

Dr. Stress 1.0.1

What is Dr. Stress

Dr. Stress is a direct manipulation tool for visualizing three-dimensional stress states. The stress tensor at a point is displayed as stress components on three faces of a rotating block. Use the mouse or the keyboard to rotate the block for different views of the stress state. The traction vectors drawn on each face of the block can be viewed as is, or decomposed into normal and shear components. The stress state can also be simultaneously viewed using a 3D Mohr's Circle.

Hardware Requirements

FPU

Dr. Stress no longer requires an FPU. Hooray!

RAM

Dr. Stress runs nicely in 800 Kb of RAM using 256 colors. If your screen is using more colors than this, Dr. Stress will start up but not open a window. If this happens, you should quit, and either increase Dr. Stress's memory partition from the Finder via the Information dialog, or decrease the depth of the monitor from the Monitors control panel. Please note that thousands and millions of colors are of no benefit to Dr. Stress. This only demands more space for the off-screen buffers.

Help

Dr. Stress comes with a small on-line help document in the Apple menu. A more comprehensive primer is available via anonymous ftp at:

[ecsel.engr.washington.edu](ftp://ecsel.engr.washington.edu)

in the file:

[/pub/Mechanics_of_Materials/Documentation/Dr._Stress_Primer.hqx](ftp://ecsel.engr.washington.edu/pub/Mechanics_of_Materials/Documentation/Dr._Stress_Primer.hqx)

Wait, There's More...

Dr. Stress is only one component in a suite of computer based tools developed to teach Mechanics of Materials to undergraduate engineers. Other tools include a complete set of computer based lectures, a moment and shear quizzier (Dr. Quack), a beam modeling program (Dr. Beam), and a material testing machine simulator (Dr. Baldwin). A complete description of these materials, as well as the materials themselves, may be accessed via the www at:

<http://ecsel.engr.washington.edu/main.html>

Credits

Dr. Stress was written by Stephen Cooper and Greg Miller at the University of Washington. Financial support was provided by the NSF sponsored ECSEL project. If you have any comments or questions, mail the authors at:

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