

Gregory H. Graves, Ph.D.

Professor of Practice
Department of Industrial and Systems Engineering
Texas A&M University
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EDUCATION

Ph.D. in Industrial and Systems Engineering Texas A&M University, College Station, Texas Dissertation title: Analytical foundations of physical security system assessment.	2006
M.S. in National Resource Strategy National Defense University, Fort McNair, Washington, DC	2013
M.S. in Industrial Engineering Texas A&M University, College Station, Texas	1998
B.S. in Engineering Management U.S. Military Academy, West Point, New York	1988

FACULTY EXPERIENCE

Professor of Engineering Practice Texas A&M University, Department of Industrial and Systems Engineering, College Station, Texas	2018 – Present
Visiting Professor U.S. Military Academy, Department of Systems Engineering, West Point, New York	2019 – 2020
Professor of Engineering Practice Texas A&M University, Engineering Academic and Student Affairs, College Station, Texas Joint Appointment with Department of Industrial and Systems Engineering (2017 – 2018)	2015 – 2018
Assistant Professor U.S. Military Academy, Department of Mathematical Sciences, West Point, New York	2006 – 2008
Instructor/Assistant Professor U.S. Military Academy, Department of Mathematical Sciences, West Point, New York	1998 – 2001

PROFESSIONAL EXPERIENCE

Deputy Director for Resources and Analysis, U.S. Central Command MacDill Air Force Base, FL – Colonel, U.S. Army Led the 85-person directorate responsible for financial management, operational analysis, and technology initiatives supporting forces in the Middle East.	2013 – 2015
Executive Officer to the Deputy Commander, U.S. Central Command MacDill Air Force Base, FL – Colonel, U.S. Army Set the deputy commander's agenda and prepared him for engagements with senior U.S. and international leaders. Assisted in gaining approval of contingency plans up to the highest levels of the U.S. government.	2011 – 2012

Special Assistant to the Commander, U.S. Central Command 2010 – 2011
MacDill Air Force Base, FL – Colonel, U.S. Army

Conducted independent analysis to inform the Commander's decision-making and communications on strategy and plans. Prepared the Commander to meet with senior U.S. and international officials leading up to the surge in Afghanistan.

Operations Research Analyst, U.S. Central Command 2009 – 2010
MacDill Air Force Base, FL – Lieutenant Colonel, U.S. Army

Led analytical activities for deliberate, crisis action, and strategic planning. Coordinated and prioritized the Command's inputs into the Department of Defense budget process.

Plans and Assessments Analyst, OPERATION IRAQI FREEDOM 2008 – 2009
Baghdad, Iraq – Lieutenant Colonel, U.S. Army

Led planning efforts for the drawdown of forces in Iraq. Led analysis of requirements and risk for force options.

Analysis Branch Chief, US Army Combined Arms Support Command 2001 – 2003
Fort Lee, Virginia – Major, U.S. Army

Directed operations research studies and analysis to support development of future logistics concepts and organizations.

Field Artillery Officer and Transportation Officer 1988 – 1996

Second Lieutenant – Captain, U.S. Army. Various positions at Fort Carson, Colorado and Fort Eustis, Virginia. Humanitarian relief operations in Port-au-Prince, Haiti.

TEACHING AWARDS/HONORS

- *IISE Most Influential Faculty Award, April 2018.*
 - Presented yearly to a Texas A&M Industrial & Systems Engineering professor. Selection is made by current and former undergraduate students in the department. Conducted by the IISE student chapter at Texas A&M.

REFEREED JOURNAL PUBLICATIONS

- Graves, G. H., "Predicting the Health of a Natural Water System," *PRIMUS*, 20(4), 369-379, 2010.
- Graves, G.H., Sulewski, C.A., Dye, H.A., Deveans, T.M., Agras, N.M., and Pearson, J.M., "How Are You Doing? Assessing Effectiveness in Teaching Mathematics," *PRIMUS*, 19(2), 174-193, 2009.
- Graves, G. H., "Equipping Army Distribution Organizations Based on Modeling and Simulation," *Military Operations Research*, 10(4), 5-16, 2005.
- Graves, G. H. and Lee C. Y., "Scheduling Maintenance and Semiresumable Jobs on a Single Machine," *Naval Research Logistics*, 46(7), 845-863, 1999.

