

Eric Feron
Professor of Electrical, Computer, and Mechanical Engineering
King Abdullah University of Science and Technology
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Eric Feron

Date: April 2020

Full Name: Eric Marie Jacques FERON

Professor of Electrical Engineering, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia

Professor of Aerospace Engineering, Georgia Institute of Technology, USA. On leave.

Title of Thesis for Most Advanced Degree: Linear Matrix Inequalities for the Problem of Absolute Stability of Automatic Control, Stephen Boyd Advisor

Principal Fields of Interest: System Guidance and Control, Optimization, and Computer Science with applications to autonomous aerial vehicles, air transportation systems, and embedded software.

Name and Rank of Faculty in related Fields at KAUST

Meriem Laleg, Electrical and Computer Engineering

Jeff Shamma, Electrical and Computer Engineering

Shinkyu Park, Electrical and Computer Engineering

Name of Other Faculty in related Fields at other institutions

Pierre Apkarian, ONERA Toulouse

Hamsa Balakrishnan, MIT

Alex Bayen, UC Berkeley

Venkataramanan Balakrishnan, Case Western U.

Carolyn Beck, UIUC

Stephen Boyd, Stanford University

John-Paul Clarke, UT Austin

Mark Costello, Georgia Tech

Munther Dahleh, MIT

John Doyle, Caltech

Geir Dullerud, UIUC

Emilio Frazzoli, ETH Zürich

Pierre-Loic Garoche, ONERA Toulouse

Steven. R. Hall, MIT

Naira Hovakimian, UIUC

Jerôme Hugues, Software Engineering Institute / CMU

R. John Hansman, MIT

Eric Johnson, Penn State U.

Cedric Langbort, UIUC

Naomi Leonard, Princeton

Alex Megretski, MIT
Richard Murray, Caltech
Arkadiy Nemirovski, Georgia Tech
Alessandro Orso, Georgia Tech
Santosh Pande, Georgia Tech
Pablo Parrilo, MIT
Amy Pritchett, Penn State U.
Daniela Rus, MIT
Jean-Jacques Slotine, MIT
Shankar Sastry, UC Berkeley
Peter Seiler, U. Minnesota
Jason Speyer, UCLA
Robert Stengel, Princeton
Panagiotis Tsiotras, Georgia Tech
Patricio Vela, Georgia Tech
Yorai Wardi, Georgia Tech
Marilyn Wolf, U. of Nebraska, Lincoln

I EARNED DEGREES

<u>School</u>	<u>Degree</u>	<u>Date</u>
Stanford University	Ph.D.	01/1994
École Polytechnique	DEA (equivalent M.S.)	09/1990
École Polytechnique	B.S.	09/1989
<i>Special training</i>		
East-Coast Aero-Club	FAA Private Pilot	06/1997
Ecole Polytechnique	Navy Officer of the Watch	03/1987

II EMPLOYMENT HISTORY

<u>Employer</u>	<u>Position</u>	<u>Beginning</u>	<u>Ending</u>
King Abdullah U. of Sc. and Tech.	Professor	2019	----
Tangibles that Teach	Chief Scientist	2020	----
Inst. Sup. Aero. Espace	Associate Researcher	2017	2018
Surentez, LLC.	Chief Scientist	2014	2016
Ecole Nationale Aviation Civile	Consulting Professor	2012	----
Georgia Institute of Technology	Professor	2005	2021
Nascent Technology Corp.	Chairman Board	2002	2005
Massachusetts Inst. Technology	Associate Professor	1999	2005
Massachusetts Inst. Technology	Assistant Professor	1993	1999
Ministry of Defense, France	Engineer	1990	1993

III TEACHING

A INDIVIDUAL STUDENT GUIDANCE

A1. Postdoctoral Fellows

Mohammad Shahab (2020)
Adaptive control, robotics

Sang Hyun Kim (2013)
Air Transportation
Korea Aerospace University

Alireza Esna-Ashari (2012-2014)
Control Systems and Software Engineering

Erwan Salaun (2008-2010)
Air Transportation
GNC research scientist, SAFRAN

Mazen Farhood (2006-2007)
Control Systems
Associate Professor, Virginia Tech

Viswesh Kulkarni (2002-2004)
Control Systems
Research Professor, U. Colo. Boulder

Berenice Mettler (2001-2005)
Human factors and Control Systems
Associate Professor, U. of Minnesota

Yong Wang (2001-2003)
Control Systems and Software Engineering
Professor, Beijing University

Jae Hyuk Oh (1995-1997)
Air Transportation
United Technologies Research Center

A2. Ph.D. Students

Doctoral Theses, Supervisor

M. W. McConley,
Major: Control Systems
Graduation: 01/97
"A computationally Efficient Lyapunov-Based Procedure for Control of Nonlinear Systems with Stability and Performance Guarantees".
Current Position: Technical Staff, Draper Laboratory.

N. Pujet
Major: Air Transportation
Graduation: 08/99
Thesis title: "Modeling and Control Airport of Departure Processes at Busy Airports".
Current Position: VP Research, Level 3 optical communication systems.

E. Frazzoli,
Major: Control Systems
co-Advisor: Munther Dahleh
Graduation: 08/2001
Thesis title: "Robust hybrid control for autonomous vehicle motion planning".
Current Position: Professor, ETH Zurich, Co-founder, Nutaunomy

L. McGovern,
Major: Optimization

Graduation: 05/00

Thesis title: "Computational Analysis of Real-Time Convex Optimization for Control Systems".

Current Position: Loral Corp.

Vladislav Gavrilets

Major: Robotics

Graduation: 08/03

Thesis Title: "Autonomous aerobatic maneuvering of miniature helicopters".

Current Position: Technical Fellow, Rockwell-Collins.

S. Gentry,

Major: Robotics and Human-Centered Engineering

Graduation: 06/05

Thesis Title: "Dancing cheek to cheek : haptic communication between partner dancers and swing as a finite state machine".

Current Position: Professor of Mathematics (tenured), US Naval Academy. Research fellow, Johns Hopkins U.

J. DeMot,

Major: Robotics

Graduation: 06/05

Thesis Title: "Optimal agent cooperation with local information"

Current Position: Leadership, the Coca-Cola company

F. Carr

Major: Air Transportation

Graduation: 01/04

Thesis Title: "Robust Decision-Support Tools for Airport Surface Traffic"

Current Position: Technical Staff, Draper Laboratory

Chris Dever

Major: Autonomy

Graduation: 08/04

Thesis Title: "Path planning of unmanned helicopter using parameterized aggressive maneuvers and Integer Programming"

Current Position: Technical staff, Draper Laboratory

Z. H. Mao

Major: Neuroscience

Co-Advisor: Steve Massaquoi

Graduation: 06/05

Thesis Title: "Modeling the role of the basal ganglia in motor control and motor programming"

Current Position: Associate Professor (tenured), University of Pittsburgh

T. Schouwenaars,

Major: Autonomy

Co-Advisor: Jonathan How

Graduation: 08/05

Thesis Title: "Safe trajectory planning for multiple unmanned vehicles"

Current Position: Financial Analyst, Goldman Sachs

Mardavij Roozbehani,

Major: Software Analysis

Co-Advisor: Alexandre Megretski

Graduation: 08/08

Thesis Title: "Optimization of Lyapunov Invariants in Analysis and Implementation of Safety-Critical Software Systems".

Current Position: Principal Research Engineer, MIT

Animesh Chakravarthy,

Major: Traffic Engineering

Co-Advisor: Jaime Peraire

Graduation: 11/06

Thesis Title: "Safety of a multi-vehicle system in mixed communication environments"

Current Position: Associate Professor (tenured), Wichita State U.

J H Yang,

Major: Human Centered-Engineering

Co-Advisor: Joseph Coughlin

Graduation: 08/07

Thesis Title: "Analysis and Detection of Driver Fatigue Caused by Sleep-deprivation" Current

Position: Associate Professor, Kookmin University, Korea

Jerome Le Ny

Major: Control Systems

Co-Advisor: Munther Dahleh

Graduation: 08/08

Thesis Title: "Performance Optimization for Unmanned Vehicle Systems"

Current Position: Assistant Professor, Université Polytechnique de Montréal

Keumjin Lee

Major: Air Transportation

Co-Advisor: Amy Pritchett

Graduation: 12/07

Thesis Title: "Describing Airspace Complexity: Airspace response to disturbances"

Current Position: Assistant Professor, Korea Aerospace University

Maxime Gariel

Major: Air Transportation

Graduation: 08/2010

Thesis Title: "Towards a Graceful Degradation of Air Traffic Management Systems"

Current Position: Chief Technology Officer, Cavorite Research.

Pierrick Burgain

Major: Air Transportation
Graduation: 01/2013
Thesis Title: "On the Control of Airport Departure Operations"
Current Position: Financial Analyst, Capital One

Mehrdad Pakmehr,
Major: Control Systems
Graduation: 06/2013
Thesis title: TOWARDS VERIFIABLE ADAPTIVE CONTROL OF GAS TURBINE ENGINES"
Current Position: SF Bay Area Controls Startup Optoxense.

Sang Hyun Kim,
Major: Air Transportation
Graduation: 08/2013
Thesis title: AIRPORT CONTROL THROUGH INTELLIGENT GATE ASSIGNMENT
Current Position: Research Engineer, Department of Transportation, Korea

Timothy Wang
Major: Software Engineering
Graduation: 08/2015
Thesis title: Credible autocoding of hierarchical control systems
Current Position: Research Engineer, United Technologies Research Center.

Romain Jobredeaux
Major: Software Engineering
Graduation: 08/2015
Thesis title: Analysis of credibly autocoded software
Current position : Google, Inc.

Emmanuel Boidot
Major: Robotics
Expected Graduation: 12/2017
Thesis title: Path Planning in Ambush Games
Current position: Research Engineer, Waymo, Silicon Valley

Aude Marzuoli
Major: Air Transportation
Graduation: 08/2015
Thesis Title: Multimodal Operations during Major Air Transportation Disruptions.
Current Position: Verizon Research, Palo-Alto

Romarc Breil (co-advisor, Ecole Nationale de l'Aviation Civile, France)
Major: Air Transportation and Computer Science
Graduation: 10/2017
Thesis Title: Emergent behaviors in decentralized air transportation operations.
Current Position: Research Engineer, Cap Gemini.

Raphael Cohen (co-tutelle with ONERA-Toulouse, France)
Major: Software Engineering
Graduation: 12/2018
Thesis title: Certification of embedded optimization algorithms for online vehicle guidance
Current Position: Research Engineer, Aptiv

Guillaume Davy (co-advisor, ONERA-Toulouse, France)
Major: Software Engineering
Graduation: 12/2018
Thesis title: Semantics of autotuned optimization programs.

Yong-Eun Yoon (co-advised with Eric Johnson)
Major: Control Systems
Graduation: 05/2019
Thesis title: High gain control based on the analysis of limit cycle oscillation in piecewise linear systems.

Thomas Gurriet (co-advised with Aaron Ames, Caltech)
Major: Control systems
Graduation: 2020
Thesis title: Applied Safety Critical Control

Mark Mote (co-advised with Magnus Egerstedt)
Major: Control systems
Expected graduation: 2021
Thesis: Safety verification of open experimental testbeds.

Philippe Monmousseau (co-advised with Daniel Delahaye, ENAC)
Major: Controls
Graduation: 2021
Thesis: Big data for Aerospace applications

Hanqing Zhu
Major: Robotics
Expected graduation: 2022
Thesis: Foundations of Robotics Intelligence.

Olatunde Sanni (co-advised with Brian German)
Major: Controls
Expected graduation: 2022

Kerianne Hobbs
Major: Controls and Formal Methods
Graduation: March 2020
Thesis title: Elicitation and Formal Specification of Run-Time Assurance Requirements for

Aerospace Collision Avoidance Systems

Joel Dunham (co-advised with Eric Johnson, Brian German)

Major: Control and Information Systems

Graduation: May 2020

Thesis title: Risk Analysis Framework for UAS

Corbin Klett

Major: Controls and Formal Methods

Expected graduation: 2021

Thesis: Formal methods for aerospace system validation.

Pablo Afman

Major: Robotics

Status: Dropout of PhD program

Thesis: Stable maneuver automata and aerospace applications.

Remark: Dropped out of the program to join Yamaha Marine Motors, Inc.

Gabriel Jarry (co-advised with Daniel Delahaye, ENAC)

Major: Big Data and Air Transportation

Expected graduation: 2020.

Thesis: Data science for detection of non-conforming approaches.

