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Mrinal K Roychowdhury* (mrinal@math.colostate.edu), Dept of Mathematics, University of North Texas, P.O. Box 311430, Denton, TX 76203-1430. *Any two irreducible Markov chains are finitarily orbit equivalent.*

Two invertible dynamical systems $(X, \mathfrak{A}, \mu, T)$ and $(Y, \mathfrak{B}, \nu, S)$ where X, Y are metrizable spaces and T, S are homeomorphisms on X and Y , are said to be finitarily orbit equivalent if there exists an invertible measure preserving mapping ϕ from a subset X_0 of X of full measure to a subset Y_0 of Y of full measure such that $\phi|_{X_0}$ is continuous in the relative topology on X_0 , $\phi^{-1}|_{Y_0}$ is continuous in the relative topology on Y_0 and $\phi(\text{Orb}_T(x)) = \text{Orb}_S\phi(x)$ for μ -a.e. $x \in X$. In this article a finitary orbit equivalence mapping is shown to exist between any two irreducible Markov chains. (Received August 05, 2007)