REFEREED CONFERENCE PROCEEDINGS

- Abercrombie, B., Coates, G., Morriss, S., Underwood, H., and Graves, G., "A Systems Architecture for the Indirect Fire Engagement Process in a Dynamic Targeting Scenario," *Proceedings of the 2020 Annual General Donald R. Keith Memorial Capstone Conference*, 2020.

- Graves, G. H. and Higgins, J., “Applications of Simulation in Logistics Combat Developments,” *Proceedings of the 2002 Winter Simulation Conference*, 911-916, 2002.

OTHER PROFESSIONAL PUBLICATIONS

- Graves, G. H. (2002) “The Smart Distribution System,” *Proceedings of the 2002 Army Science Conference*.
- Graves, G. H. (2002) “Determining Cargo-Handling Requirements in Combat Service Support Units,” *Army Logistician*, Vol. 34, Issue 5, 40-42.
- Graves, G. H. (2002) “Obstacles to CSS Transformation,” *Army Logistician*, Vol. 34, Issue 4, 7-11.
- Graves, G. H. (2000) “Leader Development in the Math Classroom: A Historical Perspective,” *Mathematica Militaris*, Vol. 10, 2-3.
- Graves, G. H. (1999) “Mission Success Templates for the RAH-66 Comanche.” Operations Research Center Technical Report, West Point, NY.
- Graves, G. H. (1999) “Analysis of the Army's Commercial Activity Study Process.” Operations Research Center Technical Report, West Point, NY.

GRANTS

- Innovative Pedagogy Grant; \$5000; 2017 (Sponsor: Texas A&M University)

CONFERENCE PRESENTATIONS

- Kobylski, G., D. Buede, M. Cassidy, H. Gibson, and G. Graves (2008) “Validating the Performance of Networks Used to Model Decisions Involving the UAV,” 76th Military Operations Research Society Symposium, U.S. Coast Guard Academy, CT.
- Graves, G. H. (2008) “Helping Calculus Students Predict the Health of a Natural Water System,” AMS-MAA Joint Mathematics Meetings, San Diego, CA.
- Graves, G. H. (2007) “Vulnerability Assessment in Physical Security Systems,” INFORMS Annual Meeting, Seattle, WA.
- Graves, G. H. (2006) “Analytical Framework for Assessing Physical Security Systems,” INFORMS Annual Meeting, Pittsburgh, PA.
- Graves, G. H. (2006) “Applying Risk Theory and Optimization to Physical Security Decisions,” INFORMS Annual Meeting, Pittsburgh, PA.
- Graves, G. H. and Wortman, M. A. (2005) “A Risk Theoretic Approach to Force Protection Decisions,” INFORMS Annual Meeting, San Francisco, CA.
- Graves, G. H. and J. Higgins (2002) “Applications of Simulation in Logistics Combat Developments,” 2002 Winter Simulation Conference, San Diego, CA.
- Graves, G. H. (2002) “Analysis of Physical Distribution Operations in Maneuver Support Organizations,” 70th Military Operations Research Society Symposium, Fort Leavenworth, KS.
- Graves, G. H., R. L. Watson, and N. M. Mann (1999) “Quantifying Mission Success of the RAH-66 Comanche,” 67th Military Operations Research Society Symposium, West Point, NY.

CONFERENCE ORGANIZATION / PARTICIPATION

- Track Chair, Process Modeling and Analysis Track, General Donald R. Keith Memorial Capstone Conference, 30 April 2020, West Point, NY.
- Working Group Chair, Current Operations Analysis – Strategic & Operational Level Working Group, Military Operations Research Society Special Meeting, *Irregular Warfare III – Improving Analytical Support to the Warfighter: Campaign Assessments, Operational Analysis, and Data Management*, 19-22 April 2010, Orlando, FL.
- Invited Panel Member, Combatant Command Panel, Military Operations Research Society Special Meeting, *Irregular Warfare III – Improving Analytical Support to the Warfighter: Campaign Assessments, Operational Analysis, and Data Management*, 19-22 April 2010, Orlando, FL.
- Session Chair, Military Technology and Security System Assessment, INFORMS Annual Meeting 2007, Seattle, WA.

