NEGIN MOGHADASI, LEED GA, Associate AIA

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EDUCATION:

University of Virginia (UVA)
School of Engineering
Ph.D. Student of Systems and Information Engineering (2020-Present)
With the focus in Data Science, Data Mining, Machine Learning, Deep Learning, Risk Management, Cybersecurity, and Health applications
GPA: 3.90

University of Virginia (UVA)
School of Engineering
Master of Engineering in Systems and Information Engineering (2020-2022)
GPA: 3.90

University of Southern California (USC)
Viterbi School of Engineering
Master of Project & Construction Management (2016-2018)
GPA: 3.70[1]

University of Tehran
School of Architecture and Design
Master of Industrial & Product Design (2011-2013)
GPA: 3.83

Shiraz Azad University of Art and Architecture
School of Architecture
Bachelor of Architectural Engineering (2006-2010)
GPA: 3.51

SKILLS, CERTIFICATIONS AND ACCREDITIONS:

- **Computer Skills:**
  R, Python, PRISM, P6 Primavera, Revit, Navisworks, Photoshop, BlueBeam, AutoCAD, IESVE, Rhinoceros, 3D Studio Max, V-ray, Solid works, Keyshot, Windows Live Movie Maker, Koolmoves, Home Energy Efficient Design (HEED), Design Builder, Climate Consultant

- **Other Professional Skills:**
  Data Mining, Deep Learning, Data Science, ML/AI, Data Analytics, BIM Modeling, Virtual Design and Construction, 3D and 2D Modeling, Project Cost and Damage Analysis, Sketching and rendering skills/ Modeling ability/ Presentation and communication skills/ Design Research Architectural Drawing/ Scheduling and Budgeting/ Project Management, Risk & Resilience Management, Building Information Modeling (BIM), Virtual Design and Construction (VDC).

- **Languages:**
  English (Fluent), Farsi/Persian (Fluent), Arabic (Intermediate)

WORK EXPERIENCE:

UNIVERSITY OF VIRGINIA (2020-Preset)
Ph.D. Student and Graduate Research Assistant

- Graduate Research Assistant, August 2020-Present.
- Graduate Teaching Assistant of two capstone projects, August 2020- August2021

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[1] GPA of Engineering core courses. The overall GPA including non-engineering courses is 3.36.
U.S. Citizen – Do not need work sponsorships.

- Host Session Chair (Student Committee Member) - CESUN (Council of Engineering Systems Universities) 2021, 10-12 October 2021.
- Recruiting new students in INFORMS 2021 Conference, Anaheim, CA, October 2021.
- Co-Chair, Raytheon Systems Engineering & Architecture Symposium, 15 September 2020.
- Peer reviewing of manuscripts of several significant journals.
- Executive Manager of UVA IRSA club.

SHAWMUT DESIGN AND CONSTRUCTION (2020-2020)
Virtual Design and Construction Coordinator

Luxury Residential Buildings:
- Preparing RFIs for an approximate $30 million luxury residential project located in Beverly Hills, California.
- Identify hard and soft clashes utilizing NavisWorks, Beverly Hills, California.
- 3D model the complete and detailed wood frame works utilizing BIM 360 and Revit, Beverly Hills, California.
- 3D model the complete and detailed wood frame works utilizing BIM 360 and Revit for an approximate $55 million residential project, Malibu, California.

SECRETARIAT INTERNATIONAL (2017-2020)
Senior Associate Project Manager/ Associate Project Manager/ Internship

o **Recruiting and Hiring:**
  Recruiting and interviewing new hiring candidates.

Education:
- Contributing with the management team for preparation of As-Built schedule for preliminary analysis of an approximate 100-Acre College campus in west Coast of the United States of America.

Infrastructure:
- Assisting with the preliminary delay analysis for an approximate $800 million highway in Middle East. She assisted in developing As Planned and As Built by using Primavera P6 and using Microsoft Excel to make analysis graphs and also making animations demonstrating of construction sequence of 10 Km elevated Highway.

