



# Newsletter

[ConforM-Jet initiative in Aarwangen, Switzerland](#)

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## From ConforM Jet Management

ConforM-Jet has led the initiative for the formation of European Waterjet Cutting Association (EWJCA); an initial meeting was held in November 2010 at the headquarters of WaterJet Group in Aarwangen, Switzerland. A "Steering Group" has also been formed from among the members of the EWJCA. The group will work for the standardization and research and development of waterjet cutting process

## ConforM Jet News & Events

- The "Steering Group" for EWJCA has been formed from the members of the EWJCA. The group will work for the standardization and research and development of waterjet cutting process.
- The next meeting (18M) of the ConforM-Jet project will be organized in Prague on 3rd-5th May 2011. On 3rd May the Periodic Review Meeting will take place (agenda and directions to follow).

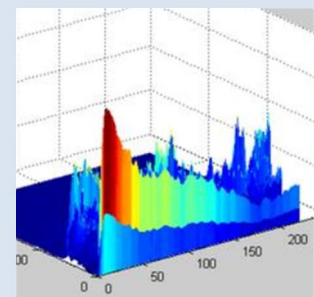
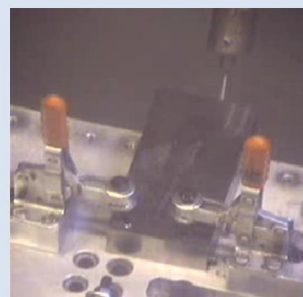
## Feature article

### **Numerical Simulation of Abrasive Particles**

Chidambaram Narayanan

The numerical modelling is split into two approaches as follows:

1. The simulation method will use the Immersed Surface Method of TransAT (the software used for this project) to take into account the geometry of the focusing device. The abrasive particles will be solved using the Lagrangian Particle Tracking (LPT) method which models the motion of particles as point particles with various forces acting on them, such as drag, lift, buoyancy, etc. The method involves two-way coupling between the fluid



and the particles such that they exchange both momentum and energy with each other.

2. The second method, considers particles are moving objects in the flow that are actually resolved by the numerical grid. This is required because the abrasive particles are not small compared to the diameter of the focusing device. This method is currently being implemented in TransAT.

In both methods, the fluid phase is modelling using the Level-Set interface tracking method, which captures the interface between the gas and liquid phases. Compressible Navier-Stokes Equations are used to model the overall fluid flow.

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