

Alejandro Henao

PhD Student

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SUMMARY

I am currently a transportation PhD student in Civil Engineering at the University of Colorado Denver (UCD), president of the Institute of Transportation Engineers UCD Student Chapter, and student leader of the Active Communities/Transportation (ACT) research group. I am conducting my dissertation on evaluating the accuracy of information technologies, and analyzing the travel behavior impacts of information technologies and evolving transportation services. I am a recipient of the Dwight Eisenhower Transportation Fellowship, the Bridge to the Doctorate Program Fellowship, and the Integrative Graduate Education and Research Traineeship (IGERT) program from the National Science Foundation. Recently I had the opportunity to teach the class "Introduction to GIS" in the Civil Engineering department at UCD.

I completed the Master of Science degree in civil engineering at UCD on December 2013. As a graduated student, I have published and presented research studies in transportation Infrastructure investments and mode share changes, sporting event stadiums characteristics including parking, and transportation economic resilience. I continue doing research that focuses on creating more sustainable and equitable places such as active transportation, multimodal and intermodal options, information technologies, and evolving transportation modes.

EDUCATION

Ph.D. Student, University of Colorado Denver (January 2014 – Present)

Department of Civil Engineering (transportation)

Advisor: Dr. Wesley E. Marshall, PhD, PE

Masters of Science, University of Colorado Denver (2013)

Department of Civil Engineering (transportation)

Thesis: "Effects of Fuel Price Shocks in Commuting Expenditures: A Socio-economic Analysis"

Advisor: Dr. Wesley E. Marshall, PhD, PE; GPA: 3.9

Bachelor of Science, University of Colorado Boulder (2006)

Department of Civil, Environmental and Architectural Engineering

GPA: 3.8; Graduated Magna Cum Laude, Dean's List - all semesters

TEACHING EXPERIENCE

Lecturer, University of Colorado Denver (Spring 2014)

CVEN 5381: Introduction to GIS, Department of Civil Engineering

Guest Lecturer, University of Colorado Denver (Spring 2013)

CVEN 5800/URPL 6686/PUAD 7600: Sustainable Transportation Systems

Teacher Assistant and Advisor to Students, University of Colorado Boulder (Fall 2005, 2006)

Multicultural Engineering Program for undergraduate student

Science, Technology, Engineering, and Mathematics (STEM) K-12 Program

ACADEMIC PAPERS

Marshall, Wesley E., Alejandro Henao and Rachael Bronson (2015). Building a Framework for Transportation Resiliency and Evaluating the Resiliency Benefits of Light Rail Transit in Denver, Colorado. *U.S. Department of Transportation, University Transportation Centers Program, Mountain-Plains Consortium, MPC 15-279*.

Marshall, Wesley E. and Alejandro Henao. The Shock Heard 'Round the Suburbs: Assessing Vulnerability, Resilience, and Transportation Affordability of Higher Fuel Price Scenarios for the Denver Metropolitan Region. *Transportation Research Record: Journal of the Transportation Research Board* (accepted).

Henao, Alejandro and Wesley E. Marshall. A Transportation Economic Resilience (TER) rating system for measuring expenditure impacts. *Urban Studies* (revise and resubmit).

Henao, Alejandro, Daniel Piatkowski, Kara S. Luckey, Krista Nordback, Wesley E. Marshall and Kevin J. Krizek (2015). Sustainable Transportation Infrastructure Investments and Mode Share Changes: A 20-year background of Boulder, Colorado. *Transport Policy, Vol. 37: 64-71*.

Henao, Alejandro and Wesley E. Marshall (2013). Parking at Sporting Event Stadiums in Denver, Colorado. *Transportation Research Record: Journal of the Transportation Research Board*, No: 2359, pp 17-26.

CONFERENCE PRESENTATIONS

Scholarly Conference Presentations (with peer-reviewed conference papers)

Henao, Alejandro and Wesley E. Marshall. Fuel Price Shocks, Affordability, and Transportation Economic Resilience. *94th Annual Meeting of the Transportation Research Board*, Washington, D.C. (January 2015).

Marshall, Wesley E. and Alejandro Henao. The Shock Heard 'Round the Suburbs: Assessing Vulnerability, Resilience, and Transportation Affordability of Higher Fuel Price Scenarios for the Denver Metropolitan Region. *94th Annual Meeting of the Transportation Research Board*, Washington, D.C. (January 2015).

Henao, Alejandro and Wesley E. Marshall. Parking at Sporting Event Stadiums in Denver, Colorado. *92nd Annual Meeting of the Transportation Research Board*, Washington, D.C. (January 2013).

Henao, Alejandro, Wesley E. Marshall, Kara S. Luckey, Krista Nordback, Eric Stonebraker, Kevin J. Krizek, and Daniel Piatkowski. Sustainable Transportation Infrastructure Investments and Mode Share Changes: A 20- year case study of Boulder, Colorado. *92nd Annual Meeting of the Transportation Research Board*, Washington, D.C. (January 2013).

Henao, Alejandro, Wesley E. Marshall, Kara S. Luckey, Krista Nordback, Eric Stonebraker, Kevin J. Krizek, and Daniel Piatkowski. Sustainable Transportation Infrastructure Investments and Mode Share Changes: A 20- year case study of Boulder, Colorado. *53rd Annual Conference Association of Collegiate Schools of Planning (ACSP)*, Cincinnati, Ohio (November 2012).

Scholarly Conference Presentations

Information Technologies and Evolving Transportation Services. *12th Annual Spring Transportation Symposium*, Denver, April, 2015.