Transportation:
- Assisting the management team to calculating construction delay dates and contributing in progress analysis for Mechanical and Electrical trades of a 6,000,000 Sq. Ft. International Airport in Middle East.
- Assisting with tracking the actual Mechanical, Electrical, Plumbing manpower on-site and preparing the productivity rate of the labors in a $17 billion international airport in the Middle East.
- Assisting the management team with the preparation of the As-Built progress analysis for Mechanical, Electrical and Plumbing trades of a $110 million transit center in Western United States.
- Assisting in construction claims and scheduling services during the construction of a $22.5 billion aboveground and underground metro railway in Saudi Arabia.
- Assisting management team analysing the design contingency rates for assessing the financial damages of a highway corridor improvement project in Southern California with the contract value of about $630 Million.

Energy:
- Assisting in the preparation of a preliminary delay analysis on a natural gas compressor station in California. The EPC (engineer procure construct) contract was valued at $40 million for the engineering, procurement and construction upgrades to the existing facility.

Marine Construction:
- Contributing with the management team in the preparation of an As-Built schedule for a delay analysis of a $50 million fireboats project located in Western United States.

Port:
- Assisting in the preparation of a delay analysis during the construction on a major waterway in Latin America. The $5.2 billion expansions will double the capacity of the waterway allowing more and larger ships to pass through.

Oil:
- Assisting in assessing the financial damages and delay and quantum analysis includes the conversion of the hulls of VLCC type ships into the FPSOs in Latin America with a contract value of $9 billion. Also assisting in preparing the financial damage expert report and financial rebuttal report of this project.
- Assisting in Analysis of financial damages for FEED package, engineering design, and construction delay issues at $950 million oil supply platform project in Rio de Janeiro, Brazil. Scope included detailed analysis of the processes and mechanics contributing to the early termination of EPC contractor. Also, she assisted in drafting the preliminary financial damages report.

Commercial and Residential:

- Assisting the management team in the preparation of a delay analysis for a 40,000 m^2 premium hotel apartment in Dubai. Negin tracked the progress of interior works, as well as, preparing progress curves regarding measuring the delays and disruptions incurred.
- Create the 3D model of the high-rise, mixed-use development on 42nd Street, for largest public REIT in Manhattan. Also assisted the management team to analysis of cost allocation and financial damages of the building.

Others:
- Assisted the management team performing a financial investigation and to calculate the financial damages for an Audio/Video equipment provider at NYC event Venues.

MONARCH Architecture and Industrial Design Group (2013-2016)
Architect/ Industrial Designer

- Collaborated with Designers to Design and Perform Safir restaurant advertising billboard, Fasham, Tehran
- Remodelled 5400 SqFt penthouse in Zaferanyeh, Tehran
- Performed 3 branches of Barekat Bakery in Hamshahri Stores Inc., Tehran
- Designed exterior elevations and interiors of residential complex in Ghomabad St, Shiraz
- Developed a project of Exterior Elevations of Kaveh residential complex in Kaveh street, Tehran
- Designed and Executed Interiors of Pool and Gym Floor of a residential complex in Kaveh street, Tehran
- Collaborated with Architects and Construction Managers to Design and Perform Residential Complex in Atlasi sq., Shiraz
- Scheduled and Performed Architecture office in Ordibehesht st., Shiraz
- Proposed Logo & office set, IRIS Company (Medical Facilities Company), Shiraz
- Renovated Clothing Boutique interior in Tehran Bazaar, Tehran
- Managed a project of Clothing Boutique in Sina Mall, Tehran
- Collaborated with Designers to design nafis advertisement billboard, Nafis Clothing Mall, Tehran
- Execute Yekta Nuts Bar in Gaz sq., Shiraz

AWARDS and PROFESSIONAL AFFILIATIONS:
- Selected from USC Architecture School for The U.S. Department of Energy (DOE) Race to Zero Student Design Competition (Race to Zero) - 2017
- Certified LEED Green Associate - 2018
- Certified Inspection Architect at Iranian Association of Architects - 2017
- Winner of 3rd place among 2013 Industrial Design graduate students at University of Tehran - 2013
- Winner of 3rd Place at Metamorphosis Workshop, Experience in Metamorphosis, University of Tehran – 2011
- Among first 5th Percentile of 2013 outstanding graduate students at University of Tehran - 2013
- Among first 10th Percentile of 2010 outstanding undergraduate students at Shiraz Azad university of Art & Architecture - 2010

