

# Dr. j. chris sackellares

## essay



**ASSIGN  
BUSTER**

Dr. J. Chris Sackellares Biography Dr.

J. Chris Sackellares was born in Savannah, received his bachelors in Chemistry at the University of Georgia in 1970, and his MD at the Medical College of Georgia. He completed his rounds as an intern in the department of Internal Medicine at the University of Louisville in ' 74, and then his residency in neurology ' 77. He also at the University of Virginia he trained in Epilepsy and Clinical Neurophysiology.

He is a certified Psychiatrist and Neurologist. Dr. Sackellares worked at the University of Michigan in the Neurology department and then founded the University Comprehensive Epilepsy Program in 1979. He has been a Professor of Neurology at the University of Florida since ' 94. He was also the Chief of Neurology at the Gainesville VA Medical Center.

Dr. Sackellares was a founding member of the University of Florida Biomedical Engineering Program and currently serves as Professor of Biomedical Engineering. He now researches while working within the Neurology, Pediatrics and Psychiatry Departments. His is also an Affiliate Professor of Neuroscience in the University of Florida, where he teaches Neuroscience courses at the graduate level. Research Staff There are no undergraduates working under Dr. Sackellares at the moment but there are opportunities for qualified applicants that have done work in computer modeling , engineering, and Neurology.

Dr. Sackellares works with the Neural Engineering staff on his epilepsy research that includes Dr. Paul R. Carney, Dr. Leon D.

Iasemidis, Dr. Panagote M. Pardalos, Dr. Jose C.

Principe, and Dr. Mark C. Yang. There are also currently 5 graduate assistants that were not mentioned. Research Dr. Sackellares researches epilepsy in humans.

Epilepsy can affect anyone of any age which makes it the most common dangerous brain disorder. About 7 of every 1, 000 suffer from this seizure causing disease.. The high incidence of epilepsy occurrence comes from the large number of causes, including genetic and zygotal anomalies that occur in early and later in life development/aging. This is the reason the very young and the elderly are more affected by epilepsy.

His studies look into the safety and efficiency of seizure medicines and epilepsy drugs as well as new ways of identifying signs that can predict seizures. They have begun to develop computer-based algorithms for prediction of seizures by a model by using in vivo rodent to test and collect EEG data. They have discovered ways to predict seizures by observable dynamic changes in electroencephalogram (EEG) which precede epileptic attacks 90% of the time by a half hour. They are working towards an automated paradigms that can predict seizures.

They hope to gain insight into these predictions by collecting massive amounts of data and developing pattern recognition algorithms for a seizure warning system (SWS). The SWS would be based upon the on-line features of the dynamical properties of brain electrical activity. Also these computer predictions will be compatible with a new design of an implantable device that will activate electronic pulses to control the seizures before they

happen. Experimental Techniques • Electroencephalogram (EEG) • Complex nonlinear systems (computer models) Multivariate time-series analysis • Pattern recognition algorithms • Optimization techniques • Neuroimaging • Neurosurgery Major Collaborators Dr. Sackellares and his research group works together with the Brain Dynamics Laboratory (McKnight Brain Institute), Computer NeuroEngineering Laboratory (College of Engineering), Center for Applied Optimization (College of Engineering), an in vitro Neurophysiology Research Laboratory (McKnight Brain Institute), an in vivo Neurophysiology Laboratory (McKnight Brain Institute), and the Epilepsy Monitoring Laboratory (Shands Hospital). Bibliography Holmes GL, Sackellares JC, McKiernan J, Ragland M, Dreifuss FE: Evaluation of childhood pseudoseizures using EEG telemetry and video monitoring.

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