

Information technology – lecture 8

Extension packages for Octave

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Extension packages for Octave

- ▶ Implemented in Octave itself (see: OctaveForge)
- ▶ Implemented in C++ and compiled to *.oct binary packages via `mkoctfile`
- ▶ Extension package code generated from general C++ code with help of SWIG extensions generator <http://www.swig.org>.

OctaveForge – repository of Octave packages

OctaveForge: <http://octave.sourceforge.net>

Installing Package

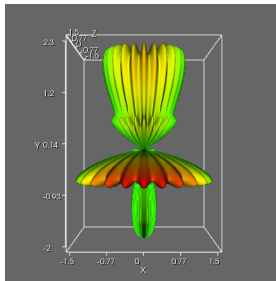
To install a package, download the package file, and install it from the Octave prompt by typing

```
pkg install package_file_name.tar.gz
```

where `package_file_name.tar.gz` is the name of the file you downloaded.

Advanced Octave graphics – octaviz

```
1 [phi, theta] = meshgrid(0:pi/250:pi, 0:pi/250:2*pi);  
2 m0 = 4; m1 = 3; m2 = 2; m3 = 3; m4 = 6; m5 = 2; m6 = 6; m7 = 4;  
3 r = sin(m0*phi).^m1 + cos(m2*phi).^m3 + sin(m4*theta).^m5 + cos(m6*theta).^m7;  
4 x = r.* sin(phi).* cos(theta); y = r.* cos(phi);  
5 z = r.* sin(phi).* sin(theta); vtk_surf(x,y,z);  
6 pause()
```



Advanced Octave graphics – octaviz

```

1  o =[30 62 19; 8 21 10];
2  n =[31 21 11; 18 42 14; 55 46 17; 56 25 13];
3  c =[5 49 15;30 50 16;42 42 15;43 29 13;18 28 12;32 6 8;63 36 15;59 60 20];
4  h = [23 5 7;32 0 16;37 5 0;73 36 16;69 60 20;54 62 28;57 66 12;6 59 16;1 44 22;0 49 6];
5  ms = "MarkerSize"; mc = "MarkerColor";
6  vtk_plot3(o(:,1), o(:,2), o(:,3), ms, 8, mc, [1 0 0]);
7  vtk_plot3(n(:,1), n(:,2), n(:,3), ms, 10, mc, [0 0 1]);
8  vtk_plot3(c(:,1), c(:,2), c(:,3), ms, 10, mc, [0 1 0]);
9  vtk_plot3(h(:,1), h(:,2), h(:,3), ms, 5, mc, [1 1 1]);
10 vtk_print('chemia.png','-dpng')

```

