Prof. Dr. Roger Traub, Yorktown Heights
"Fast network oscillations in the brain"

Network oscillations at 100 Hz and above occur in cerebral cortex, and at least sometimes are a prelude to an epileptic seizure. These very fast oscillations belong to a family of network behaviors in the brain that are generated solely, or primarily, by the coupling together of principal (excitatory) neurons by gap junctions. I will present experimental and simulation data that support these novel ideas, and discuss some of the implications for understanding epilepsy.