

CONSULTING

Aerodynamics and Hydrodynamics

Timely solutions, rapid problem set up, expert analysis - all with AMI Consulting Services.

Decades of experience and a diverse computational toolkit provide resources at your disposal for all phases of design and analysis. Aerospace, marine, automotive, and high-speed rail applications are all within easy grasp.

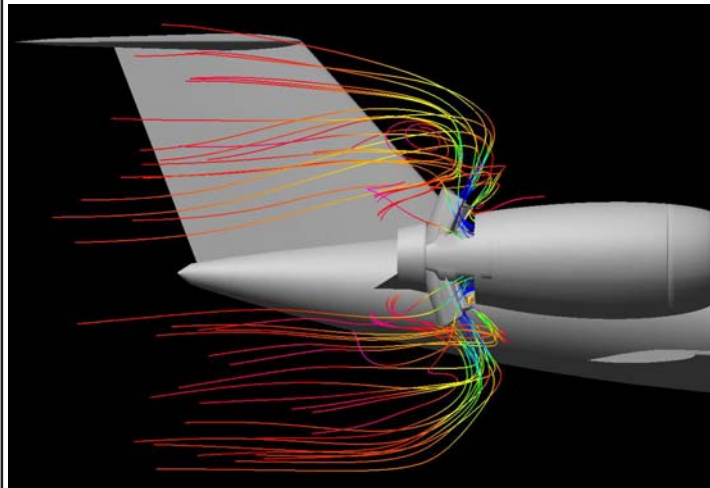
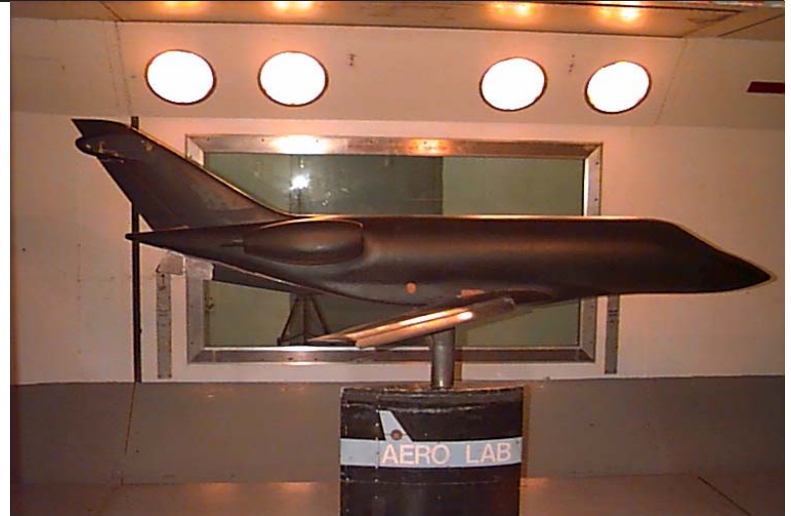
New aircraft designs and modifications, high lift systems, radomes and antennas, hushkits, wind tunnel models, wind tunnel tests, flight test support, minimum wake surface vessels, propulsion/vehicle interactions and many other areas are contained in the AMI corporate experience.

Let AMI accelerate your design effort - provide complete solutions, assist in problem set up, purchase a geometry model, obtain software and training. The full spectrum is available to ensure your success.