Ph.D. COMPLETED COURSES:
- Deep Learning
- Data Mining
- AI for Social Good
- Human-Computer Interaction
- Cyber Physical System: Formal Methods, Safety, and Security
- Optimization Models and Methods I
- Stochastic Modeling I
- Applied Linear Model
- Risk Analysis
- Intro to Systems Analysis and Design

CERTIFICATES:
- Python Programming Essentials | Rice University, Coursera - 2021
- The Data Scientist's Toolbox | Johns Hopkins, Coursera - 2021
- Programming Foundations: Fundamentals - 2020
- Learning Revit - 2020
- Navisworks Essential Training - 2020
- Construction Management: Reading Drawings & Specifications - 2020
- Tech+ 2020 Conference - 2020
- BIM-VDC for Construction - 2020
- BIM Foundation – 2020
- MATLAB, on ramp - 2018
- Advanced Primavera P6 - 2018
- LEED GA - 2018
- Autodesk AutoCAD - 2009
- Autodesk 3D Max - 2009

CLUB MEMBER:

- IEEE
- Society for Risk Analysis – SRA
- Executive Manager – IRSA (UVA)
- American Institute of Architects - AIA
- Construction Management Association of America - CMAA
- USC Construction Management Association of America - USC CMAA
- Iranian Association of Architects
- Industrial Design Society of America - IDSA
- USC Architecture School Selected Student for DOE Race to Zero Student Design Competition 2017

PUBLICATIONS AND PRESENTATIONS:

- **Published and Accepted Papers:**

  o **Negin Moghadasi**, Mai Luu, Rahman O. Adekunle, Thomas L. Polmateer, Mark C. Monasco, John M. Emmert, James H. Lambert
  IEEE Transactions on Engineering Management, 25 August 2022, doi: doi: 10.1109/TEM.2022.3197240
  Link: https://ieeexplore.ieee.org/document/9866875
  Research and Development Priorities for Security of Embedded Hardware Devices

  o **Negin Moghadasi**, Zachary A. Collier, Andrew Koch, David L. Slutzky, Thomas L. Polmateer, Mark C. Manasco, James H. Lambert
  Reliability Engineering & System Safety, Accepted on 30 April 2022, ISSN 0951-8320
  Link: https://www.sciencedirect.com/science/article/abs/pii/S0951832022002125?via%3Dihub
  Trust and Security of Electric Vehicle-to Grid Systems and Hardware Supply Chains

  o Davis C. Loose, Timothy L. Eddy, Thomas L. Polmateer, Mark C. Manasco, **Negin Moghadasi**, James H. Lambert
  2022 IEEE International Systems Conference (Syscon), April 2022
  Link: https://ieeexplore.ieee.org/abstract/document/9773915
  Managing Pandemic Resilience with Other Cascading Disruptions of a Socio-Technical System

  o Alinne Beteto, Vidal Melo, Jessica Lin, Marwan Alsultan, Eduardo Mario Dias, Elizabeth Korte, DeAndre A. Johnson, **Negin Moghadasi**, Thomas L. Polmateer, James H. Lambert
  Springer Environment Systems and Decisions, January 2022, https://doi.org/10.1007/s10669-022-09843-5
  Link: https://link.springer.com/article/10.1007/s10669-022-09843-5
  Anomaly and cyber fraud detection in pipelines and supply chains for liquid fuels

  o Christopher M. VanYe, Beatrice E. Li, Andrew Koch, Mai Luu, Rahman O. Adekunle, **Negin Moghaddasi**, Zachary A. Collier, Thomas Polmateer, David Barnes, David Slutzky, Mark C. Manasco, James H. Lambert
  2021 Systems and Information Engineering Design Symposium (SIEDS), July 2021, DOI:10.1109/SIEDS52267.2021.9483779
  Link: https://ieeexplore.ieee.org/document/9483779
  Trust and Security of Embedded Smart Devices in Advanced Logistics Systems

