

# Alejandro Henao

PhD Student

University of Colorado Denver

Phone: (303) 746-6975

[alejandro.henao@ucdenver.edu](mailto:alejandro.henao@ucdenver.edu)

[www.actresearchgroup.org](http://www.actresearchgroup.org)

---

## 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. *94<sup>th</sup> 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. *94<sup>th</sup> 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. *92<sup>nd</sup> 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. *92<sup>nd</sup> 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. *53<sup>rd</sup> Annual Conference Association of Collegiate Schools of Planning (ACSP)*, Cincinnati, Ohio (November 2012).

## **Scholarly Conference Presentations**

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

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

Parking at Sporting Event Stadiums in Denver, Colorado (with W. Marshall). *10<sup>th</sup> 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). *10<sup>th</sup> 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](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*