiency

- Last update: October, 2020