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**TIMOTHY M. CULLEN**  
**Colonel, United States Air Force, Ph.D.**  
**Assistant Professor**

125 Chennault Circle  
Maxwell AFB, AL 36113

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**Education**

- 1990-1994**      ***United States Air Force Academy***
- Bachelor of Science, Astronautical Engineering
- 1994-1996**      ***George Washington University***
- Master of Science, Mechanical Engineering (Aerospace Engineering area of concentration)
- 2006-2007**      ***United States Air Force Air Command and Staff College***
- Master of Military Operational Art and Science
- 2007-2008**      ***United States Air Force School of Advanced Air and Space Studies***
- Master of Airpower Art and Science
  - Thesis “Lethality, Legality, and Reality: Non-Lethal Weapons for Offensive Air Support”
- 2008-2011**      ***Massachusetts Institute of Technology***
- Ph.D., in Engineering Systems: Technology, Management, and Policy
  - Dissertation “The MQ-9 Reaper Remotely Piloted Aircraft: Humans and Machines in Action”

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**Other Education**

- 2013    Leader Development & Education for Sustained Peace Levant Distance Learning Course
- 2013    Safety & Accident Investigation Board President Course
- 2012    Civilian Personnel Management Course, USAF Professional Development
- 2012    Joint Firepower Course, USAF Professional Development
- 2012    Command Post of the Future Operators Course, US Army Professional Development
- 2011    Attack the Network Course, US Army Professional Development
- 2011    Air Combat Command Squadron Commanders Course, USAF Professional Development
- 2005    Dynamics of International Terrorism, USAF Professional Development
- 2004    Middle East Orientation Course, USAF Professional Development

- 2001 Joint Aerospace Command & Control Course, USAF Professional Development
- 2001 Joint Firepower Control Course, USAF Professional Development
- 2000 Flight Safety Officer Course, USAF Professional Development

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## **Honors and Awards**

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- Distinguished Alumni Award—Mount Horeb High School
- Outstanding Graduate—Squadron Officer School
- Distinguished Graduate—Joint Firepower Course
- Distinguished Graduate—Joint Aerospace Command & Control Course
- Distinguished Graduate—Joint Firepower Control Course
- Overall Air-to-Air Top Gun—F-16 Basic Operational Training Course
- Flying Training Award—Specialized Undergraduate Pilot Training
- Winner, NASA Program for Research in Education and Space Technologies Scholarship
- Winner, NCAA Postgraduate Scholarship
- Distinguished Graduate—US Air Force Academy
- Dr. John von Neuman Award for Outstanding Cadet in Astronautical Engineering
- NCAA All-American (Fencing, Epée)
- NCAA Academic All-American

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## **Publications**

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- “Saving Darfur: Seductive Analogies and the Limits of Airpower Coercion in Sudan.” *Strategic Studies Quarterly*, Summer 2009, vol. 3 no. 2, pp. 72-98.
- “Saving Darfur: Seductive Analogies and the Limits of Airpower Coercion in Sudan.” *Air and Space Power Journal Africa & Francophonie*, 4<sup>th</sup> Quarter 2009, pp. 72-92.

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## **Conference Publications**

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- *The MQ-9 Reaper Remotely Piloted Aircraft: Humans and Machines in Action*. Annual Conference for the Society of Military History, “War, Society, and Remembrance,” 14-17 March 2013. New Orleans, LA: Center for the Study of War & Society at the University of Southern Mississippi, 2013.
- *Help from Above: The Efficacy of Air Power in Humanitarian Interventions*. Distinguished Lecturer, Annual International Distinguished Lecture Series, 24-25 September 2014. Taipei, Taiwan: Taiwan National Defense University, 2014.

