

MICHAEL CRAIG HATFIELD

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EDUCATION:

1999	PhD	Electrical/Aerospace Engineering, University of Alaska Fairbanks
1987	MSEE	Electrical Engineering, California State University Fresno
1984	BSEE	Electrical Engineering, Ohio Northern University

PROFESSIONAL EXPERIENCE:

2013-present	Assistant Professor, Electrical/Computer Engineering, UAF Earth & Planetary Remote Sensing, UAF Geophysical Institute Associate Director for Science & Education, Alaska Center for Unmanned Aircraft Systems Integration (ACUASI)
2009-2012	Director, Air Force Research Laboratory Air Vehicles Directorate
2006-2009	Deputy Director, Air Force Office of Scientific Research
1999-2003	Deputy Head, USAF Academy Department of Astronautics
1992-1996	Assistant Professor, USAFA Department of Astronautics

PROFESSIONAL ORGANIZATIONS:

- Institute of Electrical and Electronics Engineers
- American Institute of Aeronautics and Astronautics
- American Society of Engineering Educators
- Alaska Mining Association
- Academy of Model Aeronautics
- American Geophysical Union
- Tau Beta Pi

AWARDS AND HONORS:

- 2001 William P. Clements Award for the Outstanding Educator in Astronautics (USAFA)
- 1994 John P. Wittry Award for the Outstanding Instructor in Engineering Design (USAFA)

REFEREED JOURNAL ARTICLES:

- Christie, K., S. Gilbert, C. Brown, M. Hatfield, L. Hansen, Unmanned aerial systems in wildlife research: current and future applications of a transformative technology, *Frontiers in Ecology and the Environment*, June 2016

MAGAZINE ARTICLE:

- Meyer, F., M. Hatfield, R. Collins, The IEEE Alaska Section GRSS Chapter: Remote Sensing of the Last Frontier, *IEEE Geoscience & Remote Sensing Magazine*, December 2016

REFEREED CONFERENCE PROCEEDINGS AND ABSTRACTS:

- Hatfield, M., C. Cahill, J. Monahan, UAS Curriculum for Students using an Active Learning Approach, ASEE Annual Conference, 2017
- Hatfield, M., P. Dewane, L. Graves, J. Monahan, C. Cahill, Low-Cost Fixed-Wing Construction Techniques for UAS Curriculum, ASEE Annual Conference, 2017
- Hatfield, M., J. Monahan, D. Thorsen, C. Cahill, Employing Unmanned Aircraft Systems to Actively Engage Students and Build Local Aerospace Infrastructure, AIAA SciTech Conference, 2017
- Hatfield, M., C. Cahill, J. Monahan, S. Vanderwaal, C. France, L. Graves, Systems Engineering Design Process in Active Learning, ASEE Annual Conference, 2016
- Hatfield, M., J. Monahan, S. Kibler, P. Dewane, S. Hoffman, A. Upton, Application of 3D Printed and Composites Technology to UAS Development, ASEE Annual Conference, 2016
- Hatfield, M., J. Monahan, S. Kibler, P. Dewane, S. Hoffman, A. Upton, Application of 3D Printed and Composites Technology to UAS Development, ASEE Annual Conference, 2015
- Hatfield, M., C. Cahill, J. Monahan, S. Vanderwaal, C. France, L. Graves, P. Dewane, UAS Systems Engineering Design Process in Active Learning ASEE Annual Conference, 2015
- Cunningham, K., M. Hatfield, L. Samsó Pericón, Unmanned Aircraft Systems for Geotechnical Monitoring of Pipelines in the Arctic, Arctic Technology Conference, 2015
- Cunningham, K., M. Hatfield, R. Philemonoff, Unmanned Aircraft Systems in Alaskan Civil Research, Arctic Technology Conference, 2014

OTHER CONFERENCE PARTICIPATION:

- AUASIG 2017, Fairbanks, AK
- AUASIG 2016, Anchorage, AK
- AUASIG 2015, Fairbanks, AK
- AUVSI 2014, Orlando, FL
- ASMC 2016, Fairbanks, AK (invited speaker)
- ASMC 2014, Anchorage, AK (invited speaker)
- AMA 2016, Fairbanks, AK (invited speaker)
- AMA 2015, Anchorage, AK (invited speaker)

RESEARCH PROJECTS DIRECTED BY DR. MICHAEL C. HATFIELD:

Dates	Title	Agency	Amount
May 2015 – Apr 2017	Use of Unmanned Aircraft Systems (UAS) and Unmanned Ground Vehicles (UGV) for Emergency Response and Disaster Preparedness in Mining Applications	Sumitomo (Pogo) Mine	\$80,000
Sep 2015 – Oct 2017	Unmanned Vehicles for Mine Safety Operations and Training	MSHA (DoL)	\$134,069
Oct 2015 – Sep 2016	Unmanned Aircraft Systems (UAS) Integration in the National Airspace System (NAS) Project: Live, Virtual, Constructive - Distributed Environment (LVC-DE) Connection Development	NASA	\$355,899
Oct 2015 – Sep 2016	Unmanned Aircraft Systems (UAS) Integration in the National Airspace System (NAS) Project: UAS Traffic Management (UTM)	NASA	\$218,015
Mar 2017 – Sep 2017	NASA Unmanned Aircraft Systems (UAS) Traffic Management (UTM) Project Activities	NASA	\$247,409
Jul 2015 – Jul 2018	Unmanned Aviation Systems for Stand-Level Assessment of Forest Insect Damage	USFS	\$144,000
Jan 2015 – Feb 2015	EPA UAS Ordnance Plume	EPA	\$13,000
Oct 2014 – Oct 2016	BLM's Unmanned Aircraft Systems (UAS) Resource Management Operations	BLM (DoI)	\$109,659

Acronyms

ACUASI	Alaska Center for Unmanned Aircraft Systems Integration
AFOSR	Air Force Office of Scientific Research
AFRL	Air Force Research Laboratory
AIAA	American Institute of Aeronautics and Astronautics
AMA	Alaska Mining Association
ASEE	American Society of Engineering Educators
ASMC	Alaska Surveying and Mapping Conference
AUASIG	Alaska Unmanned Aircraft Systems Interest Group
AUVSI	Association for Unmanned Vehicle Systems Integration International
BLM	Bureau of Land Management
DoI	Department of Interior
DoL	Department of Labor
EPA	Environmental Protection Agency
GRSS	Geoscience and Remote Sensing Society
IEEE	Institute of Electrical and Electronics Engineers
LVC-DE	Live, Virtual, Constructive – Distributed Environment
MSHA	Mine Health and Safety Administration
NASA	National Aeronautics and Space Administration
TCL	Technology Capability Level
UAF	University of Alaska Fairbanks
UAS	Unmanned Aircraft Systems
USAFA	United States Air Force Academy
USFS	United States Forestry Service
UTM	UAS Traffic Management