Matthew Abate (co-advised with Sam Coogan)

Major: Robotics

Expected graduation: 2021

Thanakorn Khamvilai

Major: Aerospace Engineering

Subject: Ultra-reliable, low cost avionics

Expected graduation: 2021

Jeremy Epps

Major: Aerospace Engineering

Subject: Aerial Robotics, modular drones, aerodynamics of many-rotor systems.

Expected graduation: 2022

Kevin Garanger

Major: Aerospace Engineering

Subject: Aerial Robotics, modular drones, Decentralized control

Expected Graduation: 2021

Clara Buire

Major: Air Transportation

Geoffrey Scozzaro
Major: Air Transportation

Bilal Maassarani
Major: Robotics

Amin Almozal
Major: Robotics

Norah Alghamdi
Major: Robotics

Obadah Wali
Major: Robotics

Mohammad Aljohani
Major: Robotics

Renzo Caballero
Major: Robotics

Eder Baron Prada
Major: Power Systems

Hassan Abdelraouf
Major: Control Systems

Safa Saber
Major: Control Systems

A3. M.S. Students

S.M. Theses

C. Sabol, MIT, "Application of Sun-Synchronous, Critically Inclined Orbits of Global Personal Communications Systems," February 1994.

F. Niles, MIT, "Noise Covariance Change Detection Using Kalman Filtering", May 1996.

L. Lintreux, MIT, "Optimal Trajectory Determination for Strapdown IMU Calibration", May 1996.

X. Paternot, ETH Zurich, "F18-SRA analysis via Wavelets and Identification", May 1996.

L. Duchesne, MIT, "A Novel Algorithm for Flutter Boundary Determination", January 1997.

M. Shewchun, MIT, "Linear Matrix Inequalities for Control Problems with Pointwise-in-Time Constraints", August 1997.

A. Turevskiy, MIT, "Flutter Boundary Prediction Using Experimental Data", January 1998.

C. Sanders, MIT, "Real-Time Collision Avoidance for Autonomous Air Vehicles", January 1998.

G. Desilles, MIT, "Differential Kolmogorov Equations for Transiting Processes", May 1998.

B. Lintereur, MIT, "Control System Design Using Convex Constraint Specification and Youla Controller Parameterization", May 1998.

B. Delcaire, MIT, "Dealing with Airport Congestion: Development of Tactical Tools for the Departure Flows from a Large Airport", May 1998.

A. Budge, MIT, "Aerodynamic Fuze Characteristics for Trajectory Control", May 1998.

S. George, MIT, "The Effect of Configurational Asymmetries on Projectile Aerodynamics, Stability, and Guidance", May 1998.

M. Jamoom, MIT, "Constrained Optimization for Hierarchical Control System Design", May 1999.

H.-F. Vuong, MIT, "Modeling and Analysis of Software Specifications for an Autonomous Aerial Vehicle", May 1999.

K. Andersson, MIT, "Potential Benefits of Information Sharing During the Arrival Process at Hub Airports", May 2000.

A. Shterenberg, MIT, "Instrumentation and System Identification for a Small Autonomous Helicopter", September 2000.

Z.-H. Mao, MIT, "Stability and Performance of Intersecting Aircraft Flows under Decentralized Conflict Resolution", May 2000.

F. Carr, MIT, "Stochastic Modeling and Control of Surface Traffic", February 2001.

T. Schouwenaars, KU Leuven, "Path planning of several vehicles using mixed-integer programming" 2001, KU Leuven

D. Dugail, MIT, "En-route airspace capacity under flow separation and scheduling constraints", 2002

K. Sprague, MIT, Avionics System for highly agile autonomous Systems 2002

I. Martinos, MIT, "Path Planning for highly agile autonomous systems" 2003

Ji Hyun Yang, MIT, "Development of a Performance-Based Approach for Collision Avoidance and Mitigation, May 2003

Mario Valenti, MIT, "reconfigurable guidance systems", June 2003.

M. Ishutkina, MIT, "Design and analysis of safe laboratory flight systems", completed 06/04

Rodin Lyasoff, MIT, "Syntax-based guidance for autonomous aggressive aerobatics in urban environments." Completed 08/04

Emily Craparo, MIT, "Natural language processing for unmanned aerial vehicle guidance interfaces": Completed 06/04

Farmey Joseph, MIT: "planning randomized paths for personnel and vehicle security management", 06/05.

Greg Marks, MIT : "Flexibility in Unmanned Rotorcraft design", 06/05

Olivier Toupet, MIT: "Path planning of Unmanned Rotorcraft using Linear and Integer Programming", 01/06.

K. Sprague, MIT Technology & Policy Program, "Civilian applications and policy implications of commercial unmanned aerial vehicles" 08/04

Phillip Root, MIT, "Randomized path planning for invasion route reconnaissance by unmanned aerial helicopters", 06/05.

Glenn Tournier, MIT "Six degrees of freedom estimation using monocular vision and moiré patterns", 05/2006

Nicolas Barbieri, Georgia Tech – "Positioning applications of lenticular sheets" – 05/2008

Aude Marzuoli - Georgia Tech "Enroute Air Traffic Optimization under Nominal or Perturbed Conditions, on a 3D Data-Based Network Flow Model", 05/2012

Timothee Cazenave - "Peak-Seeking Control of Propulsion Systems", 05/2012

Troy Hand , "Self-Organized Traffic Flows: A Sequential Conflict Resolution Approach", 2013

Raphael Cohen (ENSMA, France) "Modeling and control of small jet engine", September 2014.

Tom Guillaumet "System-on-a-chip architectures for safety-critical applications", May 2017.

Hélène Piquet "Performance metrics for the air transportation system", May 2017.

Louis Sutter "Online safety-critical algorithm reallocation on multicore architectures", August 2019.

Kevin Garanger, "3D printing computational infrastructure" june 2018.

Gabriel Jarry, "New air transportation performance measures to support Air Navigation Service Providers", September 2017.

Elaud Amegboh, "Semantics for Multiphysics Simulations", September 2017.

A4. Undergraduate Students

S.B. Theses

Christophe Martin 1995, Ecole Polytechnique SB thesis

A. Otero Saenz and D. Matsumoto, "Control of a Tethered Grapple," 1997. Award Winning team.

D. McIvor, "Experimental Evaluation of an Artificial Vision System", 1997.

P. Kuo, K. Peters and T. Wang, "Modeling an Airline Operations Center," UROP project, 1997-98.

K. Dyer, P. Eremenko and J. Markish, "Autonomous Helicopter Supervisory Control," UROP project, 1997-98.

M. Pirri, "Analysis and Design of an Airport Simulation Tool," UROP project, 1998.

P. Elliott and Benjamin Ingram, "Automatic Control of an Autonomous Helicopter", 1999.

A. Matusevski and A. Shterenberg, "Analysis and design of mechanical and electronic data processing system for autonomous vehicle system inertial management unit.", 1999.

T. Borrego and J. Wright, "Helicopter aggressive maneuvering: Human performance", 1999.

T. Melconian, "Open-loop vibrational magnetic control of small devices", 1999.

M. Coudyser, "abstract interpretation for linear control systems", 2001

Timothee de Mierry "Ground Vibration test of Hind Helicopter", 2002

Adrian Townsend and John Sims, "Air-Levitated Systems," 2004.

Timothée Hunter, "Landing of autonomous helicopters at unusual attitudes," 2007.

Keenan Jones, David Miculescu “Peak Seeking control of propulsion systems”, 2011-2012.

Mark Mote, Corey Mercurio “Aerospace information systems security”, 2014.

Matthieu Capuano “Miniature educational control experiment”, 2017.

Katherine Kwasniak and Madison Stein “Zero-g atmospheric environments: applications and customer discovery” 2017-2018

Shaheer Sajit “Dynamics of extruded materials” 2017-2018

Joseph Bakhtiar “agile drones” 2017-2018

Morgan Cook and Brian Kaplan “Miniature educational control experiment”, 2017-2018.

A.5 Doctoral Theses, Reader and committee membership

K. Y. Yang, “Efficient Design of Robust Controllers for H2 Performance”, MIT, 1997.

P. Miotto, “Fixed Structure methods for Flight Control Analysis and Automated Gain Scheduling”, MIT, 1997.

J. F. Bosc, “Techniques d’évitement réactif et simulation du trafic aérien”, (Reactive conflict avoidance and simulation of air traffic). ENAC, Toulouse, France. 1998

K. Gandhi, “Nonlinear Modeling and Characterization Techniques for Phase Transitions in Electro-Mechanically Coupled Devices”, MIT, 1998.

R. Kornfeld, “The Impact of GPS Velocity Vector Based Flight Controls on Flight Instrumentation Architecture”, MIT, 1999.

W. Hall, “Efficient Capacity Allocation in a Collaborative Air Transportation System”, MIT, 1999.

William Kaliardos, “Semistructured Decision Processes”, MIT, 1999.

Gregory Mallory, “Development and Experimental Validation of Direct Controller Tuning for Spaceborne Telescopes”, MIT, April 2000.

Jorge M. Gonçalves, “Stability Analysis of Hybrid Systems”, MIT, September 2000.

Jerry Wohletz, “Retrofit Systems for Reconfiguration in Civil Aviation”, MIT, January 2000.

Olivier DeWeck, “Multivariable isoperformance methodology for precision opto-mechanical systems”, MIT.~2000

Kuan Hang Chen, “Data-rich correlations”, MIT.~2000

Shen-Fang Liao, “Robust Control of Surge and Rotating Stall in an Axial Compressor”, MIT, September 2000.

David Benson, “A Gauss pseudospectral transcription for optimal control”, MIT, 2005.

Alvar Saenz-Otero, :”[Design Principles for the Development of Space Technology Maturation Laboratories Aboard the International Space Station.](#)”MIT, 2005.

Arthur Richards, “Robust constrained model predictive control”, MIT, 2005.

Erwan Salaun, “FILTERING ALGORITHMS AND AVIONICS SYSTEMS FOR UNMANNED AERIAL VEHICLES”, 01/09, Ecole des Mines, Paris, France.

Gauthier Hattenberger: “ Vol en Formation sans Formation” (Formation Flight without Training). Laboratoire d’Automatique et d’Analyse des Systèmes + ENAC, France. 2009.

Assale Adje: “Optimisation et jeux appliqués à l’analyse statique de programmes par interprétation abstraite”, (Optimization and games applied to static program analysis via abstract interpretation), Ecole Polytechnique, France. 2010

Raphael Deaux, (ENAC, France) “Airport control systems”, 2009.

Efsthathios Bakolas “OPTIMAL STEERING FOR KINEMATIC VEHICLES WITH APPLICATIONS TO SPATIALLY DISTRIBUTED AGENTS”, 2011, Georgia Tech.

Raghvendra V Cowlagi “Hierarchical Motion Planning for Autonomous Aerial and Terrestrial Vehicles”, 2010, Georgia Tech.

Allen Wu, “Vision-Based Navigation and Mapping for Flight in GPS-Denied Environments” , 2010,Georgia Tech.

Jonathan Nusse, “Adaptive control” ~2009. Georgia Tech.

Bhenood Gholami “[Closed-Loop Control for Cardiopulmonary Management and Intensive Care Unit Sedation using Digital Imaging](#)”, 2010.Georgia Tech.

Claus Christmann Multi-hop multi-UAS surveillance systems , 2011, Georgia Tech.

Olivia Pinon, “A METHODOLOGY FOR THE VALUATION AND SELECTION OF ADAPTABLE TECHNOLOGY PORTFOLIOS AND ITS APPLICATION TO SMALL AND MEDIUM AIRPORTS”, 2012, Georgia Tech.

Yimin Zhao “EFFICIENT AND ROBUST AIRCRAFT LANDING TRAJECTORY

OPTIMIZATION”, 2011, Georgia Tech.

Efstathios Bakolas "OPTIMAL STEERING FOR KINEMATIC VEHICLES WITH APPLICATIONS TO SPATIALLY DISTRIBUTED AGENTS", October 2011, Georgia Tech.

Jean Francois Castets " RELIABILITY, MULTI-STATE FAILURES AND SURVIVABILITY OF SPACECRAFT AND SPACE-BASED NETWORKS", 12/12, Georgia Tech.

Greg Dubosc "Satellite Flexibility", 2009, Georgia Tech.

Ioannis Simaiakis (MIT) “Airport operations optimization”, Massachusetts Institute of Technology.09/26/2012

Nour Dougui (ENAC, rapporteur) “Aircraft trajectories planning : light propagation model”, 2009

Adan Vela, "Understanding Conflict-Resolution Taskload: Implementating Advisory Conflict-Detection and Resolution Algorithms in an Airspace", 2011.

