

call for images

for

# *The Art of Multiphysics*

ISBN: 9781916307407

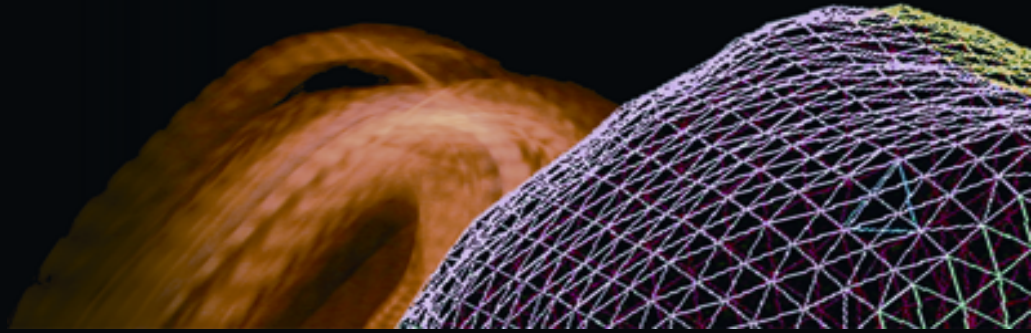
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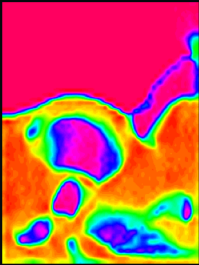
Colour Image(s) on white background with minimum of 300dpi accompanying with maximum 100 words explanation are sought via

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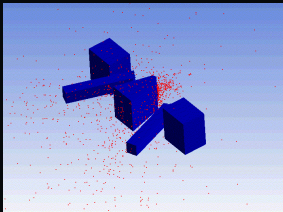
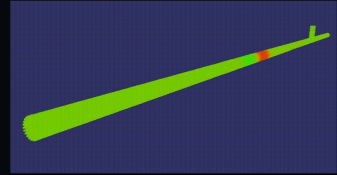
# Images for Inspiration

Numerical simulations have become a key technology in various fields, from academia to industry, researchers and engineers use the power of computers to carry out numerical experiments on various challenges and configurations. It has profoundly changed the way analysts consider science and engineering and produce beautiful images. The book is intended to give an overview of *The Art of Multiphysics*, by gathering outstanding images of simulations, illustrating applications, possible solutions, as well as highlighting physical phenomena. Contributors from industry and academia are welcome to submit images in different areas such as material science, fluid mechanics, structural mechanics, electromagnetism, biomechanics, astrophysics, etc.



**Bubble Blow:** The phenomenon of bubbling in the fluidized bed captured using CFD-DEM coupled simulations. The original code was written in FORTRAN 95, parallelised using MPI and ran for weeks on 32 noded cluster for 8 seconds of real time simulations. Results revealed formations of bubbles, and their rise and eruption. The animation were done in MATLAB®.

**Shocked:** The 100 bar air-water shock tube used to generate a shock wave in a tube which is travelling at about 1500 m/s. The shock front reflects at the T-bend and bounce back and forth in the tube. This setup can generate repetitive loading and can be used for testing shell structures. The simulations were run in LS-DYNA®.



**Chapped:** Charpy is a well-known method of testing materials toughness to impact. It is a destructive method of testing. The material under testing is intentionally fractured into two pieces with a hammer stroke to measure the energy drop in the process. The experiments can be performed in various conditions on variety of samples. The shown simulations were done in ANSYS®.

