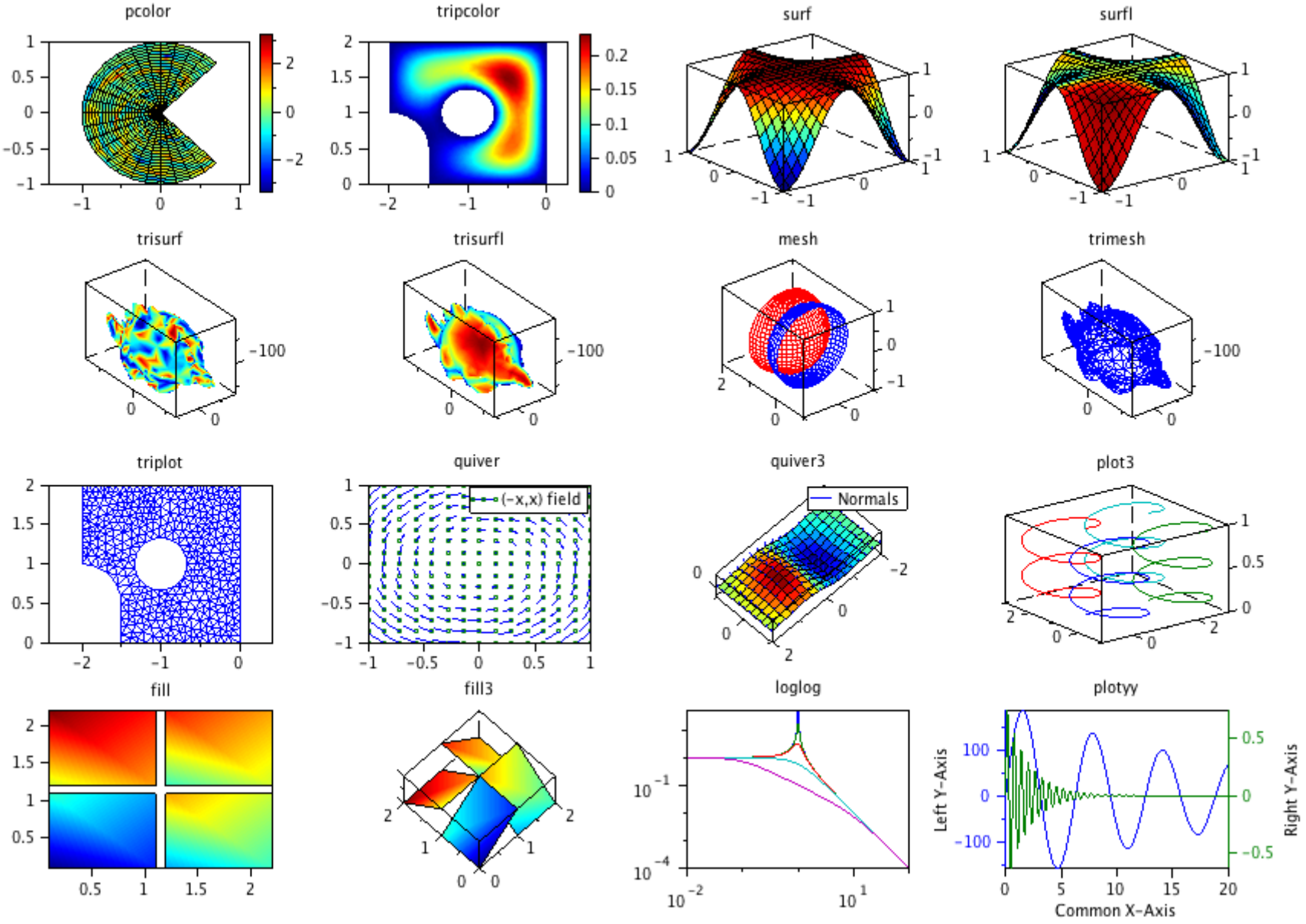
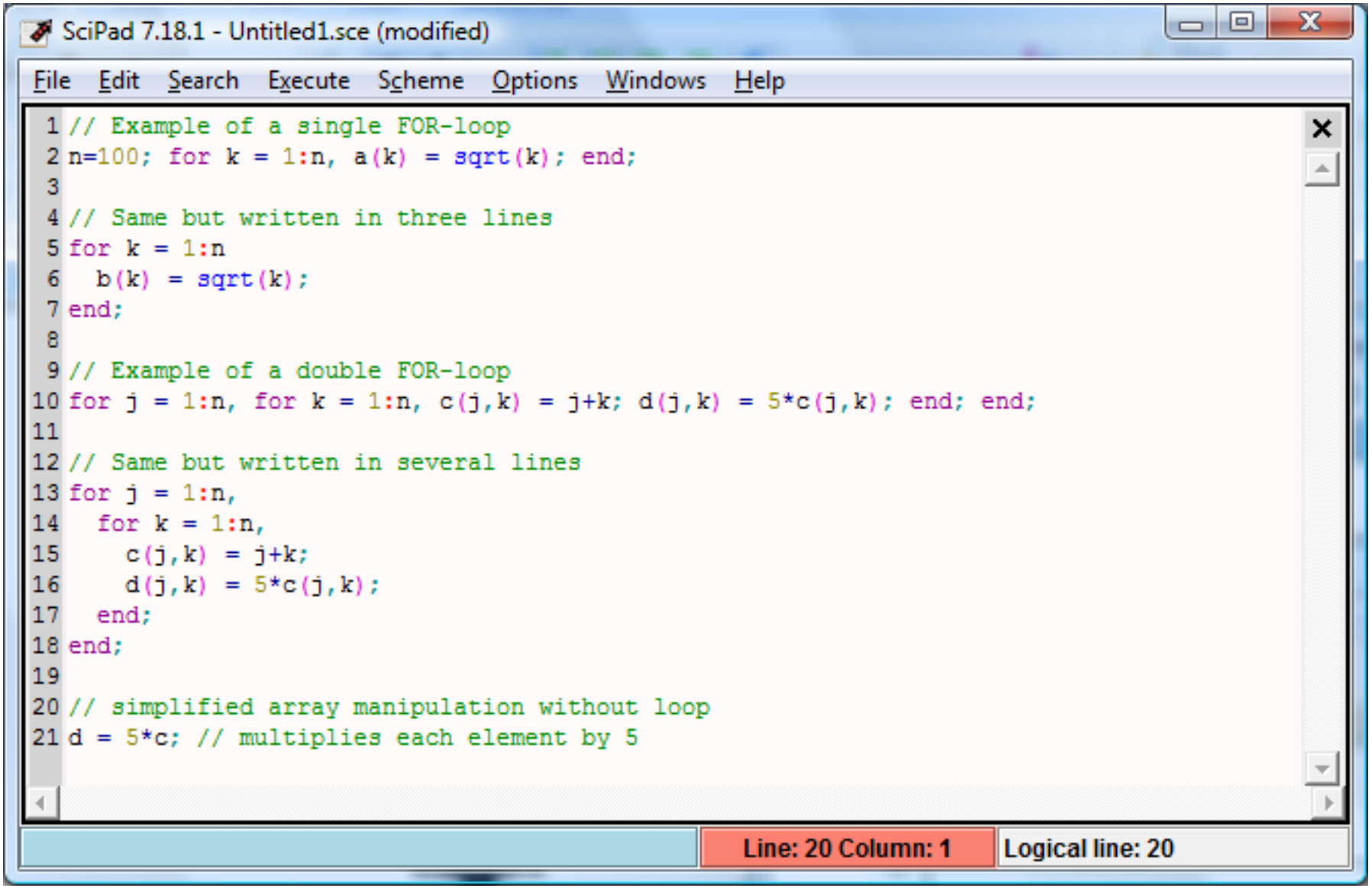
language/format	time (s)
Object-oriented Python	
as above, with Psyco	
Octave	
Numpy Python + BRAHMS	
Numpy Python	
Pyrex	
Matlab	
Raw C	

