

TUTORIAL FOR THE EXAMPLE: THE IMPACT OF A TRIANGLE ON GROUND

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In this example a triangle moving at an initial velocity impacts against a fixed rectangular block of ground. Users can change two set of parameters to control the simulation, i.e. the dimension of ground block and the velocity vector of the triangle. To modify the value of two parameters, just open TriangleGroundImpact.par in the folders:

“\VGW_QMULIC\DEV\Y2D\TriangleGroundImpact” using program notepad or any other text editor.

```
TriangleGroundImpact.par
velocity 0.0 -20 /* velocity vector of the triangle m/s */
length 20 /* length of ground m */
height 2 /* height of ground m */
```

To generate a new input file with this modified data set in the .par file, double click on MakeYInputFile.bat located in the folders:

“\VGW_QMULIC\DEV\Y2D\TriangleGroundImpact”.

To run this example double click on RunY.bat located in the folders: “\VGW_QMULIC\DEV\Y2D\TriangleGroundImpact”. Figure 1 shows the snapshots from the simulation corresponding to the values of parameters set in the above TriangleGroundImpact.par file.

After running the above example, Y will produce a series of output files with extension .ym. These are postprocessed using Mayavi program. Mayavi is open source and it has been included in VGW package. To see more information, please visit Mayavi official website, <http://mayavi.sourceforge.net/>. The easiest way to start Mayavi is to double click on ViewResultsUsingMayavi.bat files.

Postprocessing in Mayavi:

The results are postprocessed using the Mayavi program. To visualize results, several simple operations are described as follows

Visualizing animations To visualize animation, just left click “configure data” in top of left panel, a window, “Configure VtkXMLDataReader module” appears. Then click “auto sweep” box, you can watch you results frame by frame.

Zooming in and out To zoom in and out of the scene, first you place the mouse pointer inside the right visualization window. To zoom into the scene, you can keep the right mouse button pressed and drag the mouse upwards. To zoom out of the scene, you can keep the right mouse button pressed and drag the mouse downwards.

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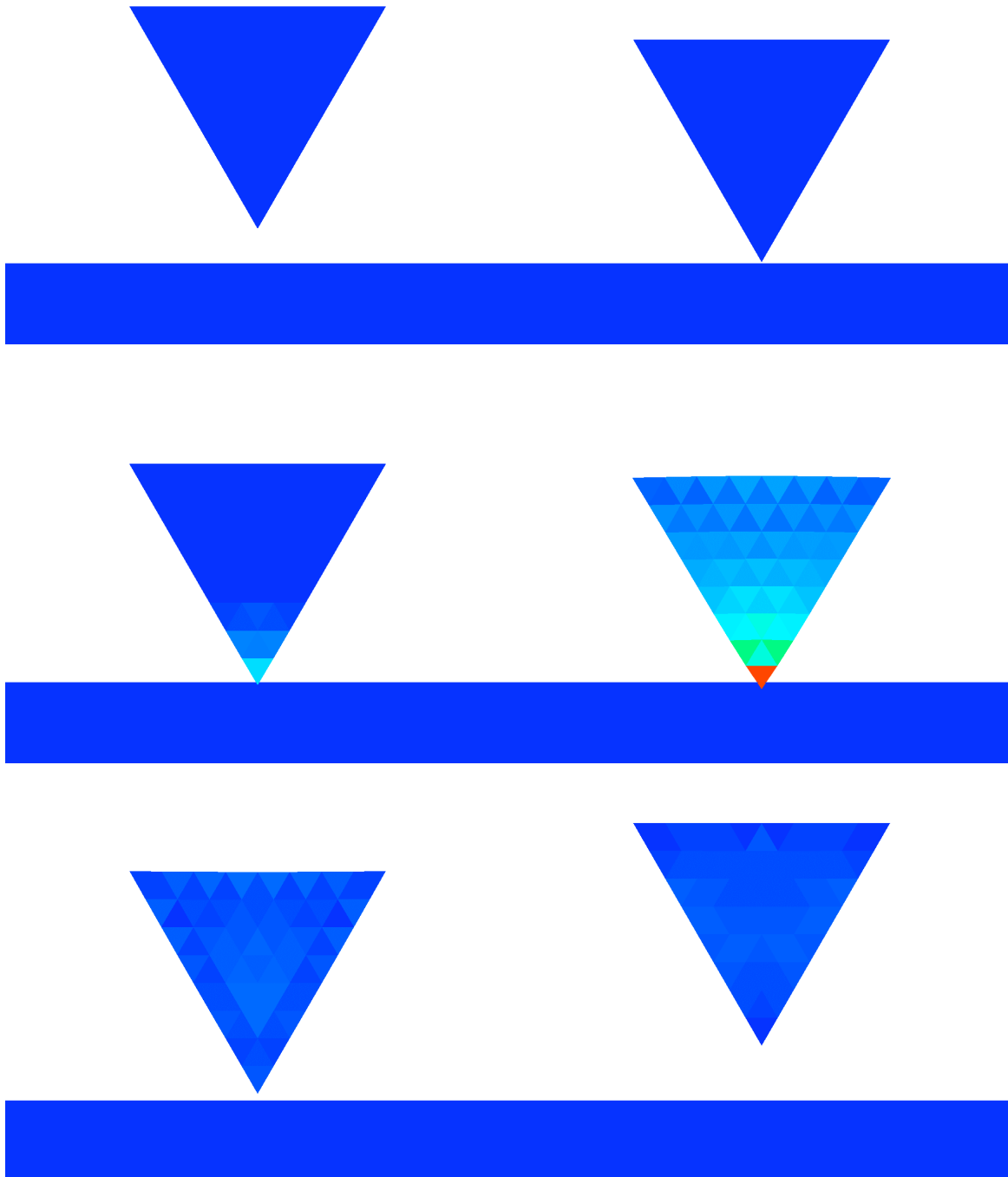