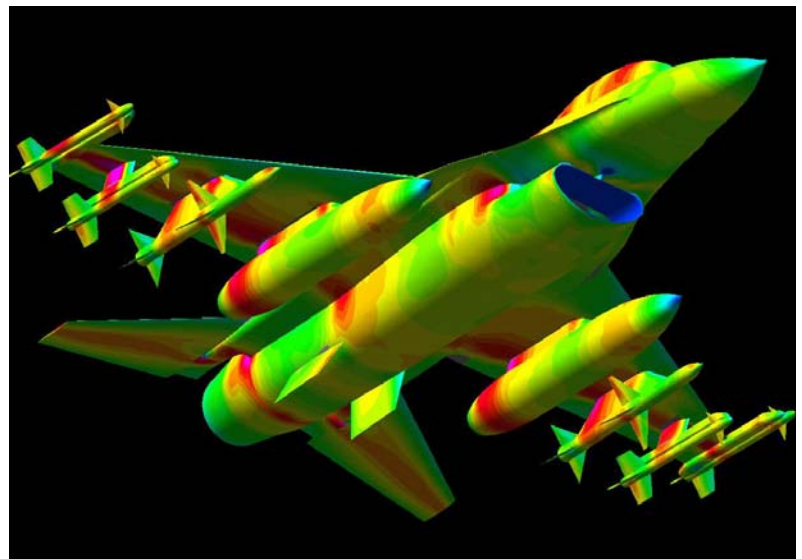
Analytical Methods, Inc.
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Wind Tunnel Test
Of An Advanced
Business Jet



Side View of
Starboard Engine
With Exhaust Plume
and Thrust Reverser
Deployed

Analysis Of
The F16D
At $\alpha = 4$,
 $M_\infty = 0.9$



History

Analytical Methods, Inc. has provided software and consulting services since 1971. Our engineers have an average of over 12 years experience and skills that span aerodynamics, hydrodynamics, propulsion and aeroelasticity. We have addressed a wide range of vehicles including fixed and rotary wing aircraft; military, commercial, business jet, general aviation, and sport aviation aircraft; missiles and guided munitions; surface ships, submarines and pleasure craft; family cars, sports cars, Formula 1 and other racing cars; high speed trains and related support facilities.

We have built models for nearly 400 aircraft and many of these models are available to you as VSAERO and MGAERO input files. All models have contributed greatly to the AMI experience base, and our expertise is another powerful resource at your disposal.

Range of Services

AMI can provide you with a complete solution to your problem; can provide you all the tools for you to obtain the solution, or offer any intermediate level of support and software. We work with one-person companies through the largest of multinational corporations, as well as university and government organizations.

Our experience derives from all manner of new aircraft designs to aircraft modifications and modernization. We have analyzed winglets; radomes and antennas; mixers, mixer-nozzles, and ejectors; external tanks and booms; re-engine efforts; re-wing and stretched fuselage; and a variety of other modifications. Specific areas are listed below.

- Aircraft preliminary design support including performance, sizing, stability and control studies; mission performance calculations including takeoff, climb, cruise, and landing optimization.
- Two-dimensional airfoil and three-dimensional wing design for subsonic and transonic speeds.
- Three-dimensional subsonic and transonic full configuration aerodynamic design and analysis including power plant integration.
- Wind tunnel test planning, execution and model fabrication. Flight test data analysis, including performance, stall characteristics and handling qualities.
- Propeller design, analysis and load calculations.
- Aerodynamic load calculations, including determination of critical load conditions.
- High Lift system design.
- Engine air inlet design.

Specific Projects

- Complete aerodynamic design of the Swearingen SJ30 business jet, including wind tunnel testing at the University of Washington Aeronautical Laboratory.
- Aerodynamic design, CFD analysis, wind tunnel testing and loads analysis for the Lockheed Martin Cooperative Avionics Testbed 737-300 (CATB).
- Design, CFD analysis and flight test support of Northrop Grumman, FedEx C-MANPADS DIRCM pod installation on the MD-11 and 747 aircraft.
- CFD support for Aviation Partners winglet modifications for commercial airliners and business jets.
- Aerodynamic analysis of the Aerion Corporation supersonic business jet including the prediction of loads, stability and control.
- Comprehensive aerodynamic support of the Advanced Technology Group Javelin high performance business jet from preliminary design through certification loads analysis.
- Aerodynamic analysis of the Diamond Aircraft D-JET entry level business jet.
- CFD analysis for all atmospheric flight phases of the Rocketplane XP sub-orbital vehicle.
- CFD analysis for of the L-3 Aeromet DC-10 WASP airborne observatory aircraft.
- Support for numerous antenna and radome modifications to military and commercial aircraft.
- Computational analysis for the Quiet Technology Venture OC135 and BAC1-11 hushkit development programs.

Questions?

For more information about AMI consulting, contact:

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