language/format	time (s)
Object-oriented Python	66.1
as above, with Psyco	48.6
Octave	1.31
Numpy Python + BRAHMS	0.89
Numpy Python	0.82
Pyrex	0.22
Matlab	0.21
Raw C	0.04

```
 9  void DO_step(void)
10  {
11    int8_T sf_j;
12    int8_T sf_i;
13    int8_T sf_k;
14    int32_T sf_exitg;
15    int32_T sf_exitg_0;
16    sf_i = 9;
17    sf_j = 9;
18    sf_k = 9;
19    y_1[99] = 0;
20    do {
21      sf_exitg = 0;
22      do {
23        sf_exitg_0 = 0;
24        do {
25          y_1[sf_i + 10 * sf_j] = u_1[10 * sf_k + sf_i] * u_2[10 * sf_j + sf_k] +
26            y_1[10 * sf_j + sf_i];
27          sf_k--;
28        } while (sf_k >= 0);
29
30        sf_j--;
31        if (sf_j >= 0) {
32          sf_k = 9;
33          y_1[sf_i + 10 * sf_j] = 0;
34        } else {
35          sf_exitg_0 = 1;
36        }
37      } while ((uint32_T)sf_exitg_0 == 0U);
38
39      sf_i--;
40      if (sf_i >= 0) {
41        sf_j = 9;
42        sf_k = 9;
43        y_1[90 + sf_i] = 0;
44      } else {
45        sf_exitg = 1;
46      }
47    } while ((uint32_T)sf_exitg == 0U);
48  }
```