Figure 1. Snapshots from a simulation of the impact of a triangle on a rectangular block of ground

Figure 2 shows the snapshots from the simulation corresponding to the modified values of parameters in below TriangleGroundImpact.par file.

```
TriangleGroundImpact.par
velocity 20 -15 /* velocity vector of the triangle m/s */
```

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```
length 0.5      /* length of gound      m      */
height 2       /* height of gound      m      */
```

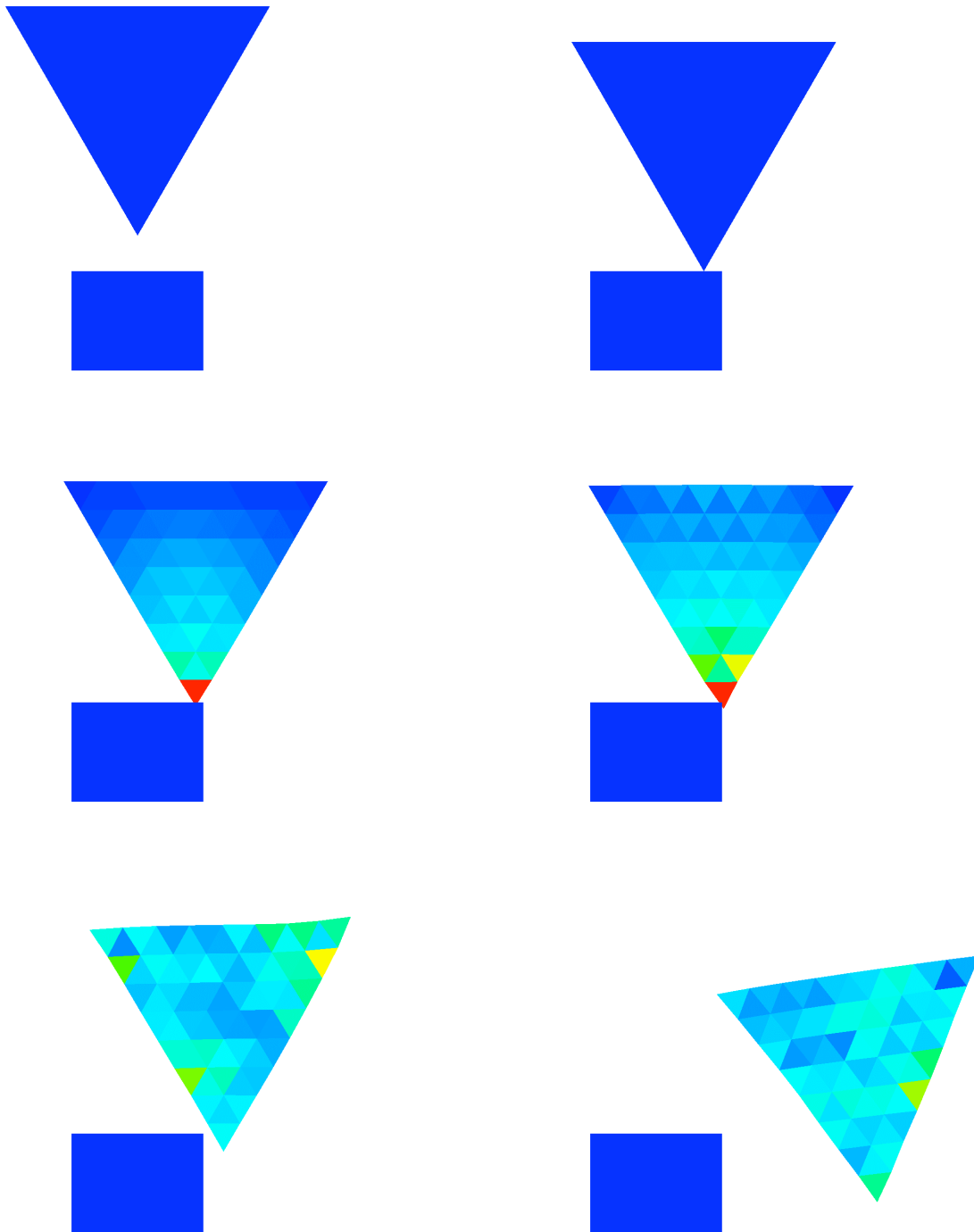


Figure 2. Snapshots from a simulation of an impact of a triangle just hitting the ground corresponding to modified the parameters.