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## **Citations and Quotes in Other Sources**

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- “Tim Cullen’s dissertation research proved central to my arguments and data in Chapter 4” in “Acknowledgements” of *Our Robots, Ourselves: Robotics and the Myths of Autonomy* by David Mindell, New York, NY: Viking Press, 2015.
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## **Professional Affiliations**

- FAA Certified Flight Instructor, single-engine, land, and seaplane
- Tau Beta Pi Association (National Engineering Honor Society)
- Sigma Gamma Tau (National Aerospace Engineering Honor Society)
- Order of Daedelians (fraternal order of military pilots)
- US Air Force Academy Association of Graduates
- Aircraft Owners and Pilots Association
- President, Maxwell Elementary and Middle School (MEMS) Board (Aug 15-present)
- National Space Society
- The Honorable Order of Saint Barbara (US Field Artillery Association)

## **Professional Experience**

21+ year active-duty career as a commissioned officer in the United States Air Force (USAF)

### **Senior Pilot**

- Over 1,000 hours in the F-16CG or F-16CJ
- Over 250 combat hours and 84 combat missions in Operations DELIBERATE FORGE, DELIBERATE GUARD, ALLIED FORCE, NORTHERN WATCH, or SOUTHERN WATCH
- Deployed twice to Afghanistan for Operation ENDURING FREEDOM and coordinated fire support for Task Force Dagger during Operation ANACONDA

### **Dean of Students and Assistant Professor, School of Advanced Air and Space Studies, Air University, Maxwell AFB, AL (Jul 15-present)**

- **Hallmarks**
  - Student and program administration, course creation and direction, seminar teaching, research advising, academic administration, complex planning, scenario-based war game execution, and DoD policy development.
- Administered 42 students in the School of Advanced Air and Space Studies through the planning, preparation, and execution phases of the most prestigious and challenging academic program in the United States Air Force. Advised 6 students through the thesis process for a Masters in Philosophy in Academic Year 2016; taught “Technology and Military Innovation”, “Space Power”, and “Strategy to Practice” courses in Academic Year 2016; and created and directed the “Technology and Military Innovation” course for Academic Year 2016; one of four “Red Team” members for the development of the Joint Staff’s “Operational Concept for Robotics and Autonomous Systems”; and technology SME for the Joint Staff’s “Future Operating Environment.”

**Director of Staff and Assistant Professor, School of Advanced Air and Space Studies, Air University, Maxwell AFB, AL (Jul 14-Aug 15)**

- **Hallmarks**
  - Faculty and program administration, seminar teaching, research advising, academic administration, complex planning, and scenario-based war game execution
- Administrated the School of Advanced Air and Space Studies' staff of 16 multi-disciplinary military and civilian faculty through the planning, preparation, and execution phases of teaching the most prestigious and challenging academic program in the United States Air Force. Advised 5 students through the thesis process for a Masters in Philosophy in Academic Year 2015 and taught "Technology and Military Innovation", "Space Power", and "Strategy to Practice" courses in Academic Year 2015. "Futures" expert for Office of Net Assessment's 20xx War Games I and II.

**Commander, 7<sup>th</sup> Air Support Operations Squadron, Fort Bliss, TX (Jul 12-Jun 14)**

- **Hallmarks**
  - Leadership, complex planning and budgeting, military operations and planning, organizational development, military liaison
- Commanded training, readiness, and support of 173 personnel, 134 vehicles, and \$37 million in unit assets with a \$400,000 annual budget. Commanded air-control personnel in the largest Air Support Operations Squadron in the United States Air Force in support of the First Armored Division and its Stryker, Heavy and Infantry Brigades. Commander and senior air advisor to an Army Major General and his staff on air and space asset employment. Led his organization through growths of 63% and 111% in personnel and vehicles, respectively.

**Director of Operations, 7<sup>th</sup> Air Support Operations Squadron, Fort Bliss, TX (Oct 11-Jul 12)**

- **Hallmarks**
  - Leadership, complex planning and budgeting, military operations and planning, organizational development, military liaison
- Directed the operations and training programs for 100 air-control personnel and endured the combat readiness of \$13 million in combat weapon systems, communications and support equipment.

