



OLD DOMINION
UNIVERSITY®

BATTEN COLLEGE OF ENGINEERING
AND TECHNOLOGY

Engineering Management &
Systems Engineering Department

ANNOUNCEMENT OF DEFENSE OF DISSERTATION RESEARCH

The faculty of the Engineering Management and Systems Engineering Department is pleased to issue an invitation to Mr. Gregory Gooden's defense of the research conducted for his dissertation.

Mr. Gooden will be presenting virtually.

The defense is open to the public.

Date: Wednesday, April 1st, 2026

Time: 10:00 AM to 12:00 PM

Location: ESB EMSE 2101A Conference Room

Online Access: Via Zoom *Meeting ID:* 953 1042 8746 *Passcode:* 924128

<https://odu.zoom.us/j/95310428746?pwd=WZVCJzNmLSGsq89CMYwUt63VybaR7.1&from=addon>

Doctoral Candidate: Gregory Gooden

Extending the Job Demands–Resources (JD-R) Model to Secure, Technical Work Environments

Director: Dr. Pilar Pazos

Abstract:

Organizations operating in secure, classified environments face unique workforce challenges shaped by elevated job demands, constrained resources, and strict operational requirements. Traditional organizational behavior models, including the Job Demands–Resources (JD-R) framework, have been widely applied to understand employee quality of work life and performance; however, their applicability in classified technical environments remains underexplored.

This dissertation extends the Job Demands–Resources (JD-R) model by examining how job demands and job resources influence job satisfaction and retention intentions among engineering professionals within secure, highly regulated, and operationally constrained work environments. Using longitudinal data collected across multiple years, the study analyzes how these relationships evolve over time and identifies key factors that support workforce stability under constrained operational conditions.

The findings show that job demands are consistently associated with lower job satisfaction and retention intent, while job resources support job satisfaction and help sustain positive workforce conditions in classified environments. From an engineering management perspective, these results provide a data-driven foundation for optimizing workforce systems to improve stability and retention in constrained, high-security environments.

This research contributes to both theory and practice by adapting the JD-R model to a previously underexamined context and providing actionable insights for improving employee outcomes in complex, high-stakes organizational settings.

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Engineering Management & Systems Engineering Department

Bio:

Gregory Gooden is a Ph.D. candidate in Engineering Management and Systems Engineering at Old Dominion University. His research focuses on workforce dynamics in secure, high-regulated environments, with particular emphasis on job demands, job resources, and employee outcomes over time.

He holds a Master of Science in Information Systems, a Master of Professional Studies in Cybersecurity, and a Bachelor of Arts in Business Technology Administration from the University of Maryland, Baltimore County. His academic work integrates systems engineering, organizational behavior, and quantitative analysis to examine complex workforce challenges in constrained operational environments.