KNOTT LABORATORY, LLC
Forensic Engineering & Visualization

Appendix A

Curriculum Vitae

EDUCATION:

B.Sc. Civil Engineering, University of Rhode Island, Kingston, RI, 2012
Ph.D. Civil Systems Engineering, University of Colorado, Boulder, CO, 2022

EXPERIENCE:

Project Engineer, Knott Laboratory, LLC, Centennial, Colorado, June 2023 to Present
Doctoral Research Assistant, University of Colorado, Boulder, Colorado, January 2019 through August 2022
Teaching Assistant, University of Colorado, Boulder, Colorado, August 2020 through June 2021
Disaster Risk Reduction Intern, International Federation of Red Cross and Red Crescent, Philippines, Summer 2019
Graduate Research Assistant, University of Colorado, Boulder, Colorado, January 2018 through December 2018
Structural Engineer, General Dynamics Electric Boat, Groton, Connecticut, June 2012 through February 2016
Project Management Intern, Streif Baulogistik, Germany, March 2011 through August 2011
Undergraduate Research Assistant, Institut für Grundbau und Bodenmechanik, TU-Braunschweig, Germany, October 2010 through March 2011
Construction Intern, Rhode Island Department of Transportation, Rhode Island, May 2009 through August 2010

FORENSIC ENGINEERING:

Mr. Seites-Rundlett has over two years of experience in onsite forensic investigations with Knott laboratory, in addition to limited forensic investigations with the Red Cross, General Dynamics, and the Rhode Island Department of Transportation. Forensic investigations have primarily addressed structural systems, including investigating steel, wood concrete, and masonry structures for damage resulting from fire, hail, wind, snow/ice buildup, vehicular collisions, foundation failures, exposure to water/moisture, mold, freeze losses, lack of maintenance, corrosion, and construction/design defects. Forensic investigations have also addressed civil engineering, building envelope, water/piping systems, mechanical/HVAC systems aspects of projects that experienced damage or unexpected losses. His clients have included attorneys, building owners, property managers, insurance companies, developers, and general contractors. Forensic investigations have often required the use of laser scanning equipment to create and analyze point cloud data, which has been performed by Mr. Seites-Rundlett.

Mr. Seites-Rundlett has been involved in numerous forensic insurance investigations ranging from small single-family residence claims to large municipal/industrial buildings, including coordination with field adjusters, desk adjusters, and public adjusters. Mr. Seites-Rundlett has been involved in numerous construction defect investigations for both plaintiffs and defendants. Mr. Seites-Rundlett has been in numerous forensic foundation investigations for both residential and commercial structures, including the design and implementation of foundation repairs, reviewing soil reports and soil characteristics, and mitigation of expansive and collapsible soils. Mr. Seites-Rundlett also has extensive experience investigating remaining capacity of in-service steel structures as result of mechanical damage, fire damage, corrosion, or pitting. Mr. Seites-Rundlett has developed an expertise in the mechanics of materials and mechanisms that cause deterioration and damage to materials, permitting investigations pertaining to a wide range of materials, including, wood composites, metal composites, concrete admixtures, and gypcrete.

ENGINEERING AND DESIGN:

Mr. Seites-Rundlett has a diverse background in civil engineering including construction management, structural design, and research on water systems, transportation systems, and disaster management. Mr. Seites-Rundlett has experience domestic and abroad, both practicing as a civil engineer and performing research.

Mr. Seites-Rundlett has extensive experience with the analysis and design of steel structures in shipbuilding applications. This experience includes the design of hull structures, cofferdams, and miscellaneous foundations. The analysis of steel structures often required the use of finite element methods and supercomputing networks. Analysis covered new design, maintenance of existing structures, development of maintenance plans, and lifting and handling. Mr. Seites-Rundlett also

has extensive experience in the analysis of steel connections, including fastener and weld design. This experience also includes concepts of lean manufacturing, design for production, and geometric dimensioning and tolerancing.

Mr. Seites-Rundlett obtained his doctorate in Civil Systems Engineering because of his experience working across multiple disciplines of engineering. Research topics have included the long-term performance of dikes, developing an update to drinking water guidelines for the World Health Organization, risk and uncertainty, statistical methods, and evacuation models. This research culminated in the dissertation, "Incorporating Uncertainty and Social Influences into Transportation System Decision Making." This research analyzed the uncertainty inherent in social data to better understand evacuation outcomes and develop methods of improving evacuation models.

Experiences during graduate school include spending a summer working for the Red Cross in the Philippines. Mr. Seites-Rundlett performed an organizational evaluation of the Philippine Red Cross, working closely with management to improve the performance of the organization. Mr. Seites-Rundlett also performed field investigations of shelters constructed by the Red Cross. This experience also included ATC-20 training on post-disaster building evaluation. During graduate school, Mr. Seites-Rundlett also taught review courses for students preparing for the Fundamentals of Engineering Exam, including structural design and analysis. Mr. Seites-Rundlett was also a teaching assistant for senior design, assisting students through the design and development of construction documents for their senior projects.

At Knott Laboratory, Mr. Seites-Rundlett has been involved in a wide range of design projects, including new design for residential and commercial structures, design of remodels and additions to existing structures, and design of repairs. Design projects have included wood, steel, concrete, and masonry structures. Design projects have also addressed designing foundation, wall framing, and roof framing plans. Foundation designs have addressed slab on grade, footing/stemwall, and deep foundations. Deep foundation designs have incorporated micropile, helical piers, and push piers.

PUBLICATIONS:

1. Seites-Rundlett, W., Garcia-Bande, E., Álvarez-Mingo, A., Torres-Machi, C., and Corotis, R. B. (2020). "Social Indicators to Inform Community Evacuation Modeling and Planning." ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, American Society of Civil Engineers, Vol. 6, Issue 3.
2. Seites-Rundlett, W., M. Z. Bashar, C. Torres-Machi, and R.B. Corotis. (2022). "Combined Evidence Model to Enhance Pavement Condition Prediction from Highly Uncertain Sensor Data." Reliability Engineering & System Safety,217: 108031.
3. Seites-Rundlett, W., Corotis, R. B., Torres-Machi C. (2022). "Development of a Protocol for Engineering Applications of Evidence Theory." ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, American Society of Civil Engineers, Vol. 8, Issue 3.
4. Seites-Rundlett, W. (2022). "Incorporating Uncertainty and Social Influences into Transportation System Decision Making." University of Colorado at Boulder. ProQuest Dissertations Publishing.

CONFERENCE PUBLICATIONS:

1. Seites-Rundlett W., Corotis R. B., Torres-Machi C. (2023). "Considerations for the Development of Evidence Theory Applications." 14th International Conference on Applications and Statistics and Probability in Civil Engineering (ICASP 14), Dublin Ireland.

CONFERENCE PRESENTATIONS:

1. 11th International Forum on Engineering Decision Making (IFED) in Manly, Australia (2019) *Uncertainty Analysis for Decision Making with Respect to Natural Hazards*
2. 45th Natural Hazards Research and Applications Workshop (2020). Participation in session: *Hazards Research by New Professionals*