

**Carl J. Unis**  
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**Objective:**

I seek a position in which I can contribute program leadership and technical expertise in applied Systems Engineering to projects in areas of complex analysis and physical systems to assist decision makers in making more complete, technically decisive decisions for their organization.

**Highlights of Qualifications:**

- Extensive experience with operations, emergency services and complex systems
- Excellent verbal and written communication skills
- Experience with analytic frameworks, systems analysis, vulnerability analysis, trade studies and engineering for complex equipment and systems.
- Experience and ability to become familiar with new modeling and simulation tools and techniques and to apply them in analyzing complex military, industrial systems and enterprise scale problems.
- Experience and ability to independently determine and develop innovative approaches and solutions to a diverse range of analytical problems.
- Project/Technical Task management experience with small agile teams.
- External customer interface and project experience.
- Knowledge of military systems/platforms, power and energy systems, logistics and supply chains, experience in analyzing complex systems with limited data.
- Experience with specialized simulation tools, state modeling, systems engineering, numerical methods, statistics, and optimization.
- Experience in cyber environments to characterize risk
- Strong analytical and problem-solving skills
- Extensive experience in teaming environments
- Active security clearance
- Honorably Discharged Embassy Marine

**Education:**

**M.E. Systems Engineering, May 2014 GPA- 3.6/4.0**

Stevens Institute of Technology, Hoboken, NJ

Focus of study: Complex systems and system of systems (SoS) methodology.

- Masters Paper: "Understanding Complex Problems in Emergency Management in Order to Mitigate Cascading Consequences." Advisor: Dr. Robert Cloutier

**B.S. Business / Marketing, May 2006 GPA 3.7/4.0**

**Experience:**

**Sandia National Laboratories, Member of the Technical Staff: 2010 – Present**

- Current member of a team that involves understanding complex systems, people, places and things to achieve an end objective of obtaining the necessary data to provide decision-support analytics.
- Former member of an analysis team that is currently conducted analysis studies on complex energy systems and micro-grids in developing third-world countries.

- Former member of a team that is conducted enterprise-wide logistical supply chain analysis in order to inform our DOD customer of some of the strategic challenges that they will face implementing and fielding a new system to their respective organizations.
- Participated and provided insight into a food defense supply chain risk assessment 2 day workshop with Pepsico and Homeland Security
- Co-Lead for Infrastructure Resource Allocation and Prioritization for Incidents (IRAPI)
- Member of the FAST team: Provided Office of Infrastructure Protection with rapid response analysis for emergency services during crisis events
- Provided ongoing SWATH analysis for many hurricane events
- Provided technical and GIS support to the FBI's WMD Directorate supporting concept-of-operations and situational awareness to key decision makers
- Lead for Continuity of Operations (COOP) and Devolution for the organization – Designed Go-Kit for remote mobile analytical tool capabilities off-site during an activation
- Emergency Services SME for our organization

**Critical Infrastructure Protection Program Manager**, New Mexico Department of Homeland Security / Emergency Management, Santa Fe, NM : 2008 – 2010

- Coordinated infrastructure protection efforts across government, private sector, and non-governmental organizations
- Led local, state and federal teams (over 100 members) to execute security activities – PRND program at the Albuquerque International Balloon Fiesta
- Coordinated the first radiological survey of abandoned uranium mines in New Mexico with the EPA's ASPECT airplane resource
- Appointed to the New Mexico Supreme Court statewide security committee
- Led and participated for the first Committee for Baseline Security standards for state government buildings in New Mexico
- One of five people selected nationwide to participate in the first Critical Infrastructure Exchange hosted by Department of Homeland Security headquarters in Washington, D.C.
- Lead for NM national critical infrastructure data calls; enabled NM access to \$3.2M in potential federal asset hardening funds. More than doubled number of tier facilities in state.
- First person in New Mexico asked to join the State, Local, Tribal and Territorial Government Coordinating Council to Represent New Mexico's critical infrastructure issues

**Construction Management:** Assistant Project Manager: 2006 - 2008

- Coordination and oversight of the overall project(s)
- Spearheading benchmark activities to ensure milestones were met
- Troubleshooting all aspects of daily operations
- Ensure consistency of entire project as a whole, including: communications, budgets, schedules and client/subcontractor/vendor/staff/management interactions

**Automotive Retail:** Service Consultant / Manager, Albuquerque, NM: 2002 - 2006

- Successfully interacted daily with clients to generate repeat and referral business
- Consistently resolved customer difficulties in an expedient and tactful manner
- Worked in several multi-line dealerships consisting of Mercedes, Porsche, BMW, Saab, Lexus, Mazda and Volkswagen lines.

**Government Service:** Federal Agent, Department of Energy (DOE): 2002 – 2002

- Provided security for classified Office of Secure Transport (OST) Safeguards operations / shipments
- Can provide additional details as needed

**U.S. Marine Corps, Logistics / Transportation, Embassy Marine: 1997 - 2001**

- Performed internal embassy security at two U.S. Embassies abroad
- Provided dignitary security for Secretary of State visits
- Collaborated with Embassy security officials on security issues at the Embassy in Finland and Mexico City
- Was the training Non-Commissioned Officer (NCO) for both Marine detachments overseas
- Provided logistics and transportation support at Camp Lejeune, NC and other bases

**Publications:**

- **“Financing Resiliency, from Smart Urban Design to Reconstruction”**  
Bruce Cahan and Carl (C.J.) Unis, Natural Hazards Review - Special Collection: The 2017 Disasters, Sociotechnical Perspectives. November, 2018
- **"Population as a Proxy for Infrastructure in the Determination of Event Response and Recovery Resource Allocations"**, Stamber, Kevin L., Carl J. Unis, Donald N. Shirah, Jessica A. Gibson, William E. Fogleman, and Paul Kaplan, Journal of Homeland Security and Emergency Management. March, 2016
- **“Understanding Complexities in Emergency Management in Order to Mitigate Cascading Consequences,”** National Symposium on Resilient Critical Infrastructure, 2014
- **Emergency Response Resource Quantification and Prioritization**, Stamber, K.L., C.J. Unis, J.A. Gibson 2013. 20th International Congress on Modeling and Simulation, Adelaide, Australia, December 1-6, 2013.
- **Multiobjective Resource Prioritization for Infrastructure Systems Following Regionally-Disruptive Events.** Stamber, K.L., C.J. Unis, D.K. Belasich, J.A. Gibson 2013. 2013 INFORMS Computing Society Conference, January 6-8, 2013, Santa Fe, NM.

**Awards and Recognition:**

- Received two Peer recognition awards for outstanding technical excellence and program support.
- Letter of Recognition from the New Jersey Office Homeland Security and Preparedness for the direct operational support of Hurricane Sandy.
- Received an award for outstanding support for DoD program development.

**Community Service:**

- Current Board Member at Zia Little League
- Participated in Preventative Radiological Nuclear Detection (PRND) for the Albuquerque International Balloon Fiesta as a technician supporting the State of New Mexico. 2009-Present
- Coach/mentor for more than eight prospective students seeking to enter the University Part-Time (UPT) program at Sandia Laboratories – All applicants accepted into the program
- Raised thousands of dollars and donated thousands of toys over 7+ years at Sandia Laboratories for the Marine Corps Toys for Tots program