Ryder C Winck: “SIMULTANEOUS CONTROL OF COUPLED ACTUATORS USING SINGULAR VALUE DECOMPOSITION AND SEMI ON-NEGATIVE MATRIX FACTORIZATION”, 08/2012 . Georgia Tech

Mike Ward: “ADAPTIVE GLIDE SLOPE CONTROL FOR PARAFOIL AND PAYLOAD AIRCRAFT” (2012) Georgia Tech.

Shanewaz Siddique: COMPLEX SYSTEMS: FAILURE MECHANISMS AND MITIGATION STRATEGIES. (2013) Georgia Tech.

Carlos Montalvo: "META AIRCRAFT FLIGHT DYNAMICS AND CONTROLS", 11/2013. Georgia Tech.

Mickael Lefebvre (ISAE-Supaéro, jury president): Contrôle d’altitude des avions de transport pour approches à pente raides (Altitude control of commercial aircraft for steep descent approaches). (2011)

Cyril Allignol (ENAC, jury president) : Planification de trajectoires pour l'optimisation du trafic aérien. (Trajectory planning to optimize air traffic) (2012)

Philip Y. Twu : " CONTROL OF MULTI-AGENT NETWORKS: FROM NETWORK DESIGN TO DECENTRALIZED COORDINATION", 05/2012, Georgia Tech.

Murat BRONZ (ISAE-Supaero, Rapporteur and jury president, 10/1/2012): a methodology to design long endurance mini unmanned aerial vehicles .

Vlad Popescu: A modular process for the Optimal Design of Airspace Structures. Georgia Tech,

2012.

David Rey (LICIT, Traffic Engineering and Transportation laboratory, Grenoble): Minimisation des conflits aériens par des modulations de vitesse. PhD Thesis. December 14, 2012.

Clement Peyronne (ENAC, Toulouse): Modélisation mathématique et résolution automatique de conflits par algorithmes génétiques et par optimisation locale continue. ENAC. December 12, 2012.

Kairat Tastambekov (INSA, Toulouse): Aircraft Trajectory Prediction by Local Functional Regression in Sobolev Space. ENAC. December 18, 2012. President Jury.

Hancao Li: "Modeling and Control of a Pressure-Limited Respirator and Lung Mechanics System using a Multi-Compartment Model", 2013, Georgia Tech.

Oscar Gonzalez: "Dimensionnement et contrôlabilité de configurations avion innovantes", ENAC, 2013.

Evan McClain "Metroplex Identification, Evaluation, and Optimization, Georgia Institute of Technology, March 2013

René Valenzuela, "Compact reliability and maintenance modeling of complex repairable systems", 2013

Antoine Varet, " Conception, Mise en OEuvre et Évaluation d'un routeur embarqué pour l'avionique de nouvelle génération (certifiable router for air transport applications)". ENAC. October 2013. jury president

Mohammad Ghasemi Hamed: " Méthodes non-paramétriques pour la prévision d'intervalles avec haut niveau de confiance : application à la prévision de trajectoires d'avions"; ENAC, January 2014

Yasin Yazicioglu, " DECENTRALIZED GRAPH PROCESSES FOR ROBUST MULTI-AGENT NETWORKS", 08/2014. Georgia Tech.

Yusun Lim: " GAME THEORETIC DISTRIBUTED COORDINATION: DRIFTING ENVIRONMENTS AND CONSTRAINED COMMUNICATIONS", aug. 2014. Georgia Tech.

Derya Aksaray: " CONSIDERATION OF CONTROL IN EARLY DESIGN FOR MULTI-AGENT SURVEILLANCE SYSTEMS", aug 2014. Georgia Tech.

Gaetan Marceau-Caron: "Optimization and Uncertainty Handling in Air Traffic Management". Paris University (Orsay), Sep 2014.

Supatcha Chaimatana: " Strategic Planning of Flight Trajectories", July 2014. Ecole Nationale de l'Aviation Civile.

Laureline Guys: " Planification de Trajectoires d'Avions sans Conflit : Fonctions Biharmoniques et Fonction de Navigation Harmonique" ENAC (2014)

Richard Alligier (11/ 2014), " Apprentissage artificiel appliqué à la prévision de trajectoire d'avion", Ecole Nationale de l'Aviation Civile.

Brunhilde Girardet (12/ 2014), Ecole Nationale de l'Aviation Civile. Jury president.

Jean-Philippe Condomines (02/2015), Institut Supérieur de l'Aéronautique et de l'Espace. Jury president.

Fancesca Favaro (03/2016), Georgia Tech, "Safety Supervisory Control, Model-Based Hazard monitoring, and Temporal Logic: Dynamic Risk-Informed Safety Interventions and Accident Prevention".

Muhammad Umer Tariq (04/2016), Georgia Tech, "Service-Oriented Reference Model for Cyber-Physical Systems".

Youngjun Choi (06/2016), Georgia Tech.

Tambet Threimur (01/2018), ENAC, "Dynamic airspace partitioning"

Peter Schmollgruber

Isabelle Santos, président

Elgiz Baskaya, président

Karim Legrand, member

Jacson Miguel Olszanecki Barth (05/20): Model-Free Control Algorithms for Tail-Sitter Micro Air Vehicles, committee member - ISAE - Sup'Aero / ENAC.

A6. Mentorship of Visiting Students/Scholars/Teachers

Dr. Philippe Roux (from ONERA), circa 2011.

Mr. Raphael Cohen (from ENSMA, now PhD student), 2013.

Mr. Pablo Roig Colomar (from TU Munich), 2014.

Mr. Christophe Brunner (from ENAC), 2014.

Prof. Emmanuel Grolleau (ENSMA), 2014.

Guillaume Davy (ENS Cachan), 2014-2015.

Gabriel Jarry (ENAC), 2016

Arthur Clavière (SUPAERO), 2017

Pierre Civit (SUPAERO), 2017

Tanguy (SUPAERO), 2017
 Prof. Fabien Dagnat, 2017-2018

Miscellaneous student awards

1. Student supervisor, International Aerial Robotics Contest team. (Ranked second, 1997, best paper presentation, 1998, best oral presentation (by club president, **Paul Eremenko**), AIAA student conference, April 1999).
2. Tech Review 35, **Vlad Gavrilets**, 2001 (35 most promising researchers under 35 according to MIT Tech Review).
3. Advisor, Georgia Tech University Student Launch Initiative (4th place, 2012). **Richard Zappulla and Kevin Reiley**
4. William Jackson award, RTCA, **Maxime Gariel** (2011).
5. **Aude Marzuoli** AIAA Guidance and Control student award, 2013
6. **Vlad Gavrilets** AIAA Guidance and Control student award, 2001.
7. **Mardavij Roozbehani**, AIAA Software student award, 2004.
8. Georgia Tech zero gravity atmospheric flight, May 2013, **Richard Zappulla and Kevin Reiley**.
9. Best Student Paper Award, **Timothy Wang and Romain Jobredeaux**, Digital Avionics Systems Conference, 2014.
10. **Tom Guillaumet**, Student paper semi-finalist and best paper of session, Digital Avionics Systems Conference, 2017.
11. **Philippe Monmousseau**, EIWAC2019 Best Student Award, 2019

• ***OTHER TEACHING ACTIVITES***

Term	Subject Number	Title	Role	Course type	Course evaluation survey given
MIT/S T94	16.921	Advanced Analysis of Control Systems	Instructor	Lecture	No
FT94	16.060	Principles of automatic control	Recitation Instructor	Lecture	No
ST95	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No

Su95	16.30S	Practical Methods for Robust Control	Instructor	Lecture	No
FT95	16.338	Nonlinear Aerospace Control Systems	Instructor	Lecture	No
ST96	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No
FT96	16.31	Feedback Control Systems	Instructor	Lecture	No
IAP97		Aerial Robotics Control	Supervisor	Lecture	No
ST97	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No
FT97	16.338	Nonlinear Aerospace Systems	Instructor	Lecture	No
IAP98		Aircraft Pilot Ground School	Supervisor	Lecture	No
ST98	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No
FT98	16.31	Feedback Control Systems	Instructor	Lecture	No
IAP99		Aircraft Pilot Ground School	Supervisor	Lecture	No
IAP99		Logan Airport Tower Visit	Supervisor	Lecture	No
ST99	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No
FT99	16.338	Nonlinear Aerospace Systems	Instructor	Lecture	No
IAP00		Aircraft Pilot Ground School	Supervisor	Lecture	No

ST00	16.410	Intro. to Optimization and Decision Analysis	Instructor	Lecture	No
ST01	16.30	Estimation and Control of Aerospace Systems	Instructor	Lecture	Yes
ST01	16.410	Principles of Automated Reasoning and Decision Making	Instructor	Lecture	Yes
FT01	6.251/ 15.081	Introduction to Linear Programming/Operations Research	Instructor	Lecture	Yes
IAP02	16.900	Intro. to computational methods in Engineering	Instructor	Lecture	Yes
ST02	16.30	Estimation and Control of Aerospace Systems	Instructor	Lecture	Yes
ST02	16.410	Principles of Automated Reasoning and Decision Making	Instructor	Lecture	Yes
FT02	6.242	Control of Complex Dynamical Systems	Guest Instructor	Lecture	Yes
FT03	16.31	Feedback Control Systems	Instructor	Lecture	Yes
IAP04	16.900	Intro. to computational methods in Engineering	Instructor	Lecture	Yes
ST04	16.30	Estimation and Control of Aerospace Systems	Instructor	Lecture	Yes
GTech/ FT05	AE4508	Analysis of Computer Programs	Instructor	Lecture	No

GTech/ ST06	AE3515	System Dynamics	Instructor	Lecture	Yes
ST06	AE4525	Control Systems Lab	Instructor	Lecture	Yes
FT06	AE8803	Analysis of Computer Programs	Instructor	Lecture	No
ST07	AE3521	Aircraft and Spacecraft Dynamics & Control	Instructor	Lecture	Yes
SuT07	AE2220	Dynamics	Instructor	Lecture	Yes
FT07	AE3521	Aircraft and Spacecraft Dynamics & Control	Instructor	Lecture	Yes
ST08	AE6531	Robust Control I	Instructor	Lecture	Yes
ST08	AE6561	Real-Time Control Software	Instructor	Lecture	Yes
SuT08	AE3515	System Dynamics	Instructor	Lecture	Yes
FT08	AE3521	Aircraft and Spacecraft Dynamics & Control	Instructor	Lecture	Yes
ST09	AE3515	Systems Dynamics	Instructor	Lecture	Yes
SuT09	AE3521	Flight Dynamics	Instructor	Lecture	Yes
FT09	AE3521	Flight Dynamics	Instructor	Lecture	Yes
ST10	AE2220	Dynamics	Instructor	Lecture	Yes
FT10	AE3521	Flight Dynamics	Instructor	Lecture	Yes
ST11	AE6531	Robust Control Systems	Instructor	Lecture	Yes
FT11	AE3521	Flight Dynamics	Instructor	Lecture	Yes
FT11	ECE2991	VIP/USLI Contest	Instructor	Lecture	No
ST12	ECE2991	VIP/USLI Contest	Instructor	Lecture	No
FT12	AE3521	Flight Dynamics	Instructor	Lecture	Yes
FT12	AE2220	Dynamics	Instructor	Lecture	Yes

ST13	AE6561	Aerospace Software Engineering	Instructor	Lecture	Yes
ST13	ECE2991	VIP/USLI Contest	Instructor	Lecture	No
FT13	ECE2991	VIP/USLI Contest	Instructor	Lecture	No
ST14	ECE2991	VIP/Rocket Launch Contest	Instructor	Lecture	No
ST14	AE6521	Adv. Flight Dynamics	Instructor	Lecture	Yes
ST14	AE3515	System Dynamics and Control	Instructor	Lecture	Yes
SuT14	AE 2220	Dynamics	Instructor	Lecture	Yes
FT14	AE 3521	Flight Dynamics	Instructor	Lecture	Yes
FT14	ECE2991	VIP/Rocket Launch Contest			No
FT14	None	Short Graduate Course: Cyber-physical Systems	Co-instructor	Lecture	No
ST15	AE6561	Aerospace Software Engineering	Instructor	Lecture	yes
ST15	ECE2991	VIP/ Student Launch Initiative	Instructor	Lecture	no
FT15	AE6531	Robust Control Systems	Instructor	Lecture	yes
FT15	CS6310	Software Architecture and Design	Instructor	MOOC	no
FT15	ECE2991	VIP/ Student Launch Initiative	Instructor	Lecture	No
ST 16	AE3521	Flight Dynamics	Instructor	Lecture	Yes

