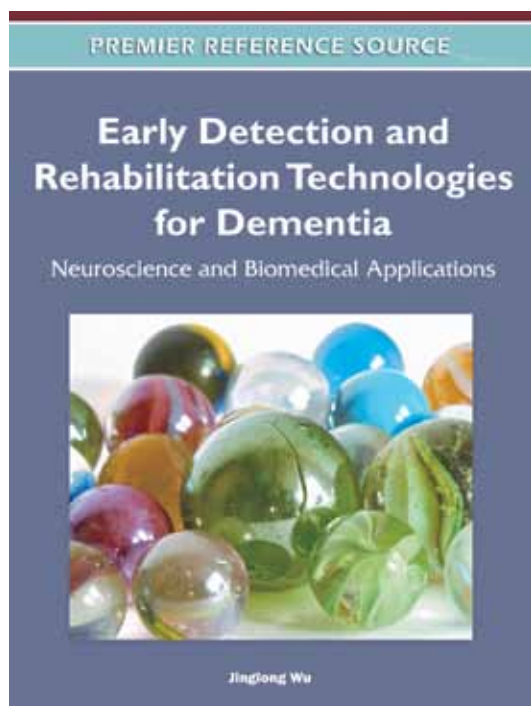


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Early Detection and Rehabilitation Technologies for Dementia: Neuroscience and Biomedical Applications



Jinglong Wu (Okayama University, Japan)

Dementia is a progressive neurodegenerative disease, of which Alzheimer's disease (AD) is the most frequent cause. AD is characterized by the progressive formation of insoluble amyloid plaques and vascular deposits of amyloid beta peptide in the brain. AD patients suffer from a loss of neurons and synapses in the cerebral cortex and certain sub-cortical regions.

Early Detection and Rehabilitation Technologies for Dementia: Neuroscience and Biomedical Applications provides a comprehensive collection for experts in the Neuroscience and Biomedical technology fields. Outlining various concepts from cognitive neuroscience and dementia to neural technology and rehabilitation; this book proves to bring together researchers and practitioners from diverse fields, in order to promote scientific research and industrial development in the field of early detection and rehabilitation technology of dementia.

Topics Covered:

- Alzheimer disease and other dementias
- Apraxia, dyslexia, and other neuron diseases
- Attention, memory, language, and other higher functions
- Brain-machine interface and rehabilitation
- Clinical technology for neurology
- Imaging and pathologic diagnosis
- Imaging cognitive neuroscience
- Neural and cognitive rehabilitations
- Rehabilitation robotics and biomechatronics
- Social medicine and dementia

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Jinglong Wu was born in Jiutai, China, on August 8, 1958. He received a B.S. from Jilin Vocational Teachers College, China, and M.S. from Kyoto University, Japan, both in electrical engineering, in 1984 and 1991, respectively. He received his Ph.D. in electric engineering from Kyoto University, Japan, in 1994. He was an assistant professor at Ritsumeikan University, Japan, from 1994 to 1997, a lecturer in the Department of Mechanical Engineering, Faculty of Engineering, Yamaguchi University, from 1997 to 1999. From 1999, he was an associate professor, and from 2002, he was a full professor in the Department of Intelligent Mechanical Systems, Faculty of Engineering, Kagawa University, Japan. Since 2008, he has been Professor and Laboratory Head, Biomedical Engineering Laboratory, Graduate School of Natural Science and Technology, Okayama University, Japan. His current research interests are biomedical engineering, cognitive neuroscience, ergonomics and human science. Dr. Wu received the Best Paper Award of the IEEE Joint International Conference on Neural Network in 1993 and the SICE Best Paper Award in 2000. In 2003, he received the Gennai Grand Prize, Ozaki Foundation, Japan.



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