

## CAE Integration

EDEM has the interfaces and functionality to couple with all of the major CAE technologies such as finite element analysis (FEA), multi-body dynamics (MBD) and computational fluid dynamics (CFD).

Bringing EDEM into play with other CAE tools enhances the insights and design capabilities of these tools and enables a more integrated and seamless multi-physics simulation capability for engineering design and analysis.

### EDEM and Finite Element Analysis

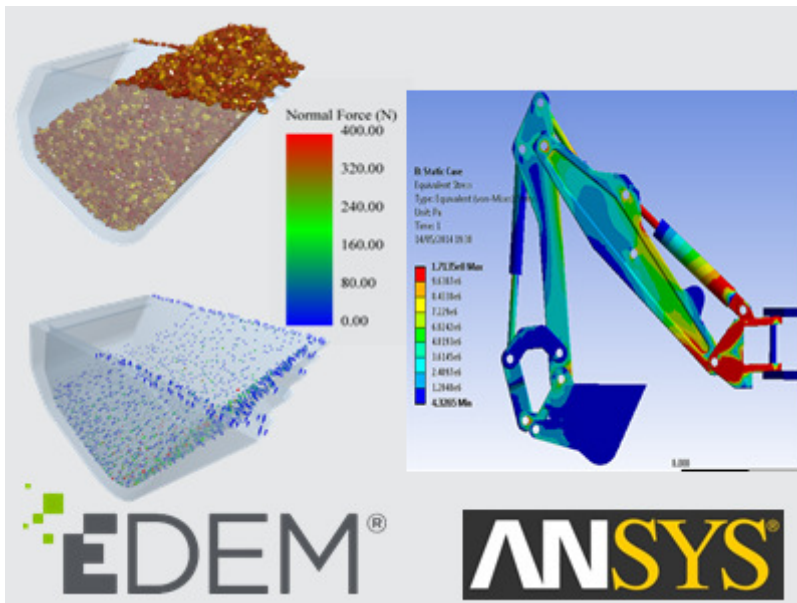
Using EDEM in combination with Finite Element Analysis (FEA) provides manufacturers of bulk materials handling equipment – such as bucket loaders, transfer chutes, and truck bodies – with valuable additional insight as to how their equipment will perform during operation.

EDEM provides design engineers with an accurate representation of the pressure and forces acting on equipment as a result of a bulk material. By transferring this realistic material data to their FEA software, engineers no longer need to rely on hand calculations or approximation during the design cycle and can have confidence that a proposed design will meet requirements.

#### **SOLUTION AVAILABLE:**

##### [EDEM and ANSYS](#)

<http://www.edemsimulation.com/techpartner/ansys/>



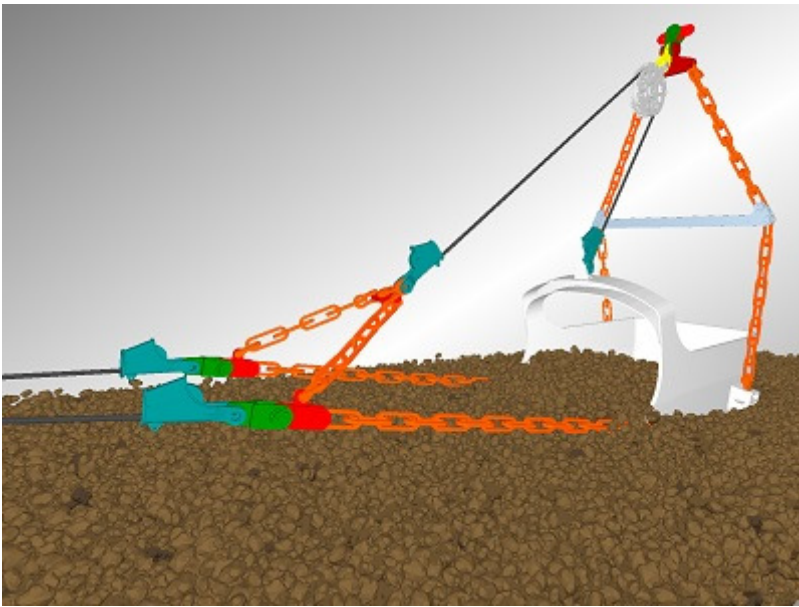
## EDEM and Multi-body Dynamics

Coupling EDEM with Multi-body Dynamics (MBD) software allows manufacturers of heavy equipment to gain better insight into machine-material interaction. EDEM-MBD co-simulation provides the capability to model and visualize dynamics of equipment movement and examine how loads exerted by bulk materials are distributed throughout the mechanical system.

The EDEM Coupling Interface enables coupling of EDEM with 3rd party MBD simulation software, as well as implementation of user-defined kinematics and rigid body dynamics models within the EDEM simulation environment.

### SOLUTIONS AVAILABLE:

- [EDEM and Adams \(MSC Software\)](http://edemsimulation.com/techpartner/msc-software/)  
*(http://edemsimulation.com/techpartner/msc-software/)*
- [EDEM and LMS Virtual.Lab Motion \(Siemens\)](http://edemsimulation.com/techpartner/siemens/)  
*(http://edemsimulation.com/techpartner/siemens/)*
- [EDEM and Simulink \(Mathworks\)](http://edemsimulation.com/techpartner/mathworks/)  
*(http://edemsimulation.com/techpartner/mathworks/)*



## EDEM and Computational Fluid Dynamics

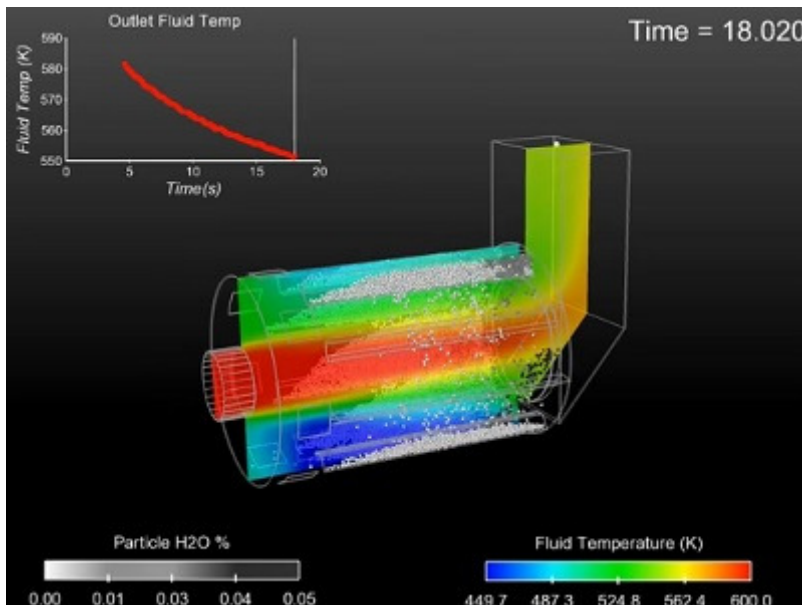
Particle-fluid systems such as fluidized beds, solid-liquid mixing, spray coating, can be investigated by coupling EDEM with Computational fluid dynamics (CFD) software.

The EDEM Coupling Interface provides a means of coupling EDEM with CFD solvers for 1-way and 2-way coupled simulations.

### SOLUTION AVAILABLE

#### [EDEM and ANSYS Fluent](#)

[\(http://edemsimulation.com/techpartner/ansys/\)](http://edemsimulation.com/techpartner/ansys/)



Want to learn more about integrating EDEM with other CAE tools

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(<https://www.edemsimulation.com/contact/>)