ST 16	ECE2991	VIP/Student Launch Initiative	Instructor	Lecture	No
FT 16	AE2220	Dynamics	Instructor	Lecture	Yes
FT 16	ECE2991	VIP/Student Launch Initiative	Instructor	Lecture	No
ST 17	AE3530	System Dynamics and Vibrations	Instructor	Lecture	yes
ST 17	ECE2992	VIP/Student Launch	Instructor	Lecture	No
FT 17	AE 6530	Multivariable Control Systems	Instructor	Lecture	Yes
FT 17	CS 8803-009	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
ST 18	AE 3531	Control System Design	Instructor	Lecture	Yes
ST 18	CS 8803-009	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
FT 18	AE 4531	Flight Dynamics and Control	Instructor	Lecture	Yes
FT 18	CS 8803-009	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
ST 19	AE4531	Flight Dynamics and Control	Instructor	Lecture	Yes

ST19	CS 7639-001	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
FT19	CS 7639-001	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
FT 19	ECE-8803-CPS	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
FT19	AE-6561	Reliable Control Software	Instructor	Lecture	Yes
ST20 (KAUST)	ME-221B EE-271B	Nonlinear control systems	Instructor	Lecture	Yes
ST20 (GT)	CS 7639-001	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
FT 20 (KAUST)	ME-221A ECE-271A	Linear systems	Instructor	Lecture	Yes
FT 20 (GT)	CS 7639-001	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes
ST21 (KAUST)	ME-221B EE-271B	Nonlinear control systems	Instructor	Lecture	Yes
ST 21 (GT)	CS 7639-001	Cyber-Physical Systems Design and Analysis	Instructor	Lecture	Yes

IV. SCHOLARLY ACCOMPLISHMENTS

A. PUBLISHED BOOKS AND PARTS OF BOOKS

A1. Books

1. Linear Matrix Inequalities in System and Control Theory, by Boyd, S., El Ghaoui, L., Feron, E., and Balakrishnan, V., vol. 15 in Series in Applied Mathematics, SIAM, June 1994.
2. General Theory of Algebraic Equations, by E. Bezout, translation from French by E. Feron. Princeton University Press, 2006. Original publication date: 1779.
3. Advances in Aerospace Control Technology, E. Feron Ed., Springer, 2015.

A2. Refereed Book Chapters

1. Apkarian, P. and Feron, E. "Robust Control System Analysis and Synthesis via Parameter-Dependent Lyapunov Functions", in Progrès récents en commande Robuste, Jacques Bernussou, Ed. Editions Hermès. 1996.
2. Yang, K., Hall, S.R. and Feron, E. "Robust H_2 Control", in Recent Advances on Linear Matrix Inequality Methods in Control, L. El Ghaoui and S. Niculescu, Eds. SIAM, 2000.**
3. Paganini, F. and Feron, E. "LMI Methods for Robust H_2 Analysis: A Survey with Comparisons", in Recent Advances on LMI Methods in Control, L. El Ghaoui and S. Niculescu, Eds. Book to be published by SIAM, 2000.
4. Feron, E. "Nonconvex Quadratic Programming, Semidefinite Relaxations and Randomization Algorithms in Information and Decision Systems", in System Theory: Modeling, Analysis and Control, T. Djaferis and I. Schick, Eds. pp 255—274. Kluwer Academic Publishers, 1999.
5. Frazzoli, E. and Dahleh, M. and Feron, E. "A Hybrid Control Architecture for Aggressive Maneuvering of Autonomous Aerial Vehicles", in System Theory: Modeling, Analysis and Control, T. Djaferis and I. Schick, Eds. pp 325—251. Kluwer Academic Publishers, 1999. **
6. Piedmonte, M. and Feron, E. "Aggressive Maneuvering of Autonomous Aerial Vehicles: A Human-Centered Approach", in Robotics Research, J. Hollerbach and D. Koditschek Eds. pp. 374—380. Springer-Verlag, 2000.
7. Pujet, N. and Feron, E., "Modeling an Airline Operations Control Center", in Air Transportation Systems Engineering, G. Donohue and A. Zellweger Eds, American Institute of Aeronautics and Astronautics. 2001.

8. Andersson, K., Carr, F., Hall, W., Pujet, N. and Feron, E. "Analysis and Modeling of Ground Operations at Hub Airports", Air Transportation Systems Engineering, G. Donohue and A. Zellweger Eds., American Institute of Aeronautics and Astronautics, pp 305—342. 2001.
9. Anagnostakis, I., Idris, H., Clarke, J.-P., Feron, E., Hansman, R.J., Odoni, A. and Hall, W. "A Conceptual Design of a Departure Planner Decision Aid", Air Transportation Systems Engineering, G. Donohue and A. Zellweger Eds., American Institute of Aeronautics and Astronautics. 2001.
10. Craparo, E., Sheng-Ho Chang, F., Lee, J.W., Berwick, R. and Feron, E. "Natural Language Processing in Control of Unmanned Aerial Vehicles", Theory and Algorithms for Cooperative Systems, Don Grundel, Rob Murphey, Panos Pardalos, Eds., Kluwer. 2003
11. Feron, E. and DeMot, J. "Optimal Agent Cooperation with Local Information", Cooperative Control of Distributed Multi-Agent Systems, Jeff S. Shamma, Ed., Wiley, 2008.
12. Feron, E. and Johnson, E. "Aerial Robotics", in Handbook of Robotics, O. Khatib and B. Siciliano, Eds. 2009. Winner of PROSE Award,
13. Animesh Chakravarthy, Kyungyeol Song, Jaime Peraire and Eric Feron, "Study of Mobile Mixed Sensing Networks in an Automotive Context", Springer Optimization and Its Applications, 1, Volume 61, Sensors: Theory, Algorithms, and Applications, Part 3, Pages 165-198, 2011.
14. D. Delahaye , S. Puechmorel, P. Tsiotras, E. Feron, "Mathematical Models for Aircraft Trajectory Design: A Survey", in *Air Traffic Management and Systems*, Volume 290 of the series Lecture Notes in Electrical Engineering pp 205-247, 08 February 2014
15. Timothy Wang, Romain Jobredeaux, Heber Herencia, Pierre-Loïc Garoche, Arnaud Dieumegard, Éric Feron, "From Design to Implementation: An Automated, Credible Autocoding Chain for Control Systems", in *Advances in Control System Technology for Aerospace Applications*, E. Feron, Ed., Lecture Notes in Control and Information Sciences, Springer, Vol. No. 460, Pages 137-180, 2016.

A3. Other Parts of Books

A4. Edited Volumes

1. Boyd, S., El Ghaoui, L., Feron, E., and Balakrishnan, V., "Linear matrix inequalities in system and control theory," in Proceedings Annual Allerton Conference on Communication, Control and Computing, pp. 237-246, October 1993.
2. McConley, M., Appleby, B., Dahleh, M., and Feron, E., "A Control Lyapunov Function Approach to Robust Stabilization of Nonlinear Systems", in Allerton Conference, pp. 372-381, Monticello, IL, October 1996. **
3. Brenner, M. and Feron, E., "Wavelet Analyses of F/A-18 Aeroelastic and Aeroservoelastic

Flight Test Data”, 38th AIAA Structures, Structural Dynamics, and Materials Conference, Kissimmee, FL, April 1997.

4. Brenner, M. and Feron, E., “Wavelet Analysis of Flight-Test Data on Aeroelasticity: Wavelet analysis offers advantages over Fourier analysis”, NASA Tech Briefs, December 1997.
5. Turevskiy, A. and Feron, E., “Flutter Boundary Prediction with Experimental Data”, 2nd International Conf. on Non Linear Problems in Aviation and Aerospace, Miami, FL, May 1998. **
6. Pélegrin, M., Feron, E., and Delcaire, B., “L’Aéroport Bloquera-t-il le Développement du Transport Aérien?”, (Will the airport be the bottleneck of Air Transportation Growth?), in La Jaune et la Rouge, E. Feron and M. Pélegrin Eds. May 1998. **
7. El Ghaoui, L. and Feron, E. “A New Convex Relaxation for Robust Stability and H2 Performance Analysis of Linear Systems subject to Parametric Uncertainties”, Allerton Conference, Monticello, IL, September 1999.
8. Gavrillets, V., Shterenberg, A., Dahleh, M. and Feron, E., “Avionics System for a Small Unmanned Helicopter Performing Aggressive Maneuvers”, Digital Avionics Systems Conference, Philadelphia, PA, October 2000.
9. McConley, M., Applepy, B., Frazzoli, E., Feron, E. and Dahleh, M. A., “Hybrid Control for Aggressive Maneuvering of Autonomous Aerial Vehicles”, Digital Avionics Systems Conference, Philadelphia, PA, October 2000.
10. Gentry, S., Saligrama, V. and Feron, E., ”Identification of Receding Horizon Controllers: An Extension to the Inverse Problem of Optimal Control”, Allerton Conference, Monticello, IL, October 2000.
11. Frazzoli, E., Dahleh, M., Feron, E., “Real-Time Motion Planning for Autonomous Vehicles”, Allerton Conference, Monticello, IL, October 2000.
12. Gavrillets, V. , Martinos, I., Dugail, D K. Sprague, B. Mettler, E. Feron “Control architecture for a Small Unmanned Helicopter Performing Aggressive Maneuvers”, Digital Avionics Systems Conference, 2001.
13. De Mot, J. and Feron, E. “Performance of Multiple Agents in an Unknown Environment”, Allerton Conference on Control, Systems and Communications, University of Illinois Urbana-Champaign, October 2001.

B. REFEREED PUBLICATIONS

B1. Published and Accepted Journal Articles

1. S Boyd, L El-Ghaoui, E Feron, V Balakrishnan, EE Yaz “Linear matrix inequalities in

system and control theory” - Proceedings of the IEEE, No. 4, Vol 85, June 1997.

2. Feron, E., "Analysis of Robust H₂ Performance Using Multiplier Theory," *SIAM Journal of Control and Optimization*, vol. 35, no. 1, pp. 160-177, January 1997.
3. Feron, E., Apkarian, P., and Gahinet, P., "Analysis and Synthesis of Robust Control Systems via Parameter-Dependent Lyapunov Functions," *IEEE Trans. on Automatic Control*, vol. 41, no. 7, pp. 1041-1046, July 1996.
4. Feron, E., "A More Reliable Robust Stability Indicator for Linear Systems Subject to Parametric Uncertainties," *IEEE Trans. on Automatic Control*, vol. 42, no. 9, pp. 1326-1330, September 1997.
5. Boussios, C. and Feron, E., "Estimating the Conservatism of Popov's Criterion for Real Parametric Uncertainties", *Systems and Control Letters*, pp. 173-183, August 1997.
6. Feron, E., Brenner, M., Paduano, J., and Turevskiy, A., "Time-Frequency Analysis for Transfer Function Estimation and Application to Flutter Clearance", in *AIAA J. on Guidance, Control and Dynamics*, vol. 21, no. 3, pp. 375—382, May - June 1998.
7. McConley, M. W., Appleby, B. D., Dahleh, M. A., and Feron, E., "Computational Complexity of Lyapunov Stability Analysis Problems for a Class of Nonlinear Systems", *SIAM Journal of Control and Optimization*, vol. 36, no. 6, pp. 2176-2193, November 1998.
8. Shewchun, J. M. and Feron, E., "High Performance Control with Position and Rate Limited Actuators", *Int. J. Robust and Nonlinear Control*, special issue on saturating systems, vol. 9, pp. 617-630, July 1999.
9. McConley, M. W., Appleby, B. D., Dahleh, M. A., and Feron, E., "Polytopic Lyapunov Functions for Robust Stabilization of a Class of Nonlinear Systems", in *Systems and Control Letters*, pp. 77—85, May 1998.
10. McConley, M.W., Appleby, B. D., Dahleh, M. A., and Feron, E., "A Computationally Efficient Lyapunov-Based Scheduling Procedure for Control of Nonlinear Systems with Stability Guarantees", *IEEE Trans. Aut. Control*, Jan 2000.
11. Turevskiy, A., Feron, E., and Paduano, J., "Combining Physical Models and Experimental Data for Flutter Boundary Prediction", *AIAA J. on Guidance, Control and Dynamics*, vol. 22, no. 1, January-February 1999.
12. Oh, J.H., Jamoom, M., McConley, M. and Feron, E., "Solving Control Allocation Problems using Semidefinite Programming", *AIAA J. on Guidance, Control and Dynamics*, vol. 22, no. 3, May-June 1999.
13. Pujet, N. and Feron, E., "Modeling an Airline Operations Control Center", *Air Traffic Control Quarterly*, vol 7, no. 4, 1999.