**Commander, Peace Vector IV, Gianaclis Air Base, Egypt (Mar 05 – Jul 06)**

- **Hallmarks**
  - Leadership, complex planning and budgeting, military operations and planning, organizational development, government liaison

- Commanded 6-person training and liaison team and was responsible for the health and safety of 35 contractors on a 25-acre compound on an Egyptian Air Base. Advised the Egyptian Air Force Wing Commander on the operations and maintenance of 57 F-16 aircraft. Managed the \$1.7 Billion Peace Vector IV F-16 foreign-military-sales case in Egypt.

**F-16 Flight Examiner, Standardization & Evaluation, 366<sup>th</sup> Operations Group, Mountain Home AFB, ID (Oct 04 – Mar 05)**

- **Hallmarks**
  - Leadership, operational F-16 employment, standardization and evaluation, instructor pilot/mission commander
- Critically assessed aircrew performance during demanding tactical scenarios. Evaluated squadron evaluators for objectivity during evaluation execution. Evaluated squadron and individual aircrew deployment capability, wartime operating procedures, and mission effectiveness. Supervised flying operations for the 366<sup>th</sup> Fighter Wing.

**Flight Commander, 389<sup>th</sup> Fighter Squadron, Mountain Home AFB, ID (Nov 03 – Oct 04)**

- **Hallmarks**
  - Leadership, operational F-16 employment, large-scale project planning and execution, mission commander
- Led 10 combat-ready pilots and monitored and scheduled all their flying activities, upgrade training, and additional duties. Maintained combat readiness in all aspects of the F-16CJ and the “Wild Weasel” mission. Supervised flying operations for the 366<sup>th</sup> Fighter Wing.

**Assistant Director of Operations, 682<sup>nd</sup> Air Support Operations Squadron, Shaw AFB, SC (Feb 01 – Dec 02)**

- **Hallmarks**
  - Leadership, military liaison, operational employment, standardization and evaluation, command and control
- Supervised operations and intelligence in the planning, coordination, and execution of air support operations for Central Command’s only Air Support Operations Center and was the unit’s Standardization and Evaluation Officer.

**Chief of Wing Flight Safety, 31<sup>st</sup> Fighter Wing, Aviano Air Base, Italy (Feb 00 – Jan 01)**

- **Hallmarks**
  - Program management, organizational (airfield) safety

- Directed the Wing Commander's flight safety mishap prevention program, conducted safety inspections and staff assistance visits of subordinate organizations, investigated and reported flight safety mishaps and recommended procedures to prevent or abate similar mishaps, coordinated airfield construction, waivers, and maintenance procedures, and conducted quarterly safety briefings to all wing pilots.

**Chief of Plans, 555<sup>th</sup> Fighter Squadron, Aviano Air Base, Italy (Jun 99 – Feb 00)**

- **Hallmarks**
  - Program management, project planning and execution
- Maintained the organization's conventional and unconventional plans led the unit's training verification program for 32 combat-ready personnel.

**Chief of Training, 555<sup>th</sup> Fighter Squadron, Aviano Air Base, Italy (Nov 98 – Jun 99)**

- **Hallmarks**
  - Program management, project planning and execution
- Led tracking and maintenance of pilot qualifications and currency requirements for 32 personnel.

**Aeronautical Engineer, X-Ray Timing Explorer Satellite, NASA Spaceflight Systems Branch, Goddard Space Flight Center, Greenbelt, MD (Aug 94 – Dec 95)**

- **Hallmarks**
  - Spacecraft integration and testing, data analysis
- Received NASA Goddard Space Flight Center's "Special Act Group Award" as part of the X-Ray Timing Explorer Satellite's Integration and Test Team. Created and organized the Trend Data Package for the X-Ray Timing Explorer Satellite, which allowed spacecraft system engineers to examine satellite subsystem performance characteristics over the environmental test history of the spacecraft.

**Intern for NASA's Launch Vehicle Design Branch, NASA Langley AFB, VA (Aug 93)**

- **Hallmarks**
    - Quantitative analysis of orbital and space vehicle re-entry dynamics.
  - Analyzed launch vehicle entry and abort profiles for single-stage space vehicles. Competitively selected for position as part of the USAF Academy's summer research program.
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