COURSES TAUGHT / DIRECTED

Year	Semester	Course	Number
<i>U.S. Military Academy, West Point, New York</i>			
1999	Fall	Discrete Dynamical Systems & Intro to Calculus	MA 103
2000	Spring	Single Variable Calculus	MA 104
2000	Fall	Single Variable Calculus	MA 104 (Course Director)
2001	Winter	Tools of the Profession	MS 402
2001	Spring	Single Variable Calculus	MA 104 (Course Director)
2006	Fall	Integral Calculus & Intro to Differential Eqns	MA 205
2007	Spring	Differential Calculus	MA 104
2007	Fall	Differential Calculus	MA 104 (Program Director)
2008	Spring	Differential Calculus	MA 104 (Program Director)
<i>Texas A&M University, College Station, Texas</i>			
2015	Fall	Foundations of Engineering I	ENGR 111
2016	Spring	Foundations of Engineering II	ENGR 112
		Ethics and Engineering	ENGR 482
2016	Summer	Ethics and Engineering	ENGR 482
2016	Fall	Foundations of Engineering I	ENGR 111
		Ethics and Engineering	ENGR 482
2017	Spring	Foundations of Engineering II	ENGR 112
		Special Topics in Foundations of Engineering	ENGR 289
2017	Summer	Special Topics in Foundations of Engineering	ENGR 289
2017	Fall	Foundations of Engineering I	ENGR 111
		Special Topics in Foundations of Engineering	ENGR 289
		Uncertainty Modeling for Industrial Engineers	ISEN 310
2018	Spring	Foundations of Engineering II	ENGR 112
		Operations Research II	ISEN 340
2018	Fall	Fundamentals of Industrial Engineering Design	ISEN 210
		Operations Research II	ISEN 340
2019	Spring	Operations Research II	ISEN 340
		Capstone Senior Design	ISEN 460
<i>U.S. Military Academy, West Point, New York</i>			
2019	Fall	Foundations of Engr Design & System Mgmt	SE 301

2020	Spring	Capstone Design I	SE 402
		Decision Analysis	SE 385
		Capstone Design II	SE 403
<i>Texas A&M University, College Station, Texas</i>			
2020	Fall	Operations Research II	ISEN 340
		Capstone Senior Design	ISEN 460

COMMITTEES & PROFESSIONAL SERVICE

National Level:

- Industrial & Systems Engineering PE Exam Committee, National Council of Examiners for Engineering and Surveying (NCEES), 2018 – present.
- Triage Judge, Interdisciplinary Contest in Modeling, Consortium for Mathematics and its Application (COMAP), 2007-2008.

University Level:

- Honor Council, Texas A&M University, 2020 – present.
- Dean's Faculty Council, U.S. Military Academy, 2006-2008. Ethics Committee, Documentation of Written Work Subcommittee.
- ABET Accreditation Committee, U.S. Military Academy, 2007-2008.
- Superintendent's Junior Faculty Assessment Advisory Council, U.S. Military Academy, 1999-2000.

College / Department Level:

- Graduate Affairs Committee, Department of Industrial & Systems Engineering, Texas A&M University, 2020-present.
- ABET and AEFIS Task Force, Department of Industrial & Systems Engineering, Texas A&M University, 2020-present.
- Industry / Government Agencies Liaison Task Force, Department of Industrial & Systems Engineering, Texas A&M University, 2020-present.
- Capstone Senior Design Course Coordinator, Department of Industrial & Systems Engineering, Texas A&M University, 2020-present.
- Undergraduate Affairs Committee, Department of Industrial & Systems Engineering, Texas A&M University, 2018-2019.
- Undergraduate Recruitment Task Force, Department of Industrial & Systems Engineering, Texas A&M University, 2018-2019.
- Engineering Management Task Force, Department of Industrial & Systems Engineering, Texas A&M University, 2018-2019.
- College of Engineering Tenure and Promotion Advisory Committee, EASA Representative, Texas A&M University, 2016-2018.
- Committee on Effective Delivery of Engineering Ethics, College of Engineering, Texas A&M University, 2016.

PROFESSIONAL ORGANIZATION AND HONOR SOCIETY MEMBERSHIPS

- Military Operations Research Society (MORS)

- American Society for Engineering Education (ASEE)
- Phi Kappa Phi
- Pi Mu Epsilon

PROFESSIONAL LICENSURE

- Professional Engineer: Commonwealth of Virginia, License Number 0402033972
State of Texas, License Number 133007