Teryn W. DalBello

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Denver, CO

Active TS/SCI clearance

PROFESSIONAL SUMMARY

Results-driven and innovative **Principal Aerodynamics Engineer** with 20+ years of success leading advanced programs in **Computational Fluid Dynamics (CFD)**, **aerodynamics**, **propulsion systems**, and **conceptual aircraft design**. Renowned for solving complex, high-stakes engineering challenges with **precision**, **technical depth**, and **systems-level thinking**. Skilled in tools such as **Pointwise**, **CFD++**, **STARCCM+**, **FLOEFD, Fluent, Fieldview** and **MATLAB**, with deep experience across the full project lifecycle—from conceptual R&D through flight test and validation. Proven leader of **multidisciplinary engineering teams**, delivering solutions that enhance performance, reduce risk, and align with **military and aerospace standards**. A quality-driven, analytical thinker who thrives in **mission-critical environments**, mentors peers, and drives continuous improvement. Seeking to contribute my **expertise, leadership,** and **innovation mindset** to an organization building the future of aerospace.

KEY STRENGTHS & CORE COMPETENCIES

- Extensive steady/unsteady subsonic, transonic and supersonic external Flow analysis experience
- Aerodynamic Loads
- Monte-Carlo analysis
- Store-Separation & 6-DOF Simulations
- Propulsion Systems
- Propeller modeling, analysis and design
- Physical modeling and simulations
- Wind Tunnel Testing Execution
- Flight test, CFD and wind tunnel data validation
- Analytical tool development, scripting and coding
- Excel in Multidisciplinary Team Collaboration
- Internal flows with fans/heat exchangers/filters and heat transfer from components and surroundings
- High-Performance Computing (HPC) Management and Administration

PROFESSIONAL EXPERIENCE

Co-Owner / Managing Director

HomeSmiles Denver – Denver, CO | 10/2025 – 5/2026

- Founded and lead a preventative maintenance company serving residential and commercial properties, responsible for business strategy, operations, and technical execution. Built and launched a full-service operation from inception, overseeing process design & process execution, vendor management, quality control, and customer delivery.
- Applied systems-engineering principles to optimize workflows, reduce operational risk, and improve service reliability.
- Managed financial planning, client relationships, and long-term growth strategies while maintaining hands-on operational oversight.

Principal Engineer Lead, Aerodynamics/Flight Sciences

Sierra Nevada Corporation (SNC) | 10/2016 – 10/2025

- **Team** Lead for the CFD/aerodynamics group with five direct reports, serving as the primary interface between the Flight Sciences Team and cross-functional Program needs across the company.
- Led and actively contributed to advanced aerodynamic analyses of **unsteady** and **steady** flows across **subsonic**, **transonic**, and **supersonic regimes**, supporting a diverse portfolio of military contracts and certification efforts in a high-performance, results-driven environment.
- Performed high-level **CFD** and mesh development, **internal and external aerodynamics**, **propulsion system flows**, **aerodynamic loads, stability & control**, **vibration & buffet, aeroacoustics, 6DOF store separation**, **aircraft icing**, **multiphase flows**, **wind tunnel testing**, **aircraft conceptual design**, and **thermodynamics/heat transfer**. Skilled in wide

TRAINING / EXPERIENCE

- 25+ years experience building/piloting RC airplanes
- EVMS qualified
- Flight Dynamics, 2023 University of Kansas Short Course
- Hypersonic Aerodynamics for Flight Testers, Society of Flight Test Engineers Short Course
- University of Kansas Aerospace Short Course - Conceptual Design of UAVs by Richard Colgren
- AIAA Professional Development Short Course - Turbulence Modeling for CFD by David Wilcox
- NASA Glenn Research Center Short Course - Aircraft Conceptual Design by Daniel Raymer
- Aircraft Structural Loads, 2016 University of Kansas Short Course

ACHIEVEMENTS / AFFILIATIONS

- Eagle Scout, Boy Scouts of America
- Member of Academy of Model Aeronautics (AMA) and International Miniature Aircraft Association (IMAA)

PATENTS

Pagliara; Philip W. *et al*, "Methods and Apparatus for a Tandem Divert and Attitude Control System", US Patent # 8,800,913, issued August 12, 2014 and filed on January 29, 2010.

range of analytical tools such as **Matlab**, **Fieldview**, **Pointwise**, **CFD++**, **STAR-CCM+, Fluent** and **FLOEFD.**

