

J. Milton · P. Jung (Eds.)

# Epilepsy as a Dynamic Disease



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John Milton Peter Jung (Eds.)

# Epilepsy as a Dynamic Disease

With 170 Figures, 24 Color Plates,  
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## Epilepsy as a Dynamic Disease

A "brain defibrillator" may be closer than we think. An epileptic seizure involves a paroxysmal change in the activity of millions of neurons. Feedback control of seizures would require an implantable device that could predict seizure occurrence and then deliver a stimulus to abort it. To examine the feasibility of building such a device, this text brings together experts in epilepsy, bio-engineering, and dynamical systems theory. Topics include the development of epileptic systems, seizure prediction, neural synchronization, wave phenomena in excitable media, and the control of complex neural dynamics using brief electrical stimuli.

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