Scilab


pcolor
tripcolor
surf
surfl
trisurf
trisurfl
mesh
trimesh
triplot
quiver
(-x,x) field
quiver3
Normals
plot3
fill
fill3
loglog
plotyy
Left Y-Axis
Right Y-Axis
Common X-Axis

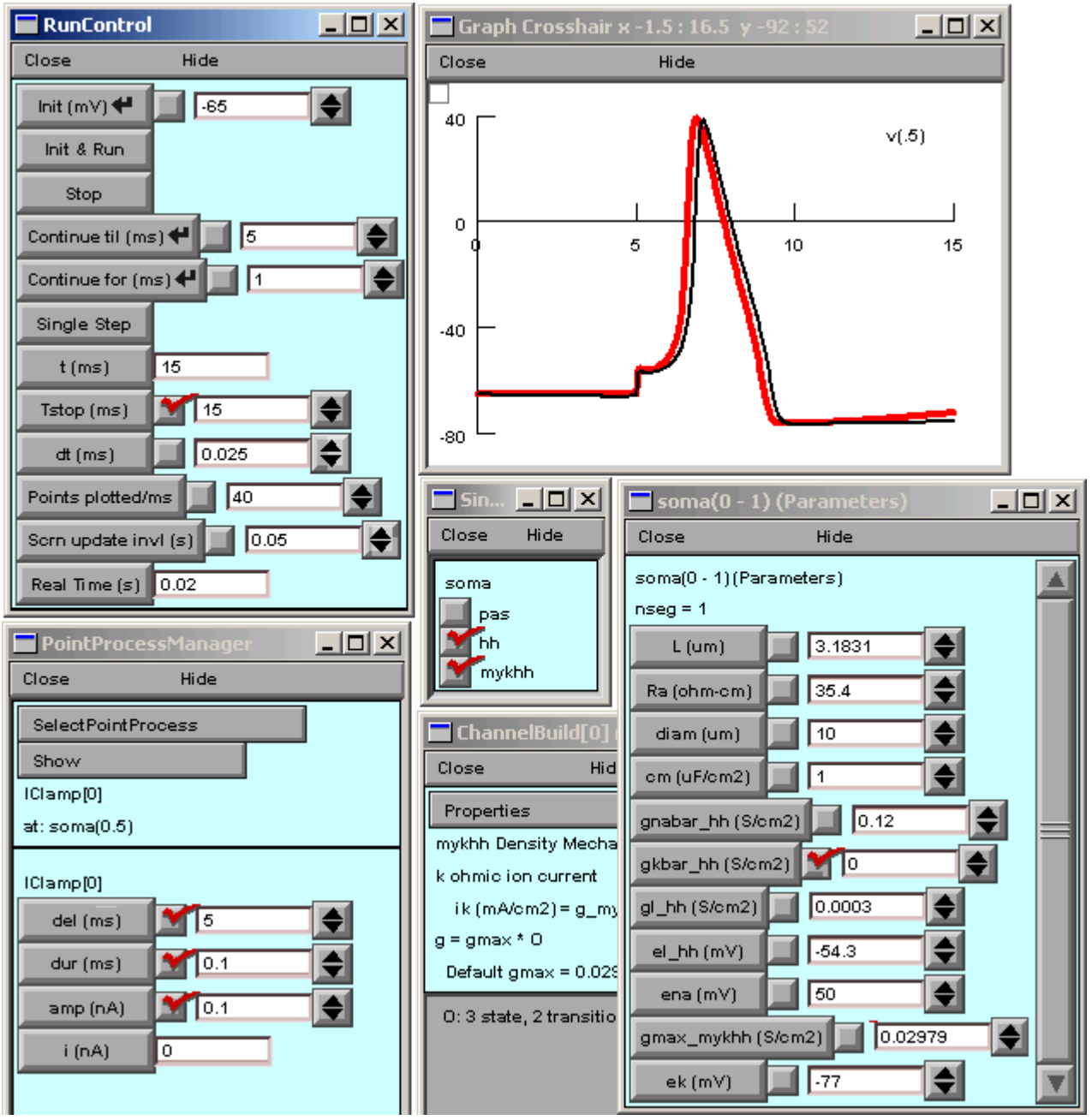

SciPad 7.18.1 - Untitled1.sce (modified)
File Edit Search Execute Scheme Options Windows Help
1 // Example of a single FOR-loop
2 n=100; for k = 1:n, a(k) = sqrt(k); end;
3
4 // Same but written in three lines
5 for k = 1:n
6 b(k) = sqrt(k);
7 end;
8
9 // Example of a double FOR-loop
10 for j = 1:n, for k = 1:n, c(j,k) = j+k; d(j,k) = 5*c(j,k); end; end;
11
12 // Same but written in several lines
13 for j = 1:n,
14 for k = 1:n,
15 c(j,k) = j+k;
16 d(j,k) = 5*c(j,k);
17 end;
18 end;
19
20 // simplified array manipulation without loop
21 d = 5*c; // multiplies each element by 5
Line: 20 Column: 1
Logical line: 20

