

Juan Pablo Bertucci

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"Infrastructure development means opportunities for society, it's the highest value we civil engineers can provide"

Education

University of Illinois at Urbana-Champaign

August 2020

Master of Science in Civil Engineering - Sustainable and Resilient Infrastructure Systems: 3.92/4.00 GPA

University of Buenos Aires

June 2016

Bachelor of Science in Civil Engineering: 7.02/10.00 GPA

Project Highlights

Transportation Reliability for Flood Hazards

Urbana-Champaign, Illinois

Thesis paper for MS degree, finding better metrics for road safety and network planning

November 2018 - Present

- Discussing existing professional practices and reviewing current research literature to develop new analysis methods
- Programming network simulation and performance metrics in MATLAB; with network data obtained through GIS

San Martín Viaduct Installation

Buenos Aires, Argentina

Urban transport mega project in the heart of Buenos Aires City

June 2016 - October 2018

- Traced and budgeted solutions from bid stage to design, including client meetings, drafting, preliminary calculations, etc
- Proposed innovative competing designs to complete construction compatible with ongoing train operations
- Won a contract over 2MMUSD, 20 people employed, 90.000 people benefitted daily from better service

SAOCOM 1A Satellite Logistic Plan and Execution

Buenos Aires/ California

Transport of the first Argentinian satellite to SpaceX launching facilities in Vandenberg, California

March 2018 - August 2018

- Engaged in logistic planning, bidding for the National Aeronautics Commission of Argentina, earned two 500MUSD contract
- Coordinated logistics from Argentina to military transport in the USA, showing client-focus earned ALE a second contract for 2020.

Pioneering of Wind Farm Logistics in Argentina

Watabaek, Thailand

Report on logistics, structures, business processes in the ongoing Watabaek Wind Farm

August 2016

- Trained and contributed in the operations at the ongoing Wind Farm project in Watabaek, Thailand
- Collaborated with technical offices at Bangkok to learn current processes in wind farm logistics and construction
- Summarized and presented a technical report for ALE Argentina to deliver added value in RenovAR renewable generation projects

Provision of Water and Sanitation Infrastructure for San Antonio de Areco

San Antonio de Areco - Argentina

Design of water, sanitation, and stormwater systems for the western watershed population

November 2014 - August 2016

- Engaged in project discussion with municipal authorities and local population on required works.
- Completed Drafting, calculation, modelling, budgeting and final report production

Relevant Experience

University of Illinois at Urbana Champaign (UIUC)

Champaign, Illinois

Graduate Research Assistant

August 2018 - Current

- Performing research in sustainable and resilience applied to major infrastructure investments, presenting findings in weekly group meetings and preparing publication materials
- Developing computer programs focused in decision making, project life cycle sustainability and economic impact analysis

Abnormal Load Engineering (ALE)

Buenos Aires, Argentina

Solutions Engineer

March 2016 - August 2018

- Developed key relationships and projects with public authorities as well with major construction firms in civil infrastructure and power generation projects. Held weekly meetings for business development, technical consulting and jobsite visits
- Collaborated in designing, budgeting and deploying logistic solutions for wind farms, gas power plants, industrial components, and satellites; unifying collaboration of 7 commercial executives and 10 project engineers
- Engaged in Business Development activities in Latin American's energy (Vaca Muerta Shale Oil Field, RenovAR) and transport sectors from first meetings and feasibility to contract signing
- Introduced geographical information systems for route surveys and performance metrics for the commercial department employing customer relationship management (CRM) software
- Led the bidding process for several of the biggest Megaprojects in Buenos Aires City for the 2016-2018 period, including the San Martín Railway Viaduct Project, New Illia Highway, Belgrano Sur Viaduct and Mitre Viaduct.

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Special Studies and Projects Consulting (PEESA)

Project Engineer

Buenos Aires, Argentina

June 2014 - July 2015

- Supported engineering team in budgeting, designing, drawing, and performing feasibility studies for National Route N°18 (Paraná-Concordia) and Provincial Route N°23 (Comallo - Pilcaniyeu)
- Implemented new Excel scripts for budgeting and creating traffic projections and Civil3D solutions for quantity estimations in project control; greatly increasing cost analysis process flow

University of Buenos Aires, School of Engineering

Teaching Assistant

Buenos Aires, Argentina

June 2013 - March 2014

- Lectured specific topics for “Non-Traditional Materials in Construction”, an introductory course on composite materials for undergraduate civil engineers. Lectured for one and a half semesters classes for 15 students
- Mediated between faculty and students on homework and testing feedback, finding approaches to enhance learning

Technical Skills

✓ Transportation Design:	Freight Logistics, Civil3D, SuperPave	✓ Client Communication:	CRM, Microsoft Office, Excel
✓ Water Systems Design:	WaterCad, EPANET, SWMM, HEC-RAS	✓ Programming, Statistics:	R, Matlab, Python
✓ Structural Design:	SAP2000 – RAM	✓ Risk Analysis:	(Q-ARC) GIS, FERUM
✓ English: Fluent	✓ Spanish: Native	✓ French: Conversational	✓ Proposal and Business Dev.