Effects of Fuel Price Shocks in Transportation Economic Resilience and Affordability (with W. Marshall). *11th Annual Spring Transportation Symposium*, Denver, April, 2014.

Parking at Sporting Event Stadiums in Denver, Colorado (with W. Marshall). *10th Annual Spring Transportation Symposium*, Denver, April, 2013.

Sustainable Transportation Infrastructure Investments and Mode Share Changes: A 20-year case study of Boulder, Colorado (poster presentation with D. Piatkowski, K. Luckey, K. Nordback, E. Stonebraker, W. Marshall and K. Krizek). *10th Annual Spring Transportation Symposium*, Denver, April, 2013.

SCHOLAR ACTIVITIES

Research Assistant, University of Colorado Denver (2012-2014)

“Building a Framework for Transportation Resiliency and Evaluating the Resiliency Benefits of Light Rail Transit” through the Mountain Plains Consortium (MPC)

Principal Investigator: Dr. Wes Marshall

Discussant

Discussant, Transportation Modeling Reform Working Group. Congress for the New Urbanism Transportation Summit, Chicago, IL, November 2013.

Research Interest

- Accurate travel information, information technologies;
- Implications of new technology and evolving transportation services;
- Sustainable, equitable, and affordable transportation systems;
- Transportation economic resilience, transport flexibility, and value of transit;
- Multimodal and intermodal transportation options;
- Transportation Infrastructure investments, active transportation, and mode share changes;
- Sporting event stadiums characteristics including parking;

Affiliations

- Institute of Transportation Engineers (ITE) - National Member, Colorado/Wyoming Section Member, University of Colorado Student Chapter President (2012 – Present)
- Active Communities and Transportation Research Group, Student Leader (2011 – Present)
- Center for Sustainable Infrastructure Systems (2011 – 2013)
- American Society of Civil Engineers (ASCE)

FELLOWSHIPS AND SCHOLARSHIPS

Eisenhower Fellow (2014 – 2015)

Dwight D. Eisenhower Transportation Graduate Fellowship, U.S. Department of Transportation, Federal Highways Administration

NSF B2D Fellow (2014-2016)

Bridge to the Doctorate Program (B2D) Fellowship, National Science Foundation (NSF)

NSF IGERT Fellow (2011-2013)

Integrative Graduate Education and Research Traineeship (IGERT) Fellowship, Sustainable Urban Infrastructure, National Science Foundation (NSF)

ITE Leader and Graduate Scholarship (2012-2013)

Leadership and Graduate Student Scholarship, Institute of Transportation Engineers (ITE) Colorado/Wyoming Section

University of Colorado Denver Scholarship (2012)

Graduate School Travel Award, Conference Presentation, University of Colorado Denver

University of Colorado Boulder Scholarship (2004-2006)

Academic Achievement and Private Scholarships, University of Colorado Boulder

Univalle Academic Scholarship (1999-2000)

*Academic Scholarship, top 3 out of 150 students in engineering, Universidad del Valle, Cali, Colombia
Sports Scholarships, Regional Champions and National tournaments, Univalle Soccer Club*

SELECTED NEWS & PRESS

- The National Science Foundation, August 2014. "CU Denver study shows excess parking at some Denver sports stadiums," http://nsf.gov/news/news_summ.jsp?cntn_id=132283
- Channel 9 News Colorado, August 2014. "Study: Plenty of parking at Denver stadiums," <http://www.9news.com/story/news/local/2014/08/04/study-plenty-of-parking-at-denver-stadiums/13603525/>

ENGINEERING EXPERIENCE**Consultant, GES LiveWell Colorado, Denver (Spring 2014)**

- Research consultant in transportation projects for the Globeville & Elyria Swansea (GES) neighborhoods. Active participation and engagement with the community.
- Organized public forums in the GES LiveWell community to educate residents on the I-70 East Project.
- Developed a survey on travel behavior and opinion regarding the I-70 East Project.
- Participated in mitigation proposal and NEPA process with the community.

Structural Engineer, Contech Construction Products, Denver (2007 – 2010)

- Worked as a design engineer providing technical support to sales engineers, contractors and customers. Reviewed project plans, developed product solutions, and prepared submittal drawings.
- Scheduled drawings submittals, coordinated and managed activities within the CAD group.
- Updated and developed new tools to ensure compliance with current industry specifications, standards and policies. Implemented best practices and procedures.
- Provided training and mentoring to new engineers. Contributed to continuous team development.

Field Engineer, Insituform Technologies Inc., Denver (2007)

- Evaluated field conditions and measurements for pipe design. Created logistics plans including schedule, permits, equipment access, traffic control and logistic plans.
- Calculated and designed bypass plans based on field characteristics including contingency situations.

- Created schedules for two lining crews in different projects. Coordinated with TV and clean, traffic control and bypass subcontractors.

Project Intern, Opus Northwest, L.L.C., Denver (2006)

- Coordinated document collection and submittal for LEED Gold level certification, Environmental Protection Agency Headquarters 8 Building.
- Contacted subcontractors to discuss potential project participation. Revised initial bids.
- Assisted project managers with drawing updates, take off estimates, specification book revisions, RFI's, field bulletins and product submittals. Updated changes in record document drawings.
- Revised and updated quality control list and final punch list.

PROFESSIONAL TRAINING & LANGUAGE

Certified Engineer-in-Training (E.I.T.), State of Colorado, 2007-Present

Fluent in Spanish - written and oral

SOFTWARE SKILLS

ArcGIS spatial analysis software, Microsoft SQL Server, PGAdmin III and PostGIS.

Updated April 2015