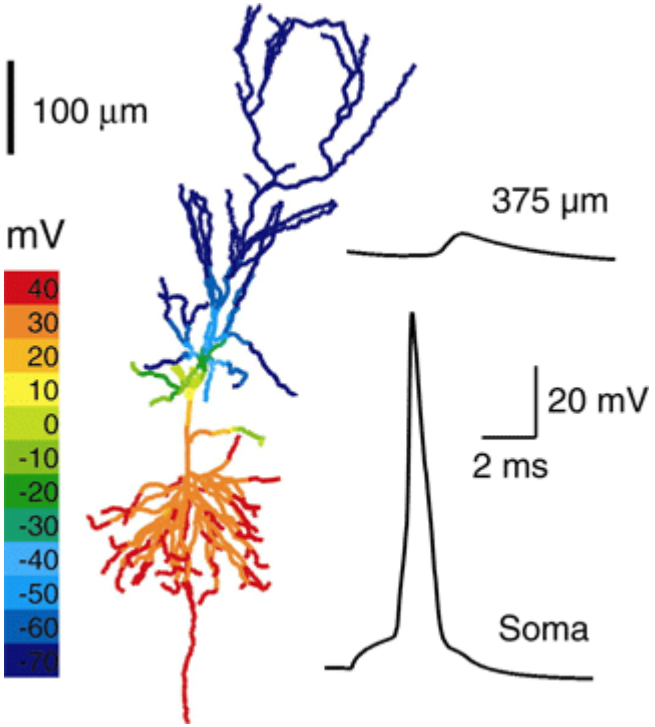
NEURON

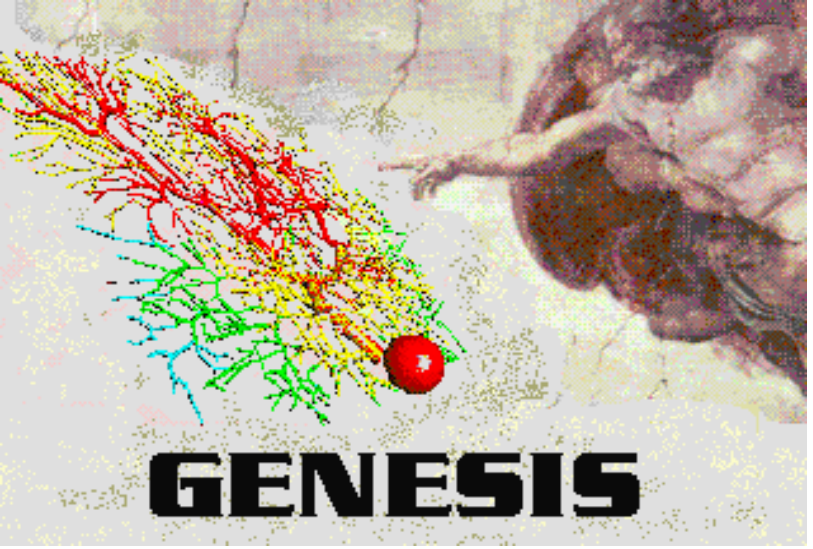
for computer simulations of neurons and neural networks

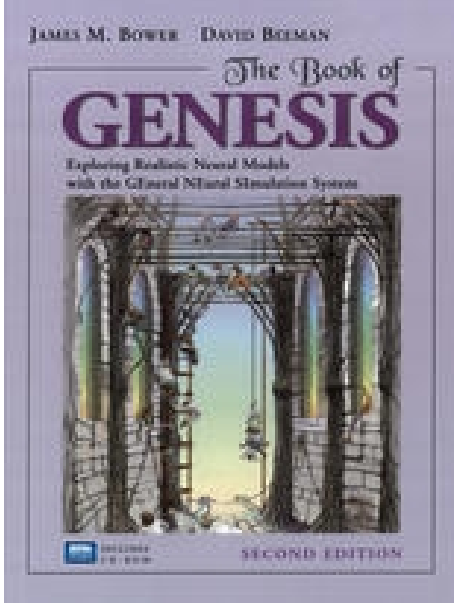
https://www.neuron.yale.edu/

With model database!

