

# TransAT

The new CFD software for wind engineering and environmental fluid mechanics

Wind  
engineering &  
Environment

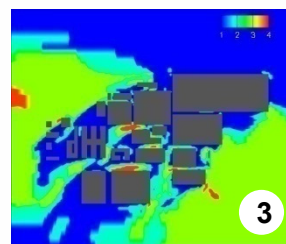
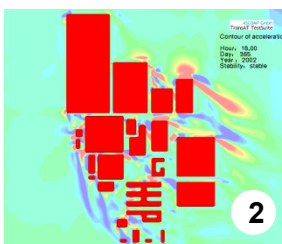
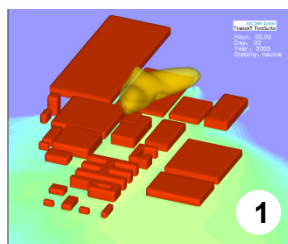


*If you are an architect, urban designer, landscaper, constructor of art works, or any person involved in environmental regulation administration ...*

**TransAT** offers you the opportunity to quantify wind loads over structures, evaluate wind responses to buildings, study comfort of pedestrians in the urban canopy, and build alert systems to extreme winds in mountains and over bridges.

*Explore a new dimension to urban comfort with TransAT*

## Urban Comfort & Pollution: Example of Technopark , Zurich – Switzerland

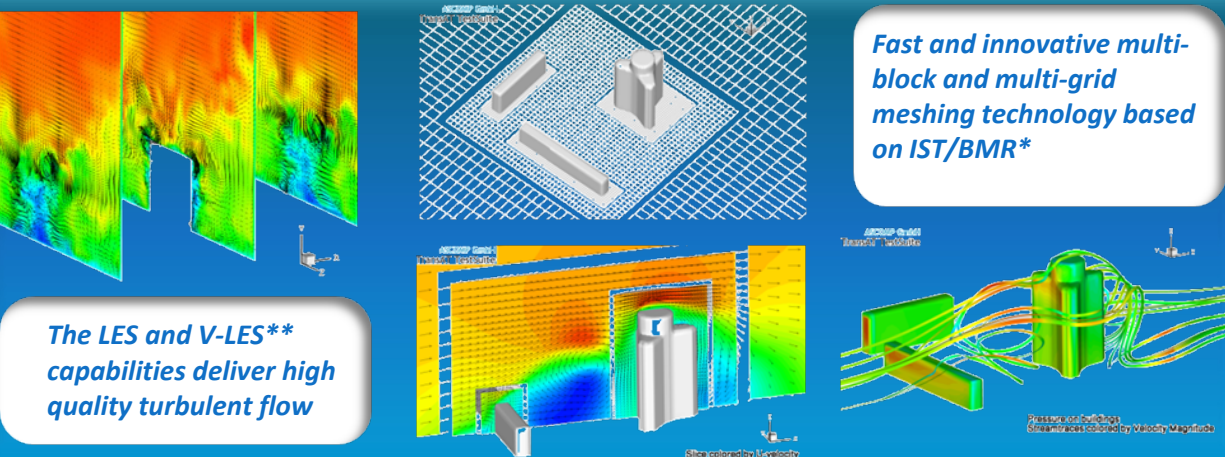


Case study of pollution dispersion over time, emanating from an industrial incinerator in the vicinity of a building under design. Solving the pseudo-transient flow within an interval of time (up to one year in the past) using archived meteorological data, e.g. wind speed at 10m height, thermal stratification and wall shear, results in (1) a pollution map, (2) a thermal map around the buildings, and (3) a comfort & wind acceleration map showing sitting, walking & critical areas.

*ASCOMP GmbH software package **TransAT** (Transport phenomena Analysis Tool) can simulate a wide range of single and multi-phase flows (Lagrangian) with conjugate heat transfer.*

Computational wind engineering has faced the same 'set-up' difficulties as those encountered in aerodynamics, namely dealing with grid generation for complex configurations.

*The immersed surface module of TransAT has solved the 'set-up' difficulties issue.*

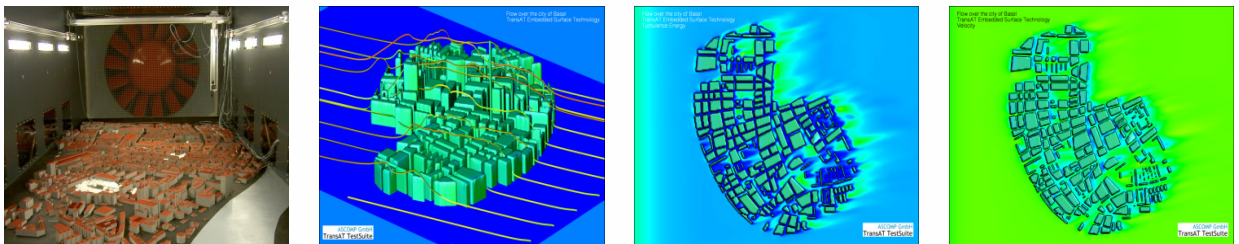


**The LES and V-LES\*\* capabilities deliver high quality turbulent flow**

**Fast and innovative multi-block and multi-grid meshing technology based on IST/BMR\***

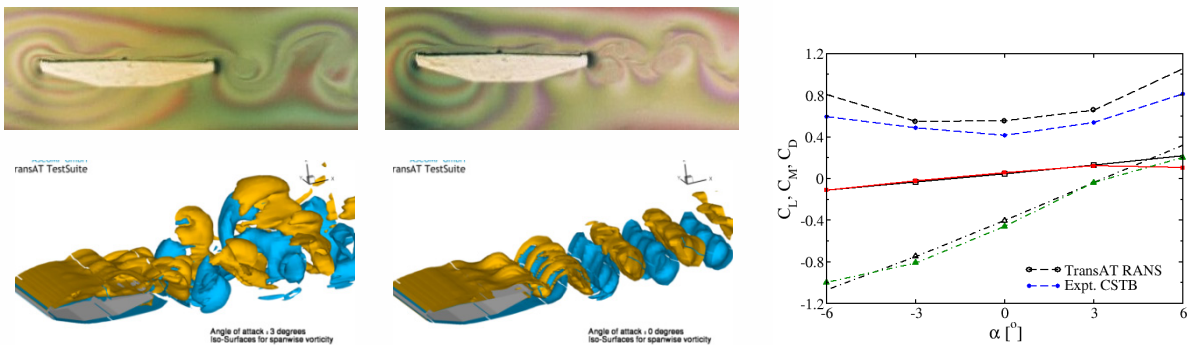
\*IST/BMR: Immersed Surface Technology / Block Mesh Refinement  
 \*\*LES & V-LES: Large Eddy Simulation & Very Large Eddy Simulation

### CFD simulation of Basel city centre - Switzerland



Thanks to the IST/BMR technology, TransAT's computational efficiency allows you to simulate the flow and pollution in large urban models (e.g. entire city centre of Basel) ...

### Wind loads on the Millaut Viaduct - France



Thanks to the LES capability, TransAT delivers instantaneous peak wind loads on bridges, besides steady-state forces, including drag, lift and torsional moment.

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