

# COMPUTATIONAL FLUID DYNAMICS (CFD) ANALYSIS

Flow Insights, Virtually Realized



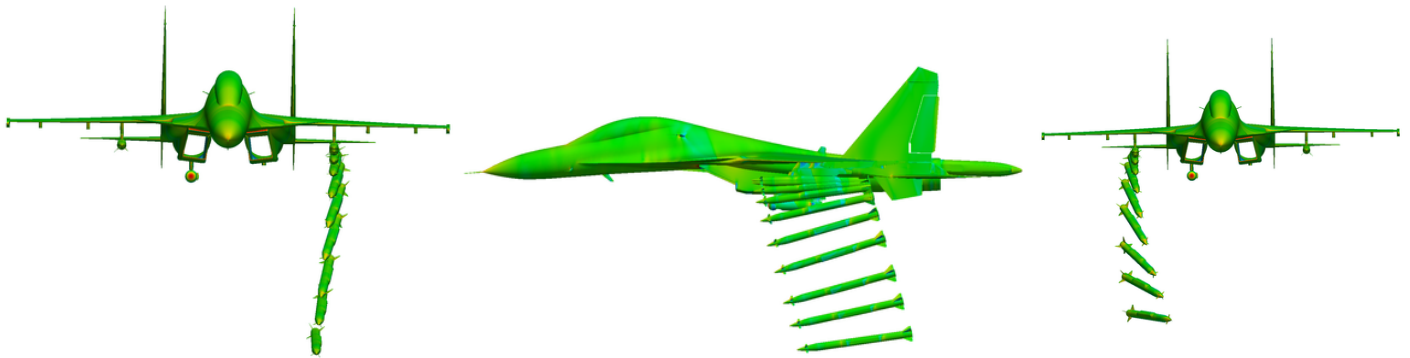
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# CFD ANALYSIS

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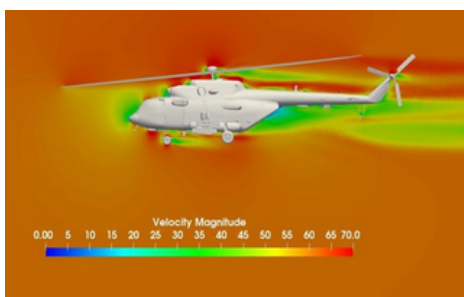


Safe Separation Analysis

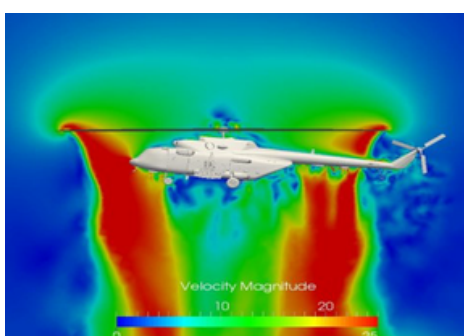
## Process

We utilize customisable **HiFUN CFD solver**, developed by experts at IISc, Bangalore, to conduct advanced computational fluid dynamics analyses. The solver is supported by a 1000-core HPC server, ensuring high computational power.

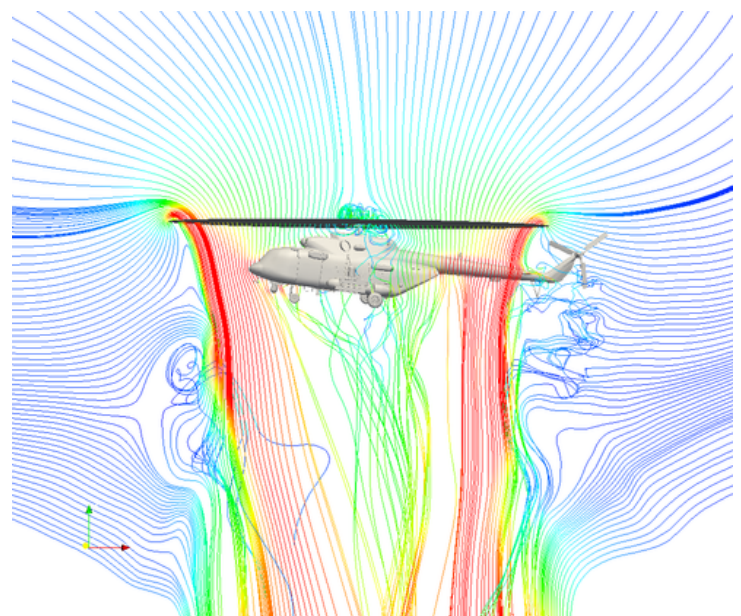
Combination of **High-Fidelity CFD Analysis & Aerodynamic Monte-Carlo analysis** is used to predict the separation characteristics of Weapons from various aircraft, significantly enhancing the safety and reliability during crucial phase of Separation of Weapons from aircraft.



Fwd Flight



Hovering Flight



Mi-17 V5 Hovering Streamlines

# CFD ANALYSIS

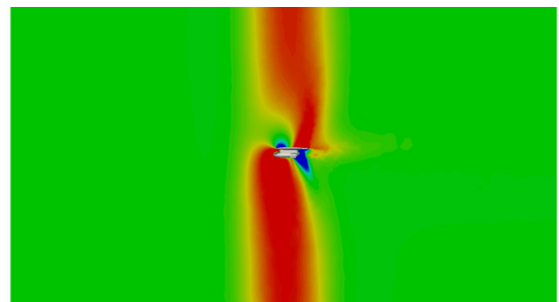
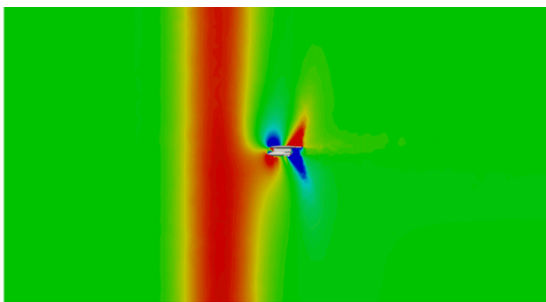
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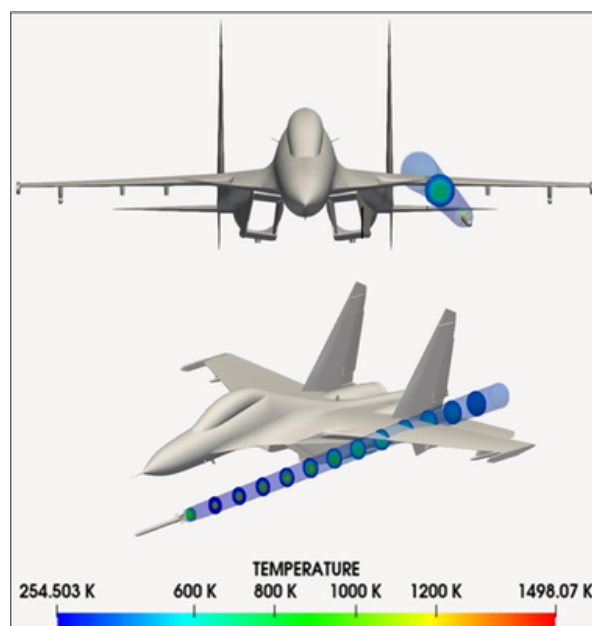
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In addition to store separation, our CFD capabilities are also utilised for several other critical analyses like:

- Aerodynamic validation of aircraft and Weapon models
- Aerodynamic loads analysis for weapons, externally fitted antennas etc
- Heat transfer analysis
- Plume analysis and wind gust analysis



Gust Analysis



Integrated Plume Analysis