Stability Analysis of Fractional-Order Neural Network Model with Proportional Delay

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In this work, a fractional-order neural network with proportional time delay is examined for the existence of a unique solution. Sufficient conditions for the existence of a solution for the given model are derived with respect to various initial conditions using analysis of fixed point theory and fractional calculus. The analytical findings are explained through numerical examples. These models are suitable when a process takes place through strongly anomalous media.