

# Computer Models For Fire and Smoke

<i>Model Name:</i>	Fire Dynamics Simulator (FDS)
<i>Version:</i>	1.0
<i>Classification:</i>	Field Model
<i>Very Short Description:</i>	General purpose low Mach number CFD code specific to fire-related flows.
<i>Modeler(s), Organization(s):</i>	Kevin McGrattan, Glenn Forney, NIST
<i>User's Guide:</i>	NISTIR 6469
<i>Technical References:</i>	NISTIR 6467
<i>Validation References:</i>	-----
<i>Availability:</i>	fire.nist.gov
<i>Price:</i>	free
<i>Necessary Hardware:</i>	UNIX or PC of PII 450 or better
<i>Computer Language:</i>	Fortran 90
<i>Size:</i>	-----
<i>Contact Information:</i>	Kevin McGrattan, 301 975 2712, kevin.mcgrattan@nist.gov

## *Detailed Description:*

Large Eddy Simulation based fire model. Solution of the low Mach number approximation to the Navier-Stokes equations.  
Rectilinear, single block grids, mixture fraction based combustion model.  
Sprinklers included. Rudimentary suppression algorithms.  
Visualization via the software package Smokeview developed by Glenn Forney.