

Douglas Ray Burton

Senior Lecturer – The Defense Resources Management Institute



Commander Douglas Burton, USN(ret) is a Senior Lecturer for the Defense Resources Management Institute (DRMI). DRMI is a Department of Defense sponsored education team located in Monterey, California at the Naval Postgraduate School. (January 2017 to Present) At DRMI, he teaches the science of sound decision making in resources constrained environments under conditions of uncertainty. Prior to his position with DRMI, he was a Senior Principal in Operations Research for Sabre Global (May 2014 to January 2017), a world-wide Airline and Hospitality reservations and operations company. Before Sabre, he was the Chair of Applied Systems Analysis and Military Associate Professor in the Operations Research Department of Naval Postgraduate School (NPS)

(September 2006 to May 2013). At NPS, CDR Burton taught courses in operations research, decision analysis, analytics, and risk assessment. He also studied problems in applied systems analysis across a broad spectrum of military applications.

At NPS (September 2006 to May 2013), CDR Burton enjoyed long-term research support from the Assessment Division in the Office of the Chief of Naval Operations (OPNAV N81 - Pentagon) and held a TOP SECRET/SCI clearance until November of 2014. He was also an adjunct faculty member at the Naval War College and a preferred lecturer within the Center for Executive Education at Naval Postgraduate School. In 2007, he earned a Bronze Star for his combat analytical support to the Second Marine Division (forward), Camp Fallujah, Al Anbar Province, Iraq during Operation Iraqi Freedom (MAR 2007 to NOV 2007).

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Teaching and Research Interests

- Applied Probability
- Statistics
- Multi-Criteria Decision Making
- Optimization
- Risk Assessment
- Simulation

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Douglas Ray Burton



May 2014 - January 2017

Operations Research Consulting
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EDUCATION

M.S. in Operations Research, Naval Postgraduate School, MAR 1993.
Thesis: "*Software Reliability. Management through Metrics.*"
M.A. in National Security and Strategic Studies, Naval War College, NOV 2001.
B.S. in Aerospace Engineering, United States Naval Academy, MAY 1985.

WORK EXPERIENCE

Senior Lecturer, DRMI,
The Defense Resources Management Institute (DRMI), JAN 2017-present.

Senior Principal, Operations Research Consulting,
Sabre Global, MAY 2014-JAN 2017.

Chair professor of Applied Systems Analysis, Operations Research Department,
Naval Postgraduate School, SEP 2006-MAY 2013. **Awarded Meritorious Service
Medal for Accomplishments.

Military Associate Professor, Operations Research Department, Naval Postgraduate
School, SEP 2006-MAY 2013. **Awarded Meritorious Service Medal for
Accomplishments.

Systems Engineering Analysis Program Officer, Operations Research and Systems
Engineering Departments, Naval Postgraduate School, SEP 2006-MAY 2013.

Adjunct Professor, Naval War College, JAN 2009-MAY 2013.

Lead Applied Systems Analyst, Second marine Division (forward), Al Anbar
Province, Iraq, MAR 2007 to NOV 2007. ****Awarded Bronze Star for
Accomplishments.**

Director for Campaign Analysis, Commander, U.S. Naval Forces Central Command, Kingdom of Bahrain, SEP 2005-SEP 2006. **Awarded Meritorious Service Medal for Accomplishments.

Commanding Officer, Navy Recruiting District Chicago, JAN 2004-AUG 2005.
**Awarded Meritorious Service Medal for Accomplishments.

Executive Officer, Navy Recruiting District Chicago, APR 2003-JAN 2004.

Executive Assistant, Assessment Division for the Chief of Naval Operations, OPNAV N81, JUN 1999-NOV 2000.

Lead Force Structure Analyst, Assessment Division for the Chief of Naval Operations, OPNAV N81, NOV 1997-JUN 1999. **Awarded Meritorious Service Medal for Accomplishments.

Aircraft Maintenance Officer, Helicopter Anti-Submarine Squadron (Light) FOUR TWO, NOV 1996-NOV 1997 **His Team earned a Sikorsky Golden Wrench as the best maintenance team in the Wing, JAN-DEC1997.

Detachment Officer in Charge, Helicopter Anti-Submarine Squadron (Light) FOUR TWO, MAR 1995-NOV 1996. **Awarded Navy and Marine Corps Commendation Medal for Accomplishments.

Helicopter Pilot and Aircraft Commander, Various Squadrons, NOV 1986-NOV 1997.

RESEARCH AND TEACHING INTERESTS

Applied Probability, Statistics, Multi-Criteria Decision Making, Management Science, Optimization, Risk Assessment, Decision Analysis, Simulation, and helping students learn how to make better decisions through scientific modeling and reasoning.

SECURITY CLEARANCE

Secret, 2017-present
Top Secret (SCI), 1990-2014

HONORS AND AWARDS

JAN 2010-MAY 2013 – Outstanding Teaching recognition, Operations Research Department, multiple citations.