- Pioneered the development and implementation of critical capabilities at SNC all supporting various Part 23/25/Military Flight Certifications. These include **aircraft Icing** analysis, **Monte-Carlo simulations, coupled fluid-thermal and heat transfer** analysis**, aircraft store separation, aircraft aerodynamic Load** analysis and **internal flows** with fans/heat exchangers/filters.
- Six years of experience standing up, managing, and administering **High-Performance Computing** (HPC) systems supporting users across all Programs**.**

Principal Systems Engineer
Raytheon Missile Systems | 12/2004 – 10/2016
AWS Surface Attack, Paveway® Program (1/2016 -10/2016)

- Served as Integration & Test IPT Lead for the AWS Surface Attack Paveway® Program, overseeing a team of seven engineers supporting weapon integration across domestic and international efforts.
- Led cross-functional coordination, ensuring successful alignment with program requirements and milestones.

AWS Surface Attack, AIM-9X Sidewinder Program (11/2013 -1/2016)

- IPT Lead and Cost Account Manager (CAM) for F-22/9X and F-15E/9X safe-separation and integration programs.
- Responsible for managing program cost, schedule, technical execution, and customer engagement in high visibility, fast paced development and flight test environment.

Aerodynamics Department (10/2004-11/2013)

- Conducted extensive CFD and aerodynamic analyses across subsonic and hypersonic regimes for aircraft and missile programs, including classified and proprietary projects.
- Developed Raytheon's first BEM-based propeller design tool for both existing and future vehicle platforms.
- Led aerodynamic modeling for safe separation on the AIM-9X/F-22 program, redesigning key Matlab tools and delivering validated predictions to U.S. Government stakeholders for Phase II program execution.

Senior Research Associate
Ohio Aerospace Institute, NASA Glenn Research Center, Engine Systems Branch | 5/2000 – 9/2002

- Conducted CFD analyses of High-Speed Civil Transport mixer/ejector nozzles to evaluate the impact of vortex-generating tabs on primary-secondary flow mixing.
- Developed a custom tab modeling procedure within the Wind code framework.

Research Engineer
NASA Ames Research Center, Fluid Mechanics Branch | 7/1999 – 5/2000

- Performed numerical simulations of aircraft forebodies at high angles of attack undergoing large-amplitude yawing motion using the Navier-Stokes solver OVERFLOW.

- Analyzed compressible dynamic stall on oscillating airfoils using an unsteady Navier-Stokes CFD code to model transient aerodynamic behavior.

EDUCATION

Diploma Course Degree, Aeronautics and Aerospace
von Karman Institute for Fluid Dynamics, Belgium

Bachelor of Science Degree, Aeronautical Engineering
Bachelor of Science Degree, Mechanical Engineering
University of California at Davis, Davis, California

PUBLICATIONS

T. W. DalBello, V. Dippold III, and N. J. Georgiadis, "Computations of Separating Flow in a Subsonic Planar Diffuser," NASA TM 2005-213894.

S. Saephan, C.P. van Dam, C.M. Fremaux, and T. W. DalBello, "Simulation of Flow About Rotating Forebodies at High Angles of Attack," *Journal of Aircraft*, Vol. 41, No. 6, pp. 1298-1305(8), November 2004.

T. W. DalBello, N.J. Georgiadis, D. A. Yoder, and T. G. Keith, "Computational Study of Axisymmetric Off-Design Nozzle Flows," AIAA Paper 2004-0530, January 2004.

T. W. DalBello, N.J. Georgiadis, D. A. Yoder, and T. G. Keith, "Computations of Internal and External Axisymmetric Nozzle Aerodynamics at Transonic Speeds," JANNAF 27th Airbreathing Propulsion Subcommittee, Colorado Springs, CO, December 2003.

T. W. DalBello, "WIND Validation Cases: Computational Study of Thermally-Perfect Gases," AIAA Paper 2003-0546, January 2003.

T. W. DalBello, C.J. Steffen Jr., "Parametric Study of a Mixer/Ejector Nozzle with Mixing Enhancement Devices," AIAA Paper 2002-0667, January 2002.

C.P. van Dam, S. Saephan, C.M. Fremaux, and T. W. DalBello, "Prediction of Flows about Forebodies at High-Angle-of-Attack Dynamic Conditions," NATO Paper RTO-MP-069(I), RTO Applied Vehicle Technology Panel Symposium, Loen, Norway, May 2001.

C.P. van Dam, T. W. DalBello, E.P.N. Duque, and C.M. Fremaux, "Computational Study of Rotary Tests on Forebody Models," AIAA Paper 2000-4105, August 2000