Guillermo Nevett Fernández

Curriculum Vitae

Ph.D. Student
University of Colorado at Boulder
Department of Civil, Environmental, and
Architectural Engineering

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PROFESSIONAL PREPARATION

Institution	Field	Degree
University of Colorado at Boulder Boulder, CO	College of Engineering and Applied Sciences	Six Sigma Statistical Practitioner, May 2017
University of Colorado at Boulder Boulder, CO	Civil Engineering – Construction Engineering & Management	MSE, December 2016
Metropolitan University Caracas, Venezuela	Civil Engineering	BSCE, February 2012

PROFESSIONAL REGISTRATION

Venezuelan Licensed Engineer, No. 227,976

*** RESEARCH***

AREAS OF RESEARCH SPECIALIZATION

- Duration Estimation for Highway Transportation Construction Projects

REFEREED JOURNAL PUBLICATIONS

1. Sankaran B., O'Brien, Goodrum, Nevett, G., and Johnson, J. (2018). "Civil Integrated Management Systems State of Practice among U.S. State Transportation Agencies." Elsevier J. of Automation in Construction. 87(2018). pp. 84-95.
2. Sankaran, B., Nevett, G., O'Brien, W. J., Goodrum, P. M., & Johnson, J. (2018). Civil Integrated Management: Empirical study of digital practices in highway project delivery and asset management. *Automation in Construction*, *87*, 84-95.

REFEREED CONFERENCE PAPERS

1. Alleman, D., Nevett, G*., and Goodrum, P., (2018) "Design-Build Performance over the Years: An Exploration into Colorado's Experience." Construction Research Congress (Construction Research Congress, April 2 2018, April 5 2018)
2. Nevett, G., Alleman, D., and Goodrum, P., (2017) "Using Statistical Models Based on Historical Project Data to Estimate Durations for Transportation Projects." International Society of Civil Engineering Congress (International Society of Civil Engineers, April 2 2018, April 5 2017)
3. Nevett, G., Goodrum, P. (2017). "Estimating Contract Times for Transportation Projects: Creating A Statistical Model to Estimate Times Using Bid Quantities." International Construction Specialty Conference (ICSC), Vancouver, June 3, 2017.

TECHNICAL REPORTS

1. O'Brien, William J., Bharathwaj Sankaran, Fernanda L. Leite, Nabeel Khwaja, Ignacio De Sande Palma, Paul Goodrum, Keith Molenaar, Guillermo Nevett, and Joshua Johnson. (2016). Civil Integrated Management (CIM) for Departments of Transportation, Volume 1: Guidebook. NCHRP No. Project 10-96. National Academies. Washington, DC.
2. O'Brien, W., Sankaran, B., Leite, F., Khwaja, N., Palma, S., Goodrum, P., Molenaar, K., Nevett, G., and Johnson, J. (2016). Civil Integrated Management (CIM) for Departments of Transportation, Volume 2: Research Report. NCHRP No. Project 10-96. 2016. National Academies. Washington, DC.

ORAL PRESENTATIONS (* indicates principal speaker)

1. Panelist "TRB Webinar: Practices for Establishing Contract Time for Highway Projects." July 12 2018
2. Alleman, D., Nevett, G*., and Goodrum, P., (2018) "Design-Build Performance over the Years: An Exploration into Colorado's Experience." Construction Research Congress (Construction Research Congress, April 2 2018, April 5 2018)
3. Nevett, G*., Alleman, D., and Goodrum, P., (2017) "Using Statistical Models Based on Historical Project Data to Estimate Durations for Transportation Projects." International Society of Civil Engineering Congress (International Society of Civil Engineers, April 2 2017, April 5 2017)
4. Nevett, G.* and Goodrum, P. (2017). "Estimating Contract Times for Transportation Projects: Creating A Statistical Model to Estimate Times Using Bid Quantities." CSCE Construction Speciality Conference. Vancouver, BC. June 3, 2017.

INDUSTRY EXPERIENCE

University of Colorado at Boulder (2015-resent)

1. **Graduate Research Assistant**

   During this period, I worked in a Transportation Construction Management (TCM) Pooled Fund (***TPF-5(260)***) and ***NCHRP 10-96***.

   For TPF-5(260) our goal was to create a tool to accurately estimate the duration of road transportation construction projects. During the early stages of the project, we developed several Multiple Linear Regression (MLR) predicting models. With such models, results similar to previous efforts from other institutions were achieved, but we wanted to take it another step forward and that's why we created an Artificial Neural Network (ANN) model. With the ANN model we reached high levels of accuracy (compared to other existing tools), but we were also able to include all projects of all sizes and types. Both, the MLR and ANN models were developed using historical data to determine how bid quantities and projects' characteristics, such as project type (e.g. bridge rehabilitation, resurfacing, etc.), Annual Average Daily Traffic, Engineers' Estimate, and Terrain Type affected the duration of the project.

   Currently, the model is being installed in Colorado's servers for it to be used in all upcoming road transportation projects by CDOT's engineering team.

   For NCHRP 10-96, I did an exhaustive literature review to determine the current practices and technologies being used in Civil Integrated Management (CIM). Along with the team, an extensive synthesis that describes state of the art and implementation challenges for CIM was produced.

2. Soltec NPN, C. A. (2012-2018)

Concrete coring and sawing, demolitions using expansive mortar and structures demolitions service firm.

Founder/President

Lead concrete coring, sawing, and demolition projects.

Supervise workers and manage tools amongst different projects to ensure optimum performance.

Estimate and analyze unit price cost.

3. Private Contractor. (2012-2014)

   Construction and remodeling contractor.

   Engineer.

   Lead construction and remodeling projects.

   Ordered and tracked materials to ensure delivery on time.

   Interacted with owner and architect to define details.

   Estimated and analyzed unit price cost for bidding process and valuations. Monitored actual cost vs. budget.

4. Obrein, C. A. (2011-2012)

   Slope stability service firm.

   Project Engineer/ Field Engineer.

   Led construction of an 80,000 ft^2 anchored wall for a basement with $3,000,000 budget.

   Supervised workers and interacted with subcontractors and laborer's union.

   Ordered and tracked materials to ensure delivery on time.

   Interacted with owner to define details.

ADDITIONAL

Microsoft Office Suite, AutoCAD, SketchUp. Windows/ Mac OS
Revit / SAP2000 / SPSS Statistics/ Stata / R / Python
Registered Professional Civil Engineer in Venezuela #227,976.

LANGUAGES

Spanish – Native Language
English – speak fluently and read/write with high proficiency