

Geometrical Data Input for ProSAir

Abstract

ProSAir (Propagation of Shocks in Air) is a compressible computational fluid dynamics package for modelling blast loads on structures near explosions. ProSAir currently offers a graphical user interface for visualisation, as well as for inputting physical parameters. However, the user interface for inputting geometric data is limited and cumbersome, requires considerable time and patience for adding complex geometries and offers no connectivity to external design packages. We wish to take on a summer intern to help us investigate, design and implement improved geometrical data input for ProSAir.

Essential pre-requisites

- C++ programming experience.
- An interest in mathematical modelling, such as CFD.
- An interest in graphical user interfaces and computer aided design (CAD / 3D modelling) and/or experience of working with complex data formats.
- Experience of using or willingness to learn standard software development tools, such as Visual Studio and Subversion.