  o Sogol Mahmoudkhan Shirazi, and **Negin Moghaddasi**
  IJEI (International Journal of Engineering Inventions) December 2016; ISSN: 2278-7461
  The Study of Effective Factors on Customer Behavior in Environmental Design

  o **Negin Moghaddasi** and Sogol Mahmoudkhan Shirazi
  ISIJ (International Science and Investigation Journal) February 2015 4(2); ISSN: 2251-8576
  The Effective Factors on Microsoft Company's Success in The Production of Game Console Devices

- **Papers Under Review:**

  - Timothy Eddy, Benjamin Mendel, Christopher Gacek, Derek Gimbel, Gabriel Sampaio, Samuel Longo, Thomas Polmateer, Davis Loose, **Negin Moghadasi**, James H. Lambert
  IEEE Transactions on Engineering Management
  Entrepreneurial Intensity for Evaluation of Green Energy Investments in Intermodal Freight Logistics Systems

- **Papers Under Preparation:**

  - **Negin Moghadasi**, James H. Lambert
  Scale-free comparisons of system resilience by the degree of order disruption

  - **Negin Moghadasi**, Cody Penneti
  Comparison of ARIMA and Random Forest models in Forecasting Truck Travel Time Reliability

- **Negin Moghadasi**, Phong C. H. Nguyen, Stephen Baek
  Machine Learning Approach in Enhancement Use of Vaso-Lock: a device holds together free vascular ends instead of stitches

- **Negin Moghadasi**, Phong C. H. Nguyen, Stephen Baek
  A Deep Learning Approach for Topology Optimization to Enhance Structural Design

- Jan Eckstein, **Negin Moghadasi**, Hermann Körperich, Elena Weise Valdés, Vanessa Sciacca, Lech Paluszkiewicz, Wolfgang Burchert, Misagh Piran
  A machine learning assisted framework for non-contrast diagnoses of amyloidotic cardiomyopathy

- **Presentations:**

  - Society for Risk Analysis _ SRA 2022, December 4-8, 2022 (Submitted Abstract on June 3, 2022; Tampa, Florida)
    Negin Moghadasi, Cody Penneti, and James H. Lambert
    Machine Learning Assisted Frameworks to Forecast Truck Travel Time Reliability and Evaluate Risk of Disruption of Logistics

  - IMECE2022, December 5-9, 2021(Accepted Abstract on March 30, 2022; to be presented on October 30 – November 3, 2022, Columbus, Ohio)
    Negin Moghadasi, Phong C. H. Nguyen, Stephen Baek
    A Deep Learning Approach for Topology Optimization to Enhance Structural Design

  - Society for Risk Analysis _ SRA 2021, December 5-9, 2021
    Negin Moghadasi, and James H. Lambert
    Scale-free comparisons of system resilience by the degree of order disruption

  - Eight International Engineering Systems Symposium _ CESUN 2021, October 10-12, 2021
    Davis C. Loose, Timothy L. Eddy, Thomas L. Polmateer, Mark C. Manasco, **Negin Moghadasi,** and James H. Lambert
    A Mathematical Framework for Tracking Resilience of Sociotechnical Systems to Pandemics and Other Disruptions

  - Informs & Society for Risk Analysis (SRA) Conference (Decision Making for Emerging Risks), June 22-23, 2021
    Security and Trust of Smart Devices in Electric Vehicle-to-Grid Systems

  - IEEE SIEDS Conference, April 2021
    Trust and Security of Embedded Smart Devices in Advanced Logistics Systems

  - Construction Super Conference, Palos Verdes, CA, December 2019
    Wayne H. Kalayjian**, Negin Moghaddasi,** Mohamad Fakhreddin
    Disasters, Miscalculations, and Construction Law

  - University of Southern California, Los Angeles, CA, January 2019
    Introduction to Constriction Law, Delay and Damage Analysis

  - International Sustainable Environment, Tehran, Iran, January 2013
    Green Library and Sustainable Environment