14. Idris, H. *et al.* “Observation of Departure Processes at Logan Airport to Support the Development of Departure Planning Tools”, *Air Traffic Control Quarterly*, vol 7, no. 4, 1999.
15. Pujet, N., Delcaire, B. and Feron, E., “Identification and Control of the Departure Process at Busy Airports”, *Air Traffic Control Quarterly*, vol 8, no. 1, 2000
16. Frazzoli, E., Mao, Z.-H., Oh, J. and Feron, E.. “Resolution of Conflicts Involving many Aircraft via Semidefinite Programming”, *AIAA J. on Guidance, Control and Dynamics*, 2001.
17. Mao , Z.-H., Feron, E. and Bilimoria, K. “Stability and Performance of Intersecting Aircraft Flows under Sequential Conflict Resolution”, accepted for publication in Special Air Traffic Control issue of *IEEE Trans. Intelligent. Transportation Systems*. 2001.
18. Gavrillets, V., Dahleh, M. and Feron, E. “Avionics system for a small unmanned helicopter performing aggressive maneuvers”, *IEEE Aerospace and Electronic Systems Magazine*, Sept 2001.
19. Frazzoli, E, Dahleh, M. and Feron, E. “Real-Time Motion Planning for Agile Autonomous Vehicles”, in *AIAA J. on Guidance, Control and Dynamics*, pp 116—129 , No. 1, Vol. 25, Jan-Feb 2002.
20. Gavrillets, V. , Frazzoli, E., Mettler, B. , Piedmonte, M. , Feron, E. “Aggressive Maneuvering of Small Helicopters: A Human-Centered Approach”, *International Journal on Robotics Research*, Vol. 20, Number 10, Oct. 2001.
21. L. Pallottino, E. Feron, and A. Bicchi. Conflict Resolution Problems for Air Traffic Management Systems Solved with Mixed Integer Programming. *IEEE Trans. Intelligent Transportation Systems*, 3(1):3-11, March 2002.
22. Andersson, K., Hall, W., Atkins, S. and Feron, E., “Optimization-Based Analysis of Collaborative Airport Arrival Planning”, *Transportation Science*, 2004.
23. A. Richards, J. How, T. Schouwenaars and E. Feron, “Spacecraft trajectory planning with collision and plume avoidance”, *AIAA J. on Guidance, Control and Dynamics*, Vol. 25, no. 4, pp. 755-64, 2002.
24. V. Gavrillets, B. Mettler, and E. Feron, “Human-Inspired Control Logic for Automated Maneuvering of Miniature Helicopter”, in *AIAA J. on Guidance, Control and Dynamics*, 2004.
25. B. Mettler, C. Dever, and E. Feron, “Scaling Effects and Dynamic Characteristics of Miniature Rotorcraft”, *AIAA J. Guidance, Control and Dynamics*, 2004.
26. Carr, F. , Theis, G., Clarke, J-P and Feron, E. “Evaluation of Improved Pushback Forecasts Derived from Airline Ground Operations Data”, [*AIAA Journal Journal of Aerospace Computing, Information, and Communication*](#), 2004.

27. Schouwenaars, Mettler, Feron, How. "Hybrid Model for Trajectory Planning of Agile Autonomous Vehicles", *AIAA Journal of Aerospace Computing, Information and Communication*, january 2005.
28. Dever, Mettler, Feron, Popovic, McConley. "Trajectory Interpolation for Parametrized Maneuvering and Flexible Motion Planning of Autonomous Vehicles", *AIAA J. of Guidance, Control and Dynamics*, 2006.
29. Mao, Z.H., Dugail, D. and Feron, E. "Stability of intersecting aircraft flows under heading changes" *IEEE Trans. on Intelligent Transportation Systems*, 2006.
30. Frazzoli, E. Dahleh, M.A. Feron, E. "Maneuver-based motion planning for nonlinear systems with symmetries". [IEEE Transactions on Robotics and Automation](#), Dec. 2005 Volume: 21, [Issue: 6](#). On page(s): 1077- 1091
31. Schouwenaars, T; Valenti, M; Feron, E; How, J; Roche, E. Linear Programming and Language Processing for Human/Unmanned-Aerial-Vehicle Team Missions, *Journal of Guidance, Control, and Dynamics*. Vol. 29, no. 2, pp. 303-313. Mar.-Apr. 2006.
32. T. Schouwenaars, A. Stubbs, J. D. Paduano and Eric Feron: "Multi-Vehicle Path Planning for Non-Line of Sight Communication", *Journal of Field Robotics*, 2006.
33. Zhi-Hong Mao, David Dugail, and Eric Feron . "Space Partition for Conflict Resolution of Intersecting Flows of Mobile Agents Zhi-Hong Mao, David Dugail, and Eric Feron", *IEEE Transactions on Intelligent Transportation Systems*, vol. 8, No. 3, September 2007.
34. Bayraktar, S. and Feron, E. "Experiments with small unmanned helicopter nose-up landings", in *AIAA J. on Guidance, Control and Dynamics*, 2008.
35. Lee, K., Feron, E. and Pritchett, A. "Describing Airspace Complexity: Airspace Response to Disturbances", in *AIAA J. on Guidance, Control and Dynamics*, 2008.
36. Burgain, P., Feron, E. and Clarke, J.-P. "Collaborative Virtual Queue: Benefit Analysis of a Collaborative Decision Making Concept Applied to Congested Departure Operations", *Air Traffic Control Quarterly*, 2009.
37. Gariel, M. and Feron, E. "Graceful Degradation of Air Traffic Operations: Airspace Sensitivity to Degraded Surveillance Systems", *Proceedings of the IEEE, special issue on aviation information systems*, 2009.
38. Yang, J.-H., Mao, Z.-H., Tijerina L., Pilutti, T., Coughlin, J., and Feron, E. "Detection of Driver Fatigue Caused by Sleep Deprivation: Analysis on Tracking Tasks and Inference of Driver States", *IEEE Trans. on Systems, Man and Cybernetics, Part A: Systems and Humans*, 2009.
39. Le Ny, J., Feron, E. and Frazzoli, E., "On the Curvature-Constrained Traveling Salesman

Problem”, *IEEE Transactions on Automatic Control*, 2011.

40. Chakravarthy, A., Song, K.-Y. and Feron, E., "Preventing automotive pile-up crashes in mixed communication environments", *IEEE Transactions on Intelligent Transportation Systems*, 2009.

41. Le Ny, J., Feron, E. and Dahleh, M., “Scheduling Kalman Filters in Continuous Time”, *IEEE Transactions on Automatic Control*, June 2011.

42. Feron, E., “From Control Systems to Control Software: Integrating Lyapunov-theoretic proofs within code”, *IEEE Control Systems Magazine*, pp 50-71, december 2010.

43. Farhood, M. and Feron, E., “Obstacle-sensitive trajectory regulation via gain scheduling and semidefinite programming”, *IEEE Trans. on Control Systems Technology*, 2011.

44. Mao, Z.-H., Lupu, M. and Feron, E.; “[Influence of Aircraft Maneuver Preference Variability on Airspace Usage](#)”, *IEEE Trans. Intell. Transp. Systems*, Vol 12, Number 3, pp 1-16, July 2011.

45. Gariel, M, Feron, E, Srivastava A., “A Trajectory Clustering and an Application to Airspace Monitoring”, *IEEE Trans. Int. Transp. Systems*, No. 99, pp 1-14, July 2011.

46. Abdallah, A., Feron, E.M., Hellestrand, G., Koopman, P. and Wolf, M. “Hardware/Software Codesign of Aerospace and Automotive Systems”, in [Proceedings of the IEEE](#), Vol. 98, Number 4, April 2010, pp. 584 – 602.

47. Salaun, E., Gariel, M., Vela, A. and Feron, E., "Aircraft Proximity Maps Based on Data-Driven Flow Modeling", in *AIAA J. Guidance, Control and Dynamics*, 2011.

48. Burgain, Pierrick; Pinon, Olivia; Feron, Eric; Clarke, John-Paul; Mavris, Dimitri "Optimizing Pushback Decisions to Valuate Airport Surface Surveillance Information", in *IEEE Trans Intell. Transp. Systems*, Volume: 13 , Issue: 1, 2012.

49. Roozbehani, M., Megretski, A. and Feron, E., “Optimization of Lyapunov Invariants in Verification of Software Systems”, *IEEE Trans. Aut. Control*, March 2013.

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51. Vlad Popescu, P. Cleveland, [Emmanuel Boidot](#), Amy R. Pritchett and Eric Feron “Reliably Creating Collision Avoidance Advisories in Piloted Simulations”, *IEEE Trans on Systems, Man and Cybernetics*, 2013.

52. S. H. Kim and E. Feron: "Impact of Gate Assignment on Departure Metering", *IEEE Trans. on Intell. Transportation Systems*, 2013.

53. P. Burgain, S.H. Kim and E. Feron: "Valuating Surface Surveillance Technology for

Collaborative Multi-Spot Control of Airport Departure Operations", IEEE Trans. on Intell. Transportation Systems, 2013.

54. M. Pakmehr, N. Fitzgerald, E. Feron, J.S. Shamma, and A. Behbahani, "Gain Scheduled Control of Gas Turbine Engines: Stability and Verification", J. Eng. Gas Turbines Power 136(3), 031201 (Nov 14, 2013) doi:10.1115/1.4025637 . 2013.

55. S. Huang , E. Feron , G. Reed , Z.-H. Mao, " Compact Configuration of Aircraft Flows at Intersections", IEEE Transactions on Intelligent Transportation Systems, 2013.

56. A. Marzuoli, M. Gariel, A. Vela, E. Feron, Data-based Modeling and Optimization of En-route Traffic, Journal of Guidance, Control and Dynamics, 2014.

57. D. Aksaray, D. Mavris, and E. Feron. "A Message Passing Strategy for Decentralized Connectivity Maintenance in Multi-Agent Surveillance", AIAA J. Guidance, Control and Dynamics, 2015.

58. M Pakmehr, N Fitzgerald, E Feron, J Paduano, A Behbahani, "Physics-Based Dynamic Modeling of a Turbohaft Engine Driving a Variable Pitch Propeller", AIAA Journal of Propulsion and Power, 1-13, 2016

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121. Fernando Alegre; Rene Valenzuela; Eric Feron; Santosh Pande “Proving Correctness of Autocoded Control Software” AIAA-2007-6885 - AIAA Modeling and Simulation Technologies Conference and Exhibit, Hilton Head, South Carolina, Aug. 20-23, 2007
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123. Le Ny, J.; Feron, E. “Performance evaluation of a multi-agent risk-sensitive tracking system”, 46th IEEE Conference on Decision and Control, 2007, Page(s): 2464 – 2469.
124. Le Ny, J., Dahleh, M.A., Feron, E., Frazzoli, E. “Continuous Path Planning for a Data Harvesting Mobile Server”, 47th IEEE Conference on Decision and Control, December 9-11, 2008, Cancun, Mexico.
125. Farhood, M.; Feron, E. “[A parameter-dependent Lyapunov approach for the control of nonstationary and hybrid LPV systems](#) “[American Control Conference, 2009. ACC '09.](#) , Page(s): 3742 – 3747.
126. Le Ny, J.; Feron, E.; Dahleh, M.A. “Scheduling Kalman filters in continuous time” American Control Conference, 2009. Page(s): 3799 - 3805
127. Salaun, E.; Vela, A.E.; Feron, E.; Clarke, J.-P.; Solak, S. “[A simplified approach to determine airspace complexity maps under automated conflict resolution](#)” IEEE/AIAA 28th Digital Avionics Systems Conference, 2009. DASC '09. Page(s): 3.C.5-1 - 3.C.5-13
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132. M. Farhood and E. Feron, "A Parameter-Dependent Lyapunov Approach for the Control of Nonstationary and Hybrid LPV Systems", 2009 American Control Conference, June 2009, St Louis, MO.
133. Vela, A.; Salaun, E.; Feron, E.; Clarke, J.-P.; Singhose, W. "Maximizing throughput at an intersection under constrained maneuvers" 49th IEEE Conference on Decision and Control (CDC), 2010. Page(s): 1207 – 1214
134. Lupu, M.; Feron, E.; Zhi-Hong Mao "Traffic complexity of intersecting flows of aircraft under variations of pilot preferences in maneuver choice", 49th IEEE Conference on Decision and Control (CDC), 2010, Page(s): 1189 – 1194
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137. Sang Hyun Kim; Eric Feron; John-Paul Clarke "Airport Gate Assignment that Minimizes Passenger Flow in Terminals and Aircraft Congestion on Ramps" AIAA-2010-7693. AIAA Guidance, Navigation, and Control Conference, Toronto, Ontario, Aug. 2-5, 2010.
138. Mehrdad Pakmehr; Nathan Fitzgerald; George Kiwada; James; Eric Feron; Alireza Behbahani "Decentralized Adaptive Control of a Turbofan System with Partial Communication", AIAA-2010-6835. 46th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Nashville, TN, July 25-28, 2010
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141. Vela, A.; Clarke, J.-P.; Feron, E.; Singhose, W. "The relative value of trajectory prediction and conflict-resolution algorithms", IEEE/AIAA 30th Digital Avionics Systems

Conference (DASC), 2011, Page(s): 6D1-1 - 6D1-11.

