1007-92-37 **Eugene M Izhikevich*** (Eugene.Izhikevich@nsi.edu), The Neurosciences Institute, 10640 John Jay Hopkins Drive, San Diego, CA 92121. *Simple Model of Spiking Neurons.*

I discuss advantages and drawbacks of the novel model of spiking neurons

$$\dot{v} = I + v^2 - u \qquad \text{if } v \geq 1, \text{ then} \qquad (1)$$
$$\dot{u} = a(bv - u) \qquad v \leftarrow c, \ u \leftarrow u + d \qquad (2)$$

having one voltage-like variable v, one recovery variable u, and five dimensionless parameters. Depending on the values of the parameters, the model can reproduce not only qualitatively but also quantitatively spiking and bursting activity of all known types of neocortical and thalamic neurons. (Received December 25, 2004)