Scientific Computing

CBC Talk on Predicting Particle Deposition in the Human Airways with RANS Turbulence Modeling - October 12, 2009

10:50 - 11:10 Predicting Particle Deposition in the Human Airways with RANS Turbulence Modeling
by Hannibal Fossum.

Total number of participants: 9
Total number of guests outside of CBC: 3
Number of different nationalities represented: 2
Total number of speakers: 1
Total number of talks: 1

Abstract:
Particle deposition in the lungs have so far been modeled mainly with the assumption of laminar flow. In the present study, several RANS turbulence models are used to simulate the airflow and particle deposition in the human respiratory system. The results are compared to LES reference data, and it is demonstrated that relatively simple two-equation eddy viscosity models seem adequate to reproduce the primary features of the flow field. The present study seems to suggest that the RANS approach gives realistic results for particles with diameters d_p > 10 micrometers.

What	▪ Talk
When	Oct 12, 2009 from 10:50 AM to 11:10 AM
Where	Bakrommet
Contact Name	Tom Atkinson
Attendees	Fredrik Andersson Are Magnus Bruaset Xing Cai Hannibal Fossum Glenn Lines Harald Osnes Ola Skavhaug Karen H. Støverud Joakim Sundnes
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