142. Vela, A.; Salaun, E.; Feron, E.; Singhose, W.; Clarke, J.-P. "Bounds on Controller Taskload Rates at an Intersection for Dense Traffic" American Control Conference (ACC), 2011 , Page(s): 2745 – 2751.
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144. Marzuoli, Aude; Gariel, Maxime; Vela, Adan; Feron, Eric "Air traffic optimization on data-driven network flow model", IEEE/AIAA 30th Digital Avionics Systems Conference (DASC), 2011 , Page(s): 1 – 21.
145. Maxime Gariel; Eric Feron; John-Paul Clarke. Air Traffic Management complexity maps induced by degradation of Communication, Navigation and Surveillance.. AIAA-2008-6516. AIAA Guidance, Navigation and Control Conference and Exhibit, Honolulu, Hawaii, Aug. 18-21, 2008 .
146. Sang Hyun Kim; Eric Feron "Robust Gate Assignment", AIAA-2011-6382 AIAA Guidance, Navigation, and Control Conference, Portland, Oregon, Aug. 8-11, 2011
147. Popescu, Vlad; Feron, Eric; Feigh, Karen, "A case for mean field games in airspace congestion forecasting", IEEE/AIAA 30th Digital Avionics Systems Conference (DASC), 2011.
148. R. Jobredeaux, T. E. Wang, E. Feron, "Autocoding Control Software with Proofs I: Annotation Translation", IEEE/AIAA Digital Avionics Systems Conference, Seattle, WA, Oct. 2011.
149. Timothee Cazenave; Mehrdad Pakmehr; Eric Feron. "Peak-Seeking Control of a DC Motor Driving a Variable Pitch Propeller", AIAA-2011-6255 AIAA Guidance, Navigation, and Control Conference, Portland, Oregon, Aug. 8-11, 2011.
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152. Mehrdad Pakmehr, Nathan Fitzgerald, George Kiwada, George Kiwada, James Paduano, Eric Feron, Alireza Behbahani, "Distributed Modeling and Control of Turbofan Systems",

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160. A. Marzuoli; C. Hurter; E. Feron "Data visualization techniques for airspace flow modeling" Intelligent Data Understanding (CIDU), 2012 Conference on Year: 2012 Pages: 79 - 86
161. Sang Hyun Kim; Eric Feron "Impact of gate assignment on gate-holding departure control strategies", 2012 IEEE/AIAA 31st Digital Avionics Systems Conference (DASC).
162. A. Marzuoli; E. Feron; A. Vela "Analysis of airspace degradation and optimization of en-route traffic under degraded conditions" 2012 IEEE/AIAA 31st Digital Avionics Systems Conference (DASC).
163. A. Marzuoli, C. Hurter, E. Feron, "Data Visualization Techniques for Airspace Flow

- Modeling", Conference on Intelligent Data Understanding (CIDU), Denver, Co., 2012.
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 167. A. Marzuoli, E. Feron, M. Hansen, A. Bayen, E. Boidot, Multimodality in a Metroplex Environment: A case study in the San Francisco Bay Area, AIAA Sciences and Technology Forum 2015.
 168. A. Marzuoli, E. Feron, M. Hansen, A. Bayen, E. Boidot, P. Van Erp, A. Ucko, Multimodal Impact Analysis of an Airside Catastrophic Event, INFORMS Annual Meeting, 2014.
 169. A. Marzuoli, E. Boidot, E. Feron, Resilience of the National Airspace System Structure: a Data-Driven Network Approach, Digital Avionics Systems Conference (DASC), 2014.
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 173. T. Wang, R. Jobredeaux, M. Pakmehr, M. Vivies and E. Feron, "An Application of a Prototype Credible Autocoding and Verification Tool-chain", best student paper, Digital Avionics Systems Conference, Colorado Springs, October 2014.
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 175. L. Dray, A. Marzuoli, A. Evans, I. Laplace, E. Féron "Air Transportation and Multimodal, Collaborative Decision Making during Adverse Events" 11th USA/EUROPE Air Traffic Management R&D Seminar, Jun 2015, Lisboa, Portugal

176. M. Wolf and E. Feron “What don't we know about CPS architectures?” 2015 52nd ACM/EDAC/IEEE Design Automation Conference (DAC), Pages: 1 - 4, D
177. R. Cohen; A.-T. Bui Long; R. Jobredeaux, E. Feron, “A credible autocoding application within a rocket and its payload”, 2015 IEEE/AIAA 34th Digital Avionics Systems Conference (DASC) Year: 2015
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179. E. Boidot; A. Marzuoli; E. Feron, “Optimal navigation policy for an autonomous agent operating in adversarial environments”, 2016 IEEE International Conference on Robotics and Automation (ICRA), Pages: 3154 - 3160,
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181. R. Breil, D. Delahaye, L. Lapasset and E. Feron, “Multi-agent Systems for Air Traffic Conflicts Resolution by Local Speed Regulation and Departure Delay”, best student paper, Digital Avionics Systems Conference, Sacramento, October 2016.
182. H. Piquet, G. Jarry, M. Luce and E. Feron, “Evaluation of New Enroute Performance Measures for Air Navigation Service Providers”, Digital Avionics Systems Conference, Sacramento, October 2016.
183. T. E. Wang, P.-L. Garoche, P. Roux, R. Jobredeaux, and É. Féron. 2016. Formal Analysis of Robustness at Model and Code Level. In Proceedings of the 19th International Conference on Hybrid Systems: Computation and Control (HSCC '16). ACM, New York, NY, USA, 125-134
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185. T. Yucelen , W. M. Haddad and E. M. Feron “Adaptive control architectures for mitigating sensor attacks in cyber-physical systems” 2016 American Control Conference (ACC) Year: 2016 Pages: 1165 - 1170.
186. S. G. Park, J.-P. B. Clarke, E. Feron, and H. Jimenez. "Encounter Rate Estimation of Continuous Descent Arrival Procedures in Terminal Area", AIAA Guidance, Navigation, and Control Conference, AIAA SciTech, (AIAA 2016-1630)
187. Thomas Gurriet, Mark L Mote, Aaron D, Éric Féron “Establishing trust in remotely

reprogrammable systems”, HCI-Aero '16: Proceedings of the International Conference on Human-Computer Interaction in Aerospace September 2016, Article No.: 19, pp 1–4 <https://doi.org/10.1145/2950112.2964573>

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189. Daniel Pickem; Paul Glotfelter; Li Wang; Mark Mote; Aaron Ames; Eric Feron; Magnus Egerstedt, “The Robotarium: A remotely accessible swarm robotics research testbed”. 2017 IEEE International Conference on Robotics and Automation (ICRA).
190. D. Pickem, P. Glotfelter, L. Wang, M. Mote, A. Ames, E. Feron, M. Egerstedt “The Robotarium: A remotely accessible swarm robotics research testbed”, International Conf. on Robotics and Automation, 2017.
191. Tom Guillaumet, Eric Feron, Philippe Baufreton, François Neumann, Kavitha Madhu, Madhava Krishna, S. K. Nandy, Ranjani Narayan and Chandan Halder, “Task Allocation of Safety-Critical Applications on Reconfigurable Multi-Core Architectures”, AIAA/IEEE Digital Avionics Systems Conference, September 2017.
192. R. Cohen, G. Davy, E. Feron, P.L. Garoche, "Formal Verification for Embedded Implementation of Convex Optimization Algorithms", 20th IFAC world congress, July 2017, Toulouse, France.
193. Eric M. Feron, Raphael P. Cohen, Guillaume Davy and Pierre-Loic Garoche, “Validation of Convex Optimization Algorithms and Credible Implementation for Model Predictive Control”, 9 - 13 January 2017 AIAA Information Systems-AIAA Infotech @ Aerospace, <https://doi.org/10.2514/6.2017-0562>
194. Mark Mote, J. Pablo Afman, Eric Feron “Robotic Trajectory Planning through Collisional Interaction”, IEEE Conference on Decision and Control, Melbourne, Aust., dec. 2017.
195. Kerianne L. Hobbs, Chris Cargal, Eric Feron and Richard S. Burns, “Early Safety Analysis of Manned-Unmanned Team System”, 8–12 January 2018, 2018 AIAA Information Systems-AIAA Infotech @ Aerospace, <https://doi.org/10.2514/6.2018-1984>
196. Francesco De Vivo, Manuela Battipede, Piero Gili, Anthony J. Yezzi, Eric Feron and Eric Johnson, “Real-time fire segmentation via Active Contours for UAV integrated wildfire propagation prediction”, 8–12 January 2018 2018 AIAA Information Systems-AIAA Infotech @ Aerospace, <https://doi.org/10.2514/6.2018-1488>
197. Pablo Afman, Eric Feron, and John Hauser “Triple integral control strategies for reduced-g atmospheric platforms”, American Control Conference, Millwaukee, WI, June 2018.
198. Aude Marzuoli; Philippe Monmousseau; Eric Feron, “Passenger-Centric Metrics for Air

Transportation Leveraging Mobile Phone and Twitter Data”, 2018 IEEE International Conference on Data Mining Workshops (ICDMW).

199. Thomas Gurriet;Andrew Singletary;Jacob Reher;Laurent Ciarletta;Eric Feron;Aaron Ames, “Towards a Framework for Realizable Safety Critical Control through Active Set Invariance”, 2018 ACM/IEEE 9th International Conference on Cyber-Physical Systems (ICCP)
200. K. Garanger, T. Khamvilai, and E. Feron, " 3D printing of a leaf spring: A demonstration of closed-loop control in additive manufacturing", IEEE Conf. Control Technology and Applications, Copenhagen, Denmark, August 2018.
201. Juan-Pablo Afman;Eric Feron;John Hauser, “Triple-Integral Control for Reduced-G Atmospheric Flight”, 2018 Annual American Control Conference (ACC).
202. Thomas Gurriet, Mark Mote, Aaron Ames, and Eric Feron, "An Online Approach to Active Set Invariance", 2018 IEEE Conference on Decision and Control (CDC), Miami Beach, FL, USA, Dec. 17-19, 2018.
203. Juan-Pablo Afman;Eric Feron;John Hauser, “Nonlinear Maneuver Regulation for Reduced-G Atmospheric Flight”, 2018 IEEE Conference on Decision and Control (CDC).
204. Kwassi H. Degue;Denis Efimov;Jerome Le Ny;Eric Feron, “Interval Observers for Secure Estimation in Cyber-Physical Systems”, 2018 IEEE Conference on Decision and Control (CDC).
205. Louis Sutter;Thanakorn Khamvilai;Philippe Monmousseau;John B. Mains;Eric Feron;Philippe Baufreton;Francois Neumann;Madhava Krishna;S. K. Nandy;Ranjani Narayan;Chandan Haldar, “Experimental Allocation of Safety-Critical Applications on Reconfigurable Multi-Core Architecture”, 2018 IEEE/AIAA 37th Digital Avionics Systems Conference (DASC).
206. Raphael Cohen;Eric Feron;Pierre-Loïc Garoche, “Credible Autocoding of The Ellipsoid Algorithm Solving Second-Order Cone Programs”, 2018 IEEE Conference on Decision and Control (CDC).
207. Mehrdad Pakmehr, Roopa S. Chakravarthy Muralidhar, Louis F. Sutter, Raphael P. Cohen, Eric M. Feron and Alireza R. Behbahani, “Developing Concepts for Optimal Scheduling in Distributed Turbine Engine Control Systems”, 19-22 August 2019AIAA Propulsion and Energy 2019 Forum, <https://doi.org/10.2514/6.2019-4387>
208. Matthew Abate; Eric Feron; Samuel Coogan, “Monitor-Based Runtime Assurance for Temporal Logic Specifications”. 2019 IEEE 58th Conference on Decision and Control (CDC).
209. Thomas Gurriet;Mark Mote;Andrew Singletary;Eric Feron;Aaron D. Ames, “A Scalable Controlled Set Invariance Framework with Practical Safety Guarantees”, 2019 IEEE 58th Conference on Decision and Control (CDC).

