Dr. Jeremy Lamar Barnes, PMP

EDUCATION

August 2012 **AUBURN UNIVERSITY**
Ph.D. Industrial and Systems Engineering (Concentration: Applied Statistical Inference)

August 2011 **AUBURN UNIVERSITY**
Master of Industrial and Systems Engineering

June 2006 **UNIVERSITY OF ALABAMA IN HUNTSVILLE**
Master of Science in Management (Contributing Coursework from Harvard)

December 2000 **AUBURN UNIVERSITY**
Bachelor of Science, Mechanical Engineering

EXPERIENCE

2020-Present **LOCKHEED MARTIN** Huntsville, AL
Electrical Engineering Functional/Resource Manager
- Manage career areas of staff members including training, pay administration and career advancement

2021-Present **LOCKHEED MARTIN** – Internal Research and Development (IRAD) Huntsville, AL
Integrated Product Team (IPT) Lead – Three IPTs
- IRAD IPT lead for missile avionics, ignition and propulsion managing all operational and project management areas of a cross-functional team
- Adapted agile processes for hardware in the avionics IPT

2020-2021 **LOCKHEED MARTIN** – Long Range Hypersonic Weapon (LRHW) Huntsville, AL
Battery Operations Center (BOC) Design Manager
- Managed hardware design and development of the BOC ground component
- Served as Cost Account Manager (CAM) ensuring planning, execution and monitoring of various Control Accounts (CA) through Earned Value Management (EVM) techniques
- Supported operations of cross-functional team members ensuring success of BOC including material planning, procurements and test bed and tactical assembly, integration and test

2018-2020 **MITRE** Huntsville, AL
Multi-Disciplinary Systems Functional/Resource Manager
- Managed career areas of staff members including training, pay administration and career advancement
- Helped establishment lab, high bay and facility layout requirements for new Huntsville facility
- Established MITRE Huntsville's internship program

2014-2020 **MITRE – TERMINAL HIGH AREA ALTITUDE DEFENSE (THAAD)** Huntsville, AL
Project Manager/Principal Multi-Disciplinary Systems Engineer (SE)
- Lead THAAD cyber testing; planning, orchestration and execution
- Managed the direction, technical quality, resource planning, execution, and outcomes of MITRE staff supporting the THAAD U.S. and Foreign Military Sale (FMS) programs
- Proposed and executed to a multi-year research effort for an advanced hybrid electrical power solution for THAAD termed THAAD System Power Architecture (SPA)
- Oversaw all technical design, development and implementation aspects of THAAD's advanced technologies division including the Remote Launcher Kit (RLK) hardware, small form factor computing solution for tactical software and Assured Position, Navigation and Timing (APNT) kit consisting of anti-jam technologies
- Conducted Hardware in the Loop (HWIL) testing of the DoD regional clock hardware integration into the THAAD Fire Control and Communication (TFCC)
- Developed detailed cost and schedule estimates for MITRE staff ensuring consistency in support to the THAAD Project Office (TPO)
- Grew staffing from three Staff Years of Technical Effort (STE) to ten STE in five years

2019 **MITRE – THAAD** Huntsville, AL
Missile Defense Agency (MDA) THAAD Systems Security and Advanced Technologies (THSS) Division Chief (Acting Government Appointment)
- Managed all THAAD cybersecurity efforts including development, acquisition, Risk Management Framework (RMF), testing, program security and physical security

- Managed THAAD efforts for network subsystem redesign, power subsystem redesign, anti-jam Position Navigation and Timing (PNT) and Size, Weight and Power (SWaP) studies
- Managed acquisition efforts related to THSS including the Prime Contractor and Other Government Agencies (OGAs)
- Led review of proposals, basis of estimates and cost data from Prime Contractor including negotiations of follow-on contracts

2011-2014 **MITRE – COMMAND & CONTROL BATTLE MANAGEMENT & COMMUNICATION (C2BMC)** Huntsville, AL

Lead Multi-Disciplinary SE

- Provided SE and program management expertise to develop and define future capabilities for the C2BMC Missile Defense Agency (MDA) program office
- Conducted Small Business Innovation Research (SBIR) technical evaluations

2008-2010 **MITRE –THAAD** Huntsville, AL | McGregor Range, NM | Sunnyvale, CA

Senior Multi-Disciplinary SE

- Provided on-site support for Sim-Over-Live (SOLD) during Limited User Testing (LUT) activities
- Supported Software Engineering Directorate (SED) THAAD software Runs for Record (RFR)
- Managed cross-integration support between Launcher, THAAD SE, and Lockheed Martin addressing architecture, logistics, information assurance, communications, requirements and software challenges
- Provided government representation during formal System Integration Laboratory RFR
- Supported hardware in the loop simulations, inter-operability efforts, and alternative hardware/software configurations to support M&S tasks
- Prepared and executed test plans for Launcher electro-magnetic testing