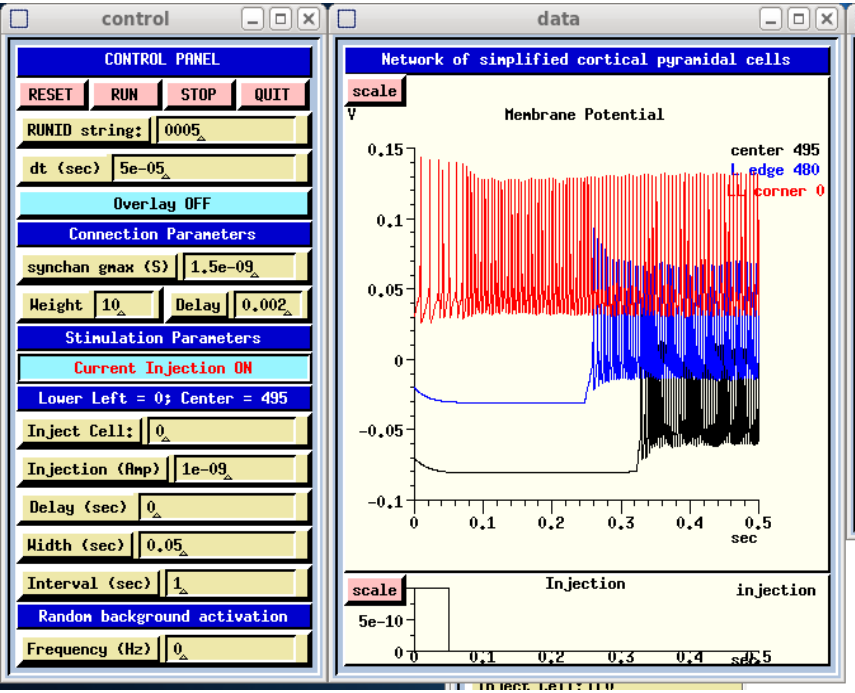


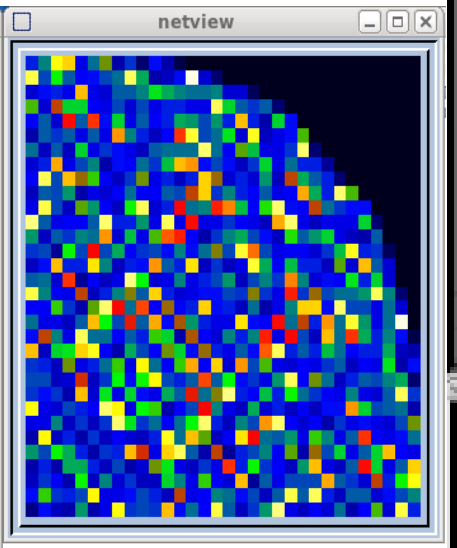


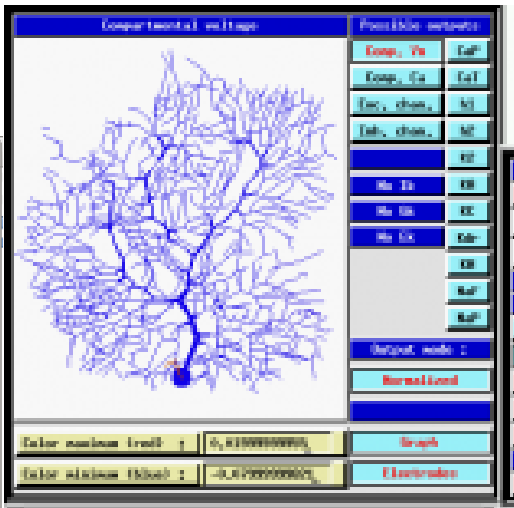


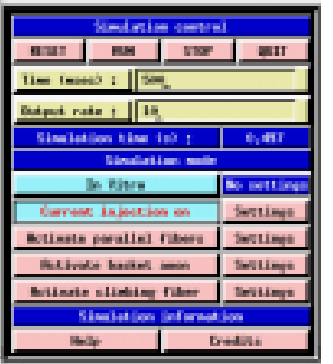


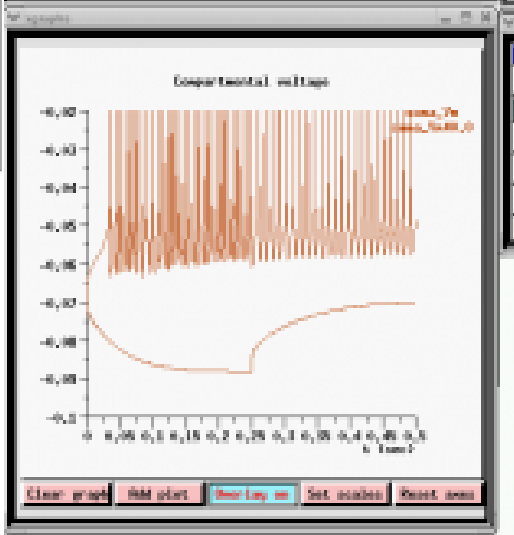
http://www.genesis-sim.org/

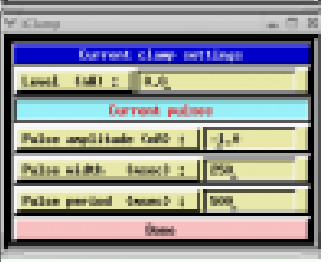


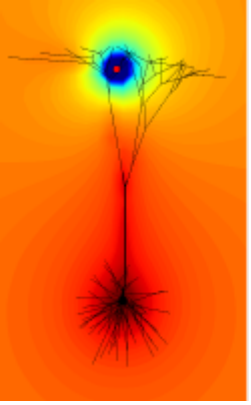












LFPy

Local Field Potentials in Python

http://compneuro.umb.no/LFPy

Uses Neuron models