Volunteer Experience

Board Member at Fulbright Association Urbana-Champaign Chapter	August 2019 - Present
SRIS Representative at Graduate Student Advisory Committee	May 2019 - Present
Volunteer at YMCA at Urbana Champaign	May 2019 - August 2019
Volunteer Office of Inclusion and Intercultural Relations (GLOBE Project)	August 2018 - Present
Volunteer The Bike Project at Urbana Champaign	August 2018 - Present
Volunteer Engineering Without Borders Argentina	April 2015 - August 2018
Volunteer University of Buenos Aires, School of Engineering, Statics Department	July 2013 - June 2014

Honours

Argentine Presidential Fellowship in Science & Technology	June 2017
2015 Design and Productive Development Project, Concrete-Polymer Container Structural Design	April 2016

Presentations

Title	Event	Location
Sustainability Assessment for Transport Infrastructure	Energy Sustainability Symposium	University of Illinois at Urbana Champaign
Advances in Network Reliability metrics	Multi Hazard Approach to Engineering	University of Illinois at Urbana Champaign
ALE's Capabilities in the Nuclear Sector	Nuclear Industry Summit LATAM	Buenos Aires
Water Infrastructure for San Antonio de Areco	Thesis defence	Buenos Aires

Selected Additional Coursework

Course Name	Location	Date
Machine Learning for Operations Research	University of Illinois at Urbana Champaign	In progress
Stochastic Processes	University of Illinois at Urbana Champaign	2019
Introduction to Statistical Learning	University of Illinois at Urbana Champaign	2019
Methods in Applied Statistics	University of Illinois at Urbana Champaign	2019

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Introduction to Trailer, Semi-trailer, and Hydraulic Module Transports	ALE Argentina	2017
Introduction to Hydraulic Systems	ALE Argentina	2017
Mastering Data Analysis in Excel,	Coursera; Duke University	2017
Application Cases of Composite Materials	University of Buenos Aires	2017
Introduction to Nanotechnology	University of Buenos Aires	2017
Characterization of Composite Materials	University of Buenos Aires	2016
Introduction to Fracture Mechanics	University of Buenos Aires	2016
Composite Materials Technology	University of Buenos Aires	2016
Polymers	University of Buenos Aires	2016
Transport Phenomena	University of Buenos Aires	2016
Financial Markets	Coursera; Yale University	2016
Introduction to Dams	University of Buenos Aires	2015
Learning How to Learn	Coursera; University of California, San Diego.	2015
Principles of Variational Analysis	University of Buenos Aires	2014
Introduction to Tensor Analysis	University of Buenos Aires	2014

Selected Conferences and Seminars Attended

Title	Location	Year
105th Annual Illinois Transportation and Highway Engineering Conference	University of Illinois at Urbana-Champaign	2019
The Railroad Environmental Conference	University of Illinois at Urbana-Champaign	2018
AREMA Annual Conference & Exposition	AREMA	2018
XXVII International Seminar on Ports, Seaways, Multimodal Transport and Commerce	Argentinean Catholic University	2017
Seminar in Composites Engineering	University of Buenos Aires	2017
Future Challenges in Argentina's Infrastructure Seminar	University of Buenos Aires	2017
Wind and Energy Conference	Argentine Association of Wind Energy	2017, 2016
Ar-Minera Mining Conference	Argentine Chamber of Mining Enterprises	2017
First Urban Engineering Congress	Professional Council of Civil Engineering	2016
Statics Department Seminar	University of Buenos Aires	2016, 2015
XVII Argentine Congress on Highways and Traffic	Argentine Association of Highways	2015
Composites: Evolution and Opportunities for Development in Building Industry	National Institute of Industrial Technology	2015
Management of Hydro-Electric Projects	University of Buenos Aires	2015

Associations

Tau Beta Pi Honour Society	August 2019 - Present
Fulbright Student Association	August 2018 - Present
Multi Hazard Approach to Engineering Group	August 2018 - Present
American Railway Engineering and Maintenance of Way Association Student Chapter	August 2018 - Present
American Society of Civil Engineers Student Chapter	August 2018 - Present