210. Thanakorn Khamvilai;Louis Sutter;Jose M. Magalhaes Junior;Aqib A. Syed;Eric Feron, “Fault Assessment of Safety-Critical Applications on Reconfigurable Multi-Core Architecture”, 2019 IEEE/AIAA 38th Digital Avionics Systems Conference (DASC).
211. Philippe Monmousseau;Aude Marzuoli;Christabelle Bosson;Eric Feron;Daniel Delahaye, “Doorway to the United States: An Exploration of Customs and Border Protection Data”, 2019 IEEE/AIAA 38th Digital Avionics Systems Conference (DASC)
212. Jose M. Magalhaes Junior;Thanakorn Khamvilai;Louis Sutter;Eric Feron, “Test platform for autopilot system embedded in a model of multi-core architecture using X-Plane flight simulator” 2019 IEEE/AIAA 38th Digital Avionics Systems Conference (DASC)
213. Thanakorn Khamvilai;John B. Mains;Michael Z. Miller;Eric M. Feron, “Trajectory Control of a Swashplate-less Coaxial Helicopter Using Nonlinear Techniques”, 2019 IEEE Aerospace Conference.
214. Kerianne L. Hobbs, Ivan Perez, Aaron Fifarek and Eric M. Feron, “Formal Verification of System States for Spacecraft Automatic Maneuvering”, 7-11 January 2019AIAA Scitech 2019 Forum, <https://doi.org/10.2514/6.2019-1187>
215. Kerianne L. Hobbs and Eric M. Feron, “A Taxonomy for Aerospace Collision Avoidance with Implications for Automation in Space Traffic Management”, 6-10 January 2020AIAA Scitech 2020 Forum
216. Joel Dunham;Eric Johnson;Eric Feron;Brian German, “Unmanned Systems Health Analysis through Evidential Reasoning Networks” 2020 AIAA/IEEE 39th Digital Avionics Systems Conference (DASC)
217. Mary Catharine Martin;Michael Z. Miller;Eric Feron, “Coordination and Path Planning of Cooperative UAVs in RF Localization and Relay Network” 2020 AIAA/IEEE 39th Digital Avionics Systems Conference (DASC).
218. Kerianne Hobbs, Alexander R. Collins and Eric Feron, “Towards a Taxonomy for Automatic and Autonomous Cooperative Spacecraft Maneuvering in a Space Traffic Management Framework”, November 16-18, 2020ASCEND 2020
219. Jeremy Epps;Kévin Garanger;Eric Feron, “Wake Interactions Of A Tetrahedron Quadcopter”, 2020 International Conference on Unmanned Aircraft Systems (ICUAS).
220. Philippe Monmousseau;Daniel Delahaye;Aude Marzuoli;Eric Feron, “Door-to-Door Air Travel Time Analysis in the United States using Uber Data”, 2020 International Conference on Artificial Intelligence and Data Analytics for Air Transportation (AIDA-AT)
221. Corbin Klett;Matthew Abate;Yongun Yoon;Samuel Coogan;Eric Feron, “Bounding the State Covariance Matrix for Switched Linear Systems with Noise”, 2020 American Control Conference (ACC).

222. Gabriel Jarry;Daniel Delahaye;Eric Feron. “Approach and Landing Aircraft On-Board Parameters Estimation with LSTM Networks”, 2020 International Conference on Artificial Intelligence and Data Analytics for Air Transportation (AIDA-AT).
223. Kévin Garanger;Jeremy Epps;Eric Feron, “Modeling and Experimental Validation of a Fractal Tetrahedron UAS Assembly”, 2020 IEEE Aerospace Conference.
224. John B. Mains;Thanakorn Khamvilai;Eric Feron, “Scheduling for Offloading Safety-Critical Applications Within Networked Groups of Vehicles”, 2020 AIAA/IEEE 39th Digital Avionics Systems Conference (DASC).
225. Matthew Abate;Corbin Klett;Samuel Coogan;Eric Feron, “Lyapunov Differential Equation Hierarchy and Polynomial Lyapunov Functions for Switched Linear Systems”, 2020 American Control Conference (ACC).
226. Olatunde B. Sanni, Thanakorn Khamvilai, Teppatat Puntawuttiwong and Eric M. Feron, “An Assessment of Unmanned Aircraft System Operations with the Extensible Trajectory Optimization Library”, 19–21 January 2021AIAA Scitech 2021 Forum, <https://doi.org/10.2514/6.2021-0576>
227. Kerianne L. Hobbs, Alexander R. Collins and Eric M. Feron, “Risk-Based Formal Requirement Elicitation for Automatic Spacecraft Maneuvering”, 19–21 January 2021AIAA Scitech 2021 Forum, <https://doi.org/10.2514/6.2021-1122>
228. Kendra Lang, Corbin Klett, Kelsey Hawkins, Eric Feron, Panagiotis Tsiotras and Sean Phillips, “Formal Verification Applied to Spacecraft Attitude Control”, 19–21 January 2021AIAA Scitech 2021 Forum, <https://doi.org/10.2514/6.2021-1126>.

C. OTHER PUBLICATIONS

1. JP Clarke, E Feron, SH Kim “Reducing ramp delay”, International Airport Review, 2013
2. Eric Feron, “L’algorithmique des Objets Cyber-Physiques” (Cyber-Physical Objects Algorithmics), Special issue on *Homo Algorithmus*, revue France-Forum, number 61, April 2016.
3. Caroline de L***., " An essay on the physical and moral influence of the feminine outfit ", translated from the French by Eric Feron. (<http://www.feron.org/Eric/Essay.pdf>)
4. Baron Antoine-Isaac Silvestre de Sacy, "On the benefits of studying Arabic poetry", translated from the French by Eric Feron. (1826). (http://www.feron.org/Eric/Sacy_Arab_Poetry.pdf)
5. Homeostasis-Enabling Wheel Prototype. *International Conference on Robotics and Automation*, 2019. Contributed video. (<https://www.youtube.com/channel/UC4QymShWvjoaP5FNGffDdYQ/videos>)

D. PRESENTATIONS

D1. Invited Talks

August 1995, "More reliable robustness indicators for linear systems subject to parametric uncertainties," California Institute of Technology, Pasadena, CA.

1996, "Robust and computational viewpoint on nonlinear systems," United Technologies Research Center, Hartford, CT.

February 1997, "Robust control systems and identification," Honeywell Research Center, Minneapolis, MN.

January-July 1997, "Time-Frequency Analysis for Transfer Function Identification and Application to F/A-18," presented at: UCLA, Hughes Communications, Catholic University of Leuven (Belgium)

January 1998, "Design and Analysis of Conflict Resolution Algorithms via Positive Semidefinite Programming," presented at: UC Berkeley, UCLA, UC Santa Barbara, Cal Tech.

March 1998, "Control of Linear Systems subject to Actuator Rate and Position Saturation," U. of Minnesota, Minneapolis, MN.

January - November 1999, "Identification and control of departure processes at busy airports", U. of Michigan, Catholic University of Leuven (Belgium), Eurocontrol Experimental Center (France), UCLA, UC Berkeley, Yale University, Boston University, ONERA (France), CNES (France), Stanford University.

May 1999, "Semidefinite Programming to Solve Conflicts Arising among many Aircraft", invited talk, workshop on Advances in Linear Matrix Inequalities in Systems and Control, Compiègne, France.

May 1999 "Aggressive Maneuvering of small autonomous Aerial Vehicles", invited talk, Catholic University of Leuven, Belgium.

August 1999, "Nonconvex quadratic programming", UC Berkeley.

March-November 2000, "Robust Hybrid Control for Autonomous Vehicles Motion Planning", United Technologies Research Center, Catholic University Leuven (Belgium), ESSI (Sophia-Antipolis, France), Stanford University, Princeton University.

March 2001 "Recent progress in Multi-Vehicle Coordination and Control", University of Illinois, Urbana-Champaign.

June 2001 "L'Aéroportuaire du Futur", Académie des Technologies, Séance plénière, Poitiers, France.

November 2001 “Acrobatic helicopter”, Upenn, Philadelphia, PA.

June 2002: “Engineering education Challenges”, National Academy of Air and Space, Ecole Nationale Supérieure de Techniques Avancées, Paris, France.

October 2002: “Real-time system requirements”, real time and embedded systems, CNES, Toulouse, France.

October 2003: “Highly Agile helicopter control”, Kyoto University, Hokkaido University, Japan. Host: Prof. Noboru Noguchi. Talk also delivered to Yamaha & Yanmar.

October 2003: “Collision avoidance issues in automotive applications” Talk delivered to Nissan and Subaru, Tokyo, Japan.

“Depression, a unique illness”, MIT Leonardo dinner, November 2003.

November 2003 “Automated and acrobatic flight”, Aircraft and Automation workshop, Marc Pélegrin host, Office National d’Etudes et Recherches Aérospatiales, Toulouse, France.

“Aerobatic autonomous helicopter flight”, Stanford University, 08/04.

“A new local 6-degree of freedom position sensor”, Columbia University, Oct 2005

“Slowdown warning system for pile-up crash avoidance”, MIT-ILP research conference, october 2004

“Bezout, French Mathematician in the XVIIIth century”, MIT Leonardo dinner, Nov. 2004

“Aerial Robotics: What’s ahead and what have we left behind?”, keynote, Information, Decision and Control conference, Adelaide, Australia, February 12, 2007 .

“Helicopter flight in crowded environments”, LAAS-Toulouse, France, Jan 08.

“Certification of control systems”, UC Berkeley, Sep, 2008.

“Certification of control systems software”, MIT – LIDS seminar, february, 2009.

“Certification of control systems software”, Mathworks seminar, february, 2009.

“Certification of control systems software”, AFRL S45 symposium, june, 2009.

“Certification of Control Systems”, ONERA-Toulouse, July 2009.

“Certification of Control Systems”, CalTech Verification and Validation Workshop, Sep 2009,

“Certification of Control Systems”, Virginia Tech invited lecture, Spring 2010,

“Certification of Control Systems”, Keynote, Numerical Software Verification III, July 14, 2010, Edimborough, Scotland.

“Cascaded control system design with full proof support”, ACGSC forum, Denver, March 2011,

“Cascaded control system design with full proof support”, Georgia Tech Cyber-Physical Systems Seminar, June 2011

“Cascaded control system design with full proof support”, AFRL S5 symposium, June 2011.

“Aviation system safety Industry Panel”, NASA Aviation Safety Meeting, St Louis, May 2011.

“Cascaded control system design with full proof support”, Numerical Software Verification IV, Snowbird, Utah, July 2011,

“Supporting control designs from specification to code implementation”, Formal Methods in Robotics Workshop, Snowbird, Utah, July 2011,

“Control system verification and validation”, FMCAD ad hoc panel, Nov 2011, Lee Pike, Galois, Inc. organizer

“Collaborative Decision Making at Large Airports”, Ecole Nationale de l’Aviation Civile, October 2011, (European) Academy of Air and Space, February 2012. Plenary

“Credible autcoding of control systems”, ETH Zurich (January 2012), Ecole Nationale de l’Aviation Civile, March 2012.

“Credible autcoding of control systems”, 2nd International Conference on Model & Data Engineering (*MEDI2012*) October 3 - 5 2012. Poitiers, Futuroscope – France. Keynote

“How can automatic control support the certification of safety-critical, embedded software ?” Pluridisciplinary Optimization Seminar in Toulouse (POST), Jan. 7, 2013. Toulouse, France.

« Control of a distributed system with a large number of actuators. » Centres de Compétence Technique – Systèmes de Commande et Automatique. Centre National d’Etudes Spatiales (CNES). January 10, 2013.

"Credible autcoding and model-based control design and validation", Opening keynote, United Technologies Research Center controls conference, October 2013.

"Credible autcoding of control systems: Preserving high-level semantics for process-wide system validation", Massachusetts Institute of Technology, Cambridge, MA, May 2014.

"Verification and Validation of Autonomous Systems (a software view)", workshop on self-driving vehicles. Robotic Science and Systems (RSS) conference, Berkeley, CA, July 13, 2014.

"Path planning in the presence of ambushes", University of Pittsburgh (ECE), Pittsburgh, PA, October 14, 2014.

"Path Planning in the presence of ambushes", KAUST, Saudi Arabia, November 2014.

"Internet of Things, what can we (not) afford to connect?", Dubai, Internet of Things forum, 2015

Credible auto coding for autonomy algorithms, NSV, July 2016, Toronto, Canada

"Command and control software for safety critical cyber-physical systems: Carrying the burden of proof.",

"Cyber-Physical Systems in Aerospace Engineering", Princeton University, Feb 2017.

"Computer Science in Aerospace Engineering", GT School of Computer Science, April 2017.