NOV 2007 – Department of Defense Bronze Star for achievements in Combat Analysis, Al Anbar Province, Iraq

SEP 2005-SEP 2006 – Department of Defense Meritorious Service Medal for achievements as Director, Campaign Analysis, U.S. FIFTH Fleet, Kingdom of Bahrain.

JAN 2003-AUG 2005 - Department of Defense Meritorious Service Medal for achievements as Commanding Officer and Executive Officer, Navy Recruiting District Chicago.

NOV 1997-NOV 2000 - Department of Defense Meritorious Service Medal for achievements as Executive Assistant and Lead Force Structure Analyst, OPNAV N81, U.S. Pentagon.

NOV 1996- NOV 1997 – **Officer of the Year for Helicopter Anti-Submarine Squadron (Light) FOUR TWO**

Various Times – 3 Navy and Marine Corps Commendation Medals

Various Department of Defense Campaign and Service Awards

SPECIAL SKILLS

Designated Naval Aviator in November 1986.

Helicopter Pilot and Aircraft Commander with over 2000 Flight Hours in Rotary Wing and Fixed Wing Aircraft.

PROFESSIONAL ORGANIZATIONS

Member, Institute for Operations Research and the Management Sciences

Member, Military Operations Research Society

Member, Military Officers Association of America

Member, Alumni Association, Naval Postgraduate School

Member, Alumni Association, Naval War College

Member, Alumni Association, United States Naval Academy

Member, Naval Helicopter Association

PUBLICATIONS

[1] Burton, et al, 2011, "Value of NPS," Naval Postgraduate School.

[2] Hughes, et al (including Burton), 2011, "Report of Workshop on Retaining Influence in the Western Pacific," Naval Postgraduate School.

[3] Hughes, et al (including Burton), 2009, "The New Navy Fighting Machine: A Study of the Connections between Contemporary Policy, Strategy, Sea Power, naval Operations, and the Composition of the United States Fleet," Naval Postgraduate School.

[4] Burton, D.R., 1993, "Software Reliability, management through Metrics," Naval Postgraduate School.

RECENT PROJECTS AND PRESENTATIONS

Master of Science in Operations Research Theses:

- [1] Advisor – Corley, Nussbaum, 2009, “Evaluating the Impact of the Fully Burdened Cost of Fuel”.
- [2] Advisor – Lin, Lin, 2010, “Optimal operation of Surveillance Towers with Limited Manpower”.
- [3] Advisor – Midgett, Lucas, Posadas, 2008, “Enhancing the operational Effectiveness of the Ground-based operational Surveillance Sensor (G-BOSS)”.
- [4] Advisor – Roscoe, Nussbaum, 2010, “A comparison of the Fully Burdened Cost of Fuel Methodologies Employed across the Department of Defense”.
- [5] Advisor – Wheeler, Salmeron, 2010, “Navy Officer Manpower Optimization Revisited”.
- [6] Advisor – Zappa, Lucas, 2009, “Integrating New Intelligence, Surveillance, and Reconnaissance (ISR) Systems into a Marine Rifle Company”.

Master of Science in Systems Engineering Analysis Projects:

- [1] Advisor – Systems Engineering Analysis Cohort 13 (SEA-13), 2008, “Maritime Interdictions in Logistically Barren Environments”.
- [2] Advisor – Systems Engineering Analysis Cohort 14 (SEA-14), 2008, “Systems Approach to Defeating Maritime Improvised Explosive Devices in U.S. Ports”.
- [3] Advisor – Systems Engineering Analysis Cohort 15 (SEA-15), 2009, “Systems Approach to Designing a Maritime Phase Zero Force for the Year 2020”.
- [4] Advisor – Systems Engineering Analysis Cohort 16 (SEA-16), 2010, “An Integrated Command and Control Architecture Concept for Unmanned Systems in the Year 2030”
- [5] Advisor – Systems Engineering Analysis Cohort 17A (SEA-17A), 2011, “Regional Stability Project”.
- [6] Advisor – Systems Engineering Analysis Cohort 17B (SEA-17B), 2011, “Advanced Undersea Warfare Systems”.
- [7] Advisor – Systems Engineering Analysis Cohort 18A (SEA-18A), 2012, “Recapitalization of Amphibious Operations and Lift”.
- [8] Advisor – Systems Engineering Analysis Cohort 18B (SEA-18B), 2012, “Tailorable Remote Unmanned Combat Craft”.
- [9] Advisor – Systems Engineering Analysis Cohort 19A (SEA-19A), 2013, “Unmanned Undersea Vehicles Project”.
- [10] Advisor – Systems Engineering Analysis Cohort 19B (SEA-19B), 2013, “Directed Energy Weapons Project”.