2006-2007 **RAYTHEON COMPANY – AN/TPY-2 RADAR** Woburn, MA

SE – Engineering Cost Account Manager

- Led an engineering team charged with Change Control Board (CCB) management and execution
- Managed a team that successfully developed a configuration management web-based service enhancing task turnaround time while providing history and accountability for configuration-controlled changes

2005 *SE – Mission Coordinator* Woburn, MA

- Supported leadership team efforts to ensure successful mission execution
- Developed a web-based management service allowing for increased collaboration, enhanced repeatability, and rapid communication of key flight test products and milestones

2005 *Test Engineer, RADAR Requirements Verification* Woburn, MA

- Performed RADAR verification of system algorithms, interfaces and system responses
- Authored and submitted Contract Deliverable (CDRL) technical requirement reports by characterization of RADAR performance, accuracy and functionality

2004-2005 **THE BOEING COMPANY – GROUND BASED MIDCOURSE DEFENSE (GMD)** Huntsville, AL

Test Engineer, Data Management Plans (DMP)

- Created DMPs to support of post test data analysis
- Developed Oracle® and ColdFusion applications resulting in increased fidelity and accuracy of DMPs

2000-2004 **THE BOEING COMPANY – NASA** Huntsville, AL | Houston, TX | Cape Canaveral, FL

Systems Engineer, SPACEHAB Subsystem Simulation Lead

- Planned and executed large scale mission simulations including fault injection/detection while monitoring flight test team performance at Johnson Space Center (JSC)
- Supervised Columbia experiment integration team during launch preparations at Kennedy Space Center (KSC) meeting critical schedule for an on-time launch
- Developed and maintained domestic and foreign customer relationships identifying and executing experiment requirements, verification methodologies and test procedures
- Integral member in generating follow-on proposal effort including aspects of costs and schedules

ACADEMICA

2018-Present **UNIVERSITY OF ALABAMA**

Culverhouse College of Commerce – Adjunct Professor (Executive Master's in Business Administration)

- Operations Management

2013-Present **UNIVERSITY OF ALABAMA IN HUNTSVILLE**

Industrial and System Engineering – Adjunct Professor (Graduate)

- Advanced Statistical Applications
- Operations Research I and Operations Research II

College of Business – Management Science – Adjunct Professor (Undergraduate/Graduate)

- Principles of Project Management
- Operations Management

2008-2012 **AUBURN UNIVERSITY**

Teaching Assistant/Instructor

- Probability and Statistics I and II (2011-2012) / Probability and Statistics II Lab (2012)
- System Engineering for Secure Computing-Intensive Environments (2010-2012)
- Auburn University's Cube Satellite Lab (2008-2009)

Research Assistant

- Performed IV&V of Missouri S&T's Army Virtual Forward Operating Base (VFOB) simulation model
- Authored initial content for NASA's Academy of Aerospace Quality site – aaq.auburn.edu

OTHER

Certifications	• Project Management Professional Certified through PMI®, 6σ Black Belt, National Information Assurance Training Standard for Senior Systems Managers, OSHA 30 Hour Safety
Core Competencies	• *Leadership:* Project, Operations, Engineering Management, Acquisition, Decision Analysis, Process Analytics, Trade Studies • *Technical:* Hardware Development and Test, Multivariate Statistics, Applied Statistical Inference, System Engineering, Operations Research, Simulation, Optimization, System Design and Analysis
Productivity	• Project®, Jira, Confluence, Minitab, MATLAB, R, Arena, Palisades, Visio®
Publishing	• *Public:* Barnes, et al. "A Shot in the Dark: Shedding Light on Exoatmospheric Situational Awareness with Alternate Sensor Utilization". Air Space and Power Journal. Air Force Research Institute. Spring, 2016. Translated and published internationally • *Army CECOM :* 'Test plan for the THAAD FY18 Cybersecurity Assessments', 'THAAD Project Office Cybersecurity Model', 'THAAD Independent M&S Validation Assessment', 'GMD Statistical Analysis on Model Validation with Limited Data Sets', 'ARTEMIS: Simulation Evaluation', 'Post-Intercept Debris Characterization for Dense Raid Environments', 'Analysis of the Modified Quadratic Method for FSP Timing with SAP Recommendations'
Copyrights	• Kriging (Excel® Add-In), Adaptive Acronym Management Solution (Word® Add-In)
Funded Research	• Primary Investigator: *Deliberate Battle Planning for Post Intercept Debris Consequence Mitigation in the Ballistic Missile Defense System* • TPO funded research: System Power Architecture, Small Form Factor Computing, assured PNT, cyber vulnerability testing and long-haul communications • Lockheed funded research: Missile technology maturation efforts