"The growing need for proofs in Aerospace Information systems", GT School of Mathematics, August 2017.

"Foundations of Intelligent Additive Manufacturing", United Technologies Research Center, July 2017.

"Guiding aerospace vehicles with real-time optimization algorithms - Supporting a rapidly evolving industrial reality", Airbus Defence and Space, Munich, September 2017.

"20 years of Aerobatic flight", Stanford University, October 2017.

"Verification of optimization-based control systems", Jet Propulsion Laboratory, September 2017.

Korea Aerospace Research Institute, December 2019. "20 years of aerobatic flight with autonomous air vehicles"

Korea Advanced Institute of Science and Technology, December 2019. Implementing and validating air passenger-centric metrics using mobile phone and social media data.

D2. Keynote Presentations

"L'Aéroportuaire du Futur", Académie des Technologies, Séance plénière, Poitiers, France. June 2001.

“Credible autocoding of control systems”, 2nd International Conference on Model & Data Engineering (*MEDI2012*) October 3 - 5 2012. Poitiers, Futuroscope – France.

“Collaborative Decision Making at Large Airports”, Ecole Nationale de l’Aviation Civile, October 2011, (European) Academy of Air and Space, February 2012.

"Credible autocoding and model-based control design and validation", United Technologies Research Center controls conference, October 2013.

“Distributed control architectures: New middleware for smart software and hardware scheduling”, NATO Science and Technology Organization, AVT-RWS-357, May 2021.

E. OTHER SCHOLARLY ACCOMPLISHMENTS

Patents and Patent Applications Pending:

US Patent: *Passive stabilization* systems for wheeled objects

Patent number: **7,568,709**

Inventor: Eric Feron

Assignee: Massachusetts institute of technology

Awarded August 4, 2009

US Provisional Patent Application

Optimal Emergency Termination System for Unmanned Aerial Vehicles by Destructive Rotor Surface Reduction

Application No.: 62/378,923

Filing Date: 24 August 2016

GTRC ID No.: 7329

Our Ref. No.: GTRC7329PRV

US Provisional Patent Application

Design and Development of an Autonomous Microgravity-Enabling Aerial Vehicle

Application No.: 62/557,925

Filing Date: 13 September 2017

GTRC ID No.: 7409/7572 PRV

Our Ref. No.: 011529.112846 (GTRC7409/7572PRV)

U.S. Patent Application No. 62/504,220

“Arrangement for Continuous Wheel Rotation for Systems with Neither Continuous Joint Rotations Nor Axles”

Filed: May 10, 2017

GTRC Reference Nos.: 7563

Our Reference No.: GTRC7563PRV

US Provisional Patent Application Serial No. 62/881,070 "Reliable real-time task allocation in

distributed computing systems"; My Ref. No.: G009PV.8236
Filing date: July 31, 2019.

Major New Products, Processes, Designs, or Systems:

Wavetool: A software tool to perform transfer function identification via wavelets. (In use at NASA). 1997.

AOCMOD: A discrete-event software simulation of an Airline Operations Center. (In use at United Airlines). 1999.

Autonomous agile helicopter: Product manufactured under MIT license by Nascent Technology Corp. and delivered to Oregon Graduate Institute (1 copy), Lockheed Martin Owego (2 copies), University of North Carolina (1 copy). Other derivative products: Simulations of small aerobatic helicopters. 2003.

Gene-Auto*/Gene-check: The next generation, credible autocoding suite for embedded systems. 2014.

Cyber-Physical Systems Design and Analysis: Udacity MOOC built in collaboration with Jerome Hugues (ISAE-Supaero). URL:
<https://www.udacity.com/course/cyber-physical-systems-design-analysis--ud9876>

V. OTHER PROFESSIONAL APPOINTMENTS - SERVICE

<u>Employer</u>	<u>Position</u>	<u>Beginning</u>	<u>Ending</u>
École Nationale de l'Aviation Civile	Visiting Professor	2011	----
Institut Supérieur de l'Aéronatique et de l'Espace	Visiting Professor	2012	2012
École Nationale Supérieure de l'Électricité, Électronique Informatique et Hydraulique	Visiting Professor	2012	2012
Institut Supérieur de l'Aéronautique et de l'Espace	Associate Researcher	2017	----

Consulting Record:

<u>Firm</u>	<u>Beginning</u>	<u>Ending</u>
ONERA-CERT	05/94	06/98
United Technologies	05/95	05/95
United Technologies	02/97	04/97
Northwest Airlines	06/00	12/00

Valeo	02/04	02/04
Nascent Technology Corp.	01/02	08/05
Firstec, Daejeon, Korea	09/13	09/13
United Technologies	02/15	12/15
A ³ by Airbus Group	02/16	08/16
Aurora Flight Sciences	09/17	12/17

SERVICE

<u>General service</u>	<u>Beginning</u>	<u>Ending</u>
Third SIAM Conference on Control Theory and Applications, Technical Committee	09/93	04/95
Reviewer for AFOSR and NRC proposals.	09/93	----
Guest Editor for the International Journal of Robust and Nonlinear Control, special issue on Linear Matrix Inequalities.	09/93	09/96
Guest Editor for the Journal of Ecole Polytechnique, France (equivalent MIT Technology Review), special issue on Air Traffic.	03/97	05/98
Associate Editor, IEEE Transactions on Automatic Control.	10/97	12/00
Technical Committee Program Member, 1999 American Control Conference.	12/97	12/98
ONERA Airport Research Project Evaluation	03/00	03/00
Member, panel on "Future Directions in Control and Dynamical Systems", sub panelist in Aerospace and Transportation. Organized by SIAM.	05/00	07/00
NSF proposal review panel member	06/00	06/00
DARPA/NSF hybrid systems panel member	10/00	10/00
Chairman, IEEE Technical Committee on Robust Control	11/00	11/03
North America Advisor for Académie Nationale des Technologies (French equivalent to National Academy of Engineering)	12/00	----

Member, Think Tank 30 Club of Rome (resigned 08/01 for lack of time)		7/01
Technical Committee Program Member, 2002 American Control Conference	12/00	12/01
NSF proposal review panel	04/01	---
Associate Editor, International Journal of Robust and Nonlinear Control	01/02	01/03
Chair, Local arrangements, 2004 ACC	01/02	08/05
Safety area Program manager, MIT-Ford Alliance	01/02	08/05
US Girls Scout Aeronautical Instructor	01/02	08/05
MIT Museum: Participant and Presenter during National Engineers Week. Theme: Stability and Instability	03/02	04/04
Review of several (>20) promotion cases (tenure, full) for U. Michigan, Stanford U., MIT, U. Berkeley in AE, ME, EE and CS	2001	---
Autonomous Intelligent Network and Systems Conference	2004	2004
Associate Editor, Journal of Field Robotics	2004	---
Abstractions, Robustness and Computations Workshop Upenn: co-organizer with Patrick Cousot	2004	08/05
NSV-II: Second International Workshop on Numerical Software Verification.	01/09	04/09
NSV-II: Second International Workshop on Numerical Software Verification.	01/11	07/11
Associate Editor, IEEE Trans. Systems, Man And Cybernetics, part A	07/11	---
Committee Member, NASA Formal Methods	06/12	---
Organizer, Workshop on Future Directions in Decision and Control in Aerospace	09/11	05/12

Advisory Board member, AIAA JACIC (now JAIS)	06/12	----
Member Committee “Habilitation à Diriger des Recherches” (HdR~Tenure)		
Daniel Delahaye	03/12	
Stephane Puechmorel	12/12	
David Gianazza	11/15	
Pierre-Loic Garoche	09/16	
Xavier Thirioux	09/16	
Jerome Hughes	02/17	
co-Organizer, workshop on "Controls Systems Software Verification", NASA Ames,	06/13	
Organizer, "Aerospace 2050", a workshop to honor Professor Marc P��legrin for his 90 th birthday at ISAE,	12/13	
NSF Cyber-Physical Systems review panel,	07/14	
co-Organizer, “Semantics of Optimization for Real-Time Embedded Systems”, Silverthorne, CO.	03/15	
co-Organizer, “Semantics of Optimization for Real-Time Embedded Systems”, Silverthorne, CO.	03/15	
NASA Formal Methods (NSV 2017)	07/16	
NSF review panel,	10/16	
Member, Career, Technical & Agricultural Education advisory committee, Frederick Douglass High School, Atlanta	05/15	
“So Toulouse” Ambassador (representative of the city of Toulouse’s economic interests abroad)	06/16	
Member, Fredrick Douglass High School Program Advisory Committee	09/15	
Advisor, Career Technical and Agricultural Education College and Career Enrichment Exchange Program, Atlanta Public Schools	02/16	
Member, On-site Evaluation Team for certification of the Engineering and Education		

Program at Frederick Douglass High School	04/16	
Examiner and “Rapporteur de séance”	09/16	
International Technical Advisory Board, Saint Exupéry Technical Research Institute, Toulouse, France	11/16	2019
Technical Advisory Board, Formal Methods Research Group, NASA Langley	11/16	----
NSF Review Panel	07/17	
Air Force 2030 Robotics and Autonomy Expert Panel,	07/18	----
"REDEFINE DAY", co-organizer, workshop on REDEFINE multicore co-processor, Toulouse, France	01/20	

University service

<u>Committee</u>	<u>Beginning</u>	<u>Ending</u>
Organizer, Workshop on Control software Verification, Georgia Tech,	08/11	11/11
co-Organizer, 2-day workshop on "Aerospace Engineering and health sciences", Georgia Tech, (France-Atlanta events)	10/13	10/13
co-organizer, 2-day workshop on Unmanned Aviation, Georgia Tech (as part of France-Atlanta) organizer,	10/14	10/14
Faculty Senate	2012	2015
Research Faculty Promotion committee	2014	2021
Faculty Executive Board	2015	2018
Faculty Reappointment Committee	2017	2021
co-organizer, 1 day round table on Airbus – Georgia Tech collaboration (as part of France-Atlanta) organizer,	2017	2017
co-organizer, round table on Toulouse Georgia Tech academic collaborations and research	2017	2017

organizer, Georgia Tech Airbus workshop on advances in control systems	2017	2017
organizer, 100 years of flight at Georgia Tech	2017	2017
co-organizer, Unmanned Aerial Systems safety workshop Georgia Tech	2018	2018
Organizer and host, Robotics workshop. KAUST	2020	2021
KAUST Continuing Open Online Learning TaskForce (K-COOL)	2020	2021

VI. HONORS AND AWARDS

	<u>Date</u>
Charles Stark Draper Chair	11/93
NSF Research Initiation Award	09/94
NASA Certificate of Recognition (wavelet analysis)	02/98
ONR Young Investigator Award	02/99
Best paper award, Airport Arrival and Departure Management track, 3 rd USA/Europe Air Traffic Management R&D Seminar	06/00
Best paper award, 2001 Digital Avionics Systems Conference, (Unmanned Systems avionics)	10/01
Dutton/Ducoffe Professorship in Aerospace Software Engineering	09/05
Certificate of Appreciation (three certificates), Sope Creek Elementary School Career Day	03/08
Certificate of appreciation, Thank a Teacher Program, Georgia Institute of Technology	03/09
American Publishers Award (PROSE award) (Handbook of Robotics)	04/09
Andrew Sage best paper award, IEEE Transactions on Systems, Man and Cybernetics (Driver drowsiness detection)	10/10
Best track paper award, 2011 Digital Avionics Systems Conference (air transportation)	10/11
"Top 10" paper for 2000-2009 period, <i>IEEE Trans. Intell. Transp. Systems</i> (air traffic control conflict avoidance)	08/13
Best student paper award, Digital Avionics Systems Conference, (autocoding of engine control functions)	10/14
Outstanding community contributor, Atlanta Public Schools	06/16
Best paper award, automation track, International Conference on Research in Air Transportation, June 2016	06/16
Best student paper award, Digital Avionics Systems Conference,	10/16

(agent-based air traffic control simulation)

Best Multi-Robot Systems paper award and best paper award finalist, IEEE International Conference on Robotics and Automation. “The Robotarium: A Remotely Accessible Swarm Robotics Research Testbed” by Pickem, Daniel; Glotfelter, Paul; Wang, Li; Mote, Mark; Ames, Aaron; Feron, Eric; Egerstedt, Magnus	06/17
Certificate of appreciation (2), Thank a Teacher Program, Georgia Institute of Technology	12/20
Fellow of American Institute of Aeronautics and Astronautics	2021
2021 IEEE Aerospace Conference Best Paper in Track Award	2021

Media Coverage

The Boston Globe, Popular Mechanics, Science et Avenir, French TV, MIT Technology Review, Atlanta WABE/NPR