Master of Systems Analysis Projects:

- [1] Advisor – Ford, Johnson, Millar, Kline, 2013, “Examination of Alternative Ordnance Load-Outs for MH-60 Helicopters Engaged in High Value Unit Defense”.
- [2] Advisor – Bubulka, Jordan, Sparrock, Wray, McLay, 2013, “Non-Combat Evacuation Operations (NEO) Chinhae Naval Base”.
- [3] Advisor – Eason, Harbin, Lay, Gates, Pilnick, Hyink, 2013, “Unmanned Aerial Vehicles (UAVs) Surface Surveillance and Control (SSC)”.
- [4] Advisor – Berry, Toohey, 2013, “Optimizing FRS Training methods”.

- [5] Advisor – Baarson, Briggs, Fox, Scafe, 2012, “Alternative Anti-Submarine Warfare (ASW) Weapons”. **Johns Hopkins/Applied Physics Lab, Excellence in Systems Analysis Award Winner.
- [6] Advisor – Cuba, Olson, Wolf, DeGrange, 2012, “Reduce Cannibalization of Combatants and Amphibious Ships to at or below maximum Allowable Limit”.
- [7] Advisor – Chrisman, Pangrac, Schwarzer, Yost, Schramm, 2012, “Unmanning the Rails: Deploying the Aviation Detachment to Support the Littoral Combat Ship (LCS) Mission”.
- [8] Advisor – Kent, Ventura, Kline, 2012, “Optimizing Littoral Combat Ship (LCS) basing and Crew deployment Concepts to Minimize the Cost of Satisfying U.S. Pacific Command (PACOM) Presence and Warfighting Demand”.
- [9] Advisor – Bowers, Goering, Leiderman, Pilnick, 2012, “Analyzing Lifecycle Lighting Costs on Hospital Ship USNS Comfort (T-AH 20)”.
- [10] Advisor – Hawthorne, Hwang, Kamas, Sharp, Hatch, 2012, “Navy Mobilization Processing Site (NMPS) Manpower Study”. **Johns Hopkins/Applied Physics Lab, Excellence in Systems Analysis Award Winner.
- [11] Advisor – Gallagher, Johnson, Meade, Merrell, Schramm, 2012, “Personality Profile of a Naval Aviator Study”.
- [12] Advisor – Torres, Garcia, Salmeron, 2012, “Theater Airlift Assessment”.
- [13] Advisor – Cunningham, Janke, Mungas, Pritchett, Schramm, 2011, “Analysis of Laser Training Requirement for Norfolk-based Helicopters”. **Johns Hopkins/Applied Physics Lab, Excellence in Systems Analysis Award Winner.
- [14] Advisor – Corpus, Espe, Goulas, Lowe, Hughes, Williams, Ellis, 2011, “Assessing the Effectiveness of the Littoral Combat Ship (LCS) Mine Counter-Measures (MCM) Mission Package”.
- [15] Advisor – Anderson, Hicks, Singham, 2011, “Personnel Recovery Study”.
- [16] Advisor – Glatzel, Gray, Hamrick, 2011, “Analyzing Link-16 Data in a Modeling and Simulation Environment”.
- [17] Advisor – Cao, Viradia, Pilnick, 2011, “Study of MK45 5 inch Major Caliber naval Gun Availability, mean Time Between Repair, Manhours, and Training Correlation”.
- [18] Advisor – Wann, Villanueva, Nguyen, Norbu, Kline, 2011, “Close in Weapons Systems (CIWS) Overhaul Study”.
- [19] Advisor – Carter, Isbell, Pilnick, Hughes, 2011, “Submarine High value unit – Suez Canal Escort Study”. **Johns Hopkins/Applied Physics Lab, Excellence in Systems Analysis Award Winner.
- [20] Advisor – Smith, Farley, Schramm, 2011, “Framework for Analyzing Decision-making in Complex Military Environments”.
- [21] Advisor – Garcia, Ketchell, Scrivner, Shearer, 2011, “Navy Targeting Capability”.
- [22] Advisor – Spangler, McDermott, 2011, “Cost Benefit Analysis of Unmanned Aircraft Systems versus Manned Aircraft Systems”.
- [23] Advisor – Freeze, Rehberg, patel, Schiffman, 2011, “Seal Production Management”.
- [24] Advisor – Dumpit, Gim, Morales, Kline, 2011, “Simulated versus Live Testing”.
- [25] Advisor – Muskeyvalley, Williamson, Burson, 2011, “DoD Individual Protective Equipment management Initiative”.

[26] Advisor - Boardman, Crysel, and Kelly, 2010, "How can BUMED best structure and employ its field hospital reserve force personnel?".

[27] Advisor - O'Connell, Riley, Wilson, 2009, "Naval Special Warfare Demand for Naval helicopter Support".

[28] Advisor - Hazlett, Hightower, Jordan, 2008, "Commercial Helicopter Outsourcing for Vertical Replenishment for Military Sealift Command".

Effects, Metrics and Risk Workshops:

Burton - JAN 2008-MAY 2013, 10 Workshops. Various locations and dates.

Executive Coaching:

Burton JAN 2009-MAY 2013, 8 Executive sessions about Systems Analysis, Assessment and Risk - CEO, CFO and COO level executives. Naval Postgraduate School's Center for Executive Education. Various Dates.