

Osama (Sam) Alsalous

1404 University City Blvd, Apt J, Blacksburg, 24060 VA - Phone: 540-998-2227 – salous@vt.edu

EDUCATION

Virginia Tech, Blacksburg, VA

PhD, Civil Engineering
Area of Research: Air Transportation.

January 2019 - Present

Virginia Tech, Blacksburg, VA

Master of Science, Civil Engineering (GPA 3.92)
Area of Research: Air Transportation.

January 2014 - December 2015

The University of Jordan, Amman, Jordan

Bachelor of Science, Civil Engineering (GPA 3.41)

September 2005 – January 2010

PROFESSIONAL EXPERIENCE

Virginia Tech, Blacksburg, VA

Graduate Research Assistant, Civil & Environmental Engineering

January 2019 - Present

- Currently conducting research for improving the efficiency of terminal airspace for US airports. The research is focused on analyzing the arrival operations within the 100 nautical mile ring around the airport and the impacts of various factors including weather conditions, traffic demand, and air traffic control decisions.

CSSI, Inc., Washington, D.C.

Trajectory/Data Analyst

June 2016 – December 2018

- Supported the System Product & Development group within the FAA's Office of Performance Analysis. Duties include processing and analysis of airborne trajectory data, deriving and evaluating performance metrics for the National Airspace System (NAS), preparation of analysis for benchmarking reports, and developing and updating tools to conduct the various analyses.
- Job responsibilities required research skills, programming, data mining and management, data analysis using visualization and statistical methods, in addition to organizing results into presentable formats to effectively communicate to team members.

Virginia Tech, Blacksburg, VA

Graduate Research Assistant, Civil & Environmental Engineering

April 2014 – May 2016

• *Global Demand Forecast Model*

December 2014 – May 2016

Developed an econometric model with the ability to forecast air traffic passengers at airport level between and within world regions. The scope covers 3,000 airports worldwide, study horizon up to 2040. Model development entailed processing and analysis population and GDP of geospatial data in addition to airlines schedule data.

• *Runway Capacity Model*

April 2014 – December 2014

The model estimates the capacity for 250 airports contained in NASA's Airspace Concept Evaluation System (ACES). Efforts included developing a recommended runway selection for departure/arrival based on runway length, wind, and weather conditions in accordance with FAA's airport design standards and aircraft manufacturers' guidelines. Additionally, conducted model validation using flight level data from ASPM and PDARS datasets.

Consolidated Contractors Company (CCC), Doha, Qatar

Doha expressway package 12 (F-ring Road) (Project value of \$266 Million)

September 2011 – December 2013

- Led a construction team of up to 80 multinational workers of a variety of trades. Efforts included supervision of earthworks, construction of barriers, landscaping, pipelines, chambers, and future duct banks.
- Reviewed daily progress and updated look-ahead plans and resource allocation.
- Coordinated across the project with engineers, management, and consultants.

Manwa Trading and Contracting Company, Riyadh, Saudi Arabia

Multiple Design-build projects (Total value of \$26 Million)

March 2010- August 2011

- Performed geometric design and prepared drawings for highway projects using AutoCAD Civil 3D.
- Performed quantity estimation for highway projects.

- Reviewed drawings with client’s representatives and consultants for approval.

PUBLICATIONS

- Alsalous, O. and Galaviz, R., 2018. “An Assessment of the Terminal Airspace Performance Indicator”. *18th AIAA Aviation Conference*, Atlanta, GA.
- Alsalous, O., Galaviz, R. and Gulding, J., 2017. “Evaluation of the Efficiency of Traffic Management Initiatives Wind Delays”. *17th AIAA Aviation Conference*, Denver, CO.
- Alsalous, O. and Abbas, M. (2016). “Evaluation of network performance with application of VSL for connected vehicles” *TRB 95th Annual Meeting*, Washington, D.C., Transportation Research Board.

ACTIVITIES AND MEMBERSHIPS

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|---|-------------------------------|
| • Air Traffic Control Association (ATCA), Member | April 2018 - Present |
| • American Institute of Aeronautics and Astronautics (AIAA), Member | April 2017 – Present |
| • Itraab, Arabic Music Ensemble at Virginia Tech, Member | December 2015 - Present |
| • Salsa Tech, Performance Team Member | September 2015 – May 2016 |
| • Alliance of Transportation Engineering Students (ATES) at Virginia Tech, Vice President | September 2014 - October 2015 |
| • Jordanian Engineers Association, Member | February 2010 - Present |
| • Saudi Council of Engineers, Member | May 2011 – May 2016 |

COMPUTER SKILLS

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|----------------------|---|
| • Microsoft Office | • MATLAB |
| • SQL | • AutoCAD and AutoCAD Civil 3D |
| • RStudio | • FAA Integrated Noise Model (INM 7.0d) |
| • Python programming | • PTV Vissim and PTV Vistro |
| • Tableau | • Adobe Photoshop |
| • ArcGIS | • SAS JMP statistical tool |

LANGUAGES:

- English (Fluent in writing, speaking and reading)
- Arabic (Native Language)