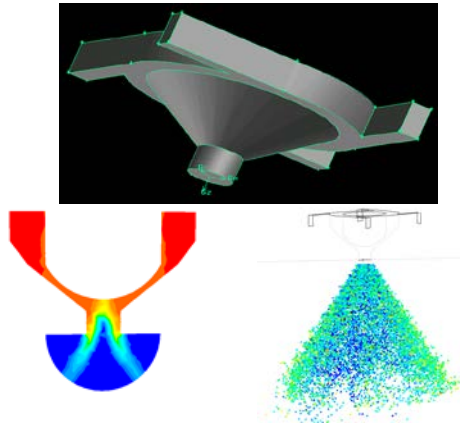


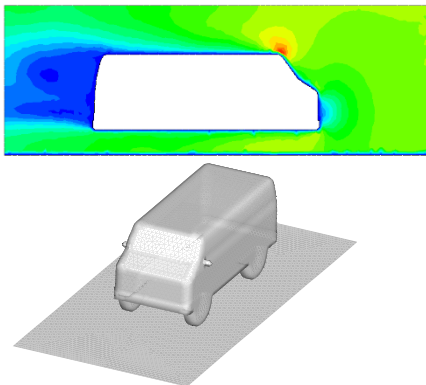


Dr. Tarek Abdel-Salam
Professor, Mechanical Engineering, Associate Dean for Research, and
Director of the Center for Sustainability
Combustion, Aerodynamics, Microfluidics, Thermal-Fluids Systems,
Renewable and Sustainable Energy, Pollution Prevention, Virtual
Laboratories .

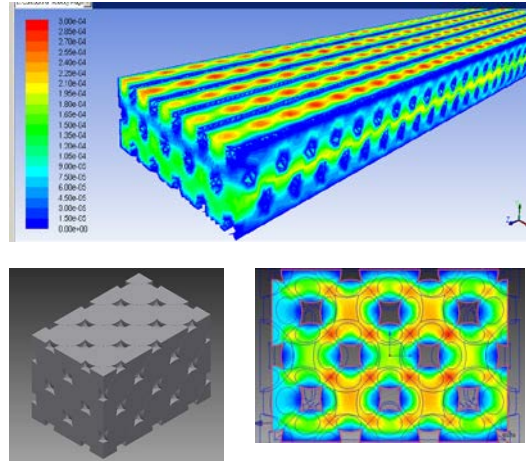
Biodiesel Atomization and Sprays



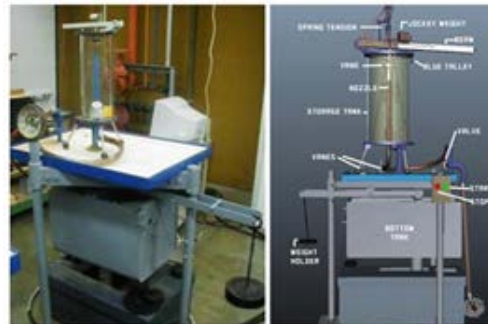
COMPUTATIONAL STUDY OF PASSENGER VAN AERODYNAMICS



Microfluidics in Tissue Engineering



Learning in Virtual Environment (LIVE)



Numerical modeling (CFD)

- *Supersonic mixing and combustion in Scramjet engines*
- *Fuel injection and Sprays in internal combustion engines*
- *Solar assisted heat pumps-sustainable systems*
- *Wind turbines*
- *Aerodynamics of cars and vans*
- *Powertrain thermal management*
- *Microfluidics in tissue engineering and micromixers for DNA analysis*

Engineering Education

- *Remote laboratories*
- *Web-based virtual laboratories*
- *Interactive visualization tools for teaching*
- *Metacognition learning*