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**Alexandru G Atim\*** (aga0007@unt.edu), Department of Mathematics, University of North Texas, P.O. Box 311430, Denton, TX 76203-1430. *A Uniqueness Result for Unitary Group.*

Let  $\mathcal{H}$  be an infinite dimensional separable Hilbert space,  $\mathcal{U}(\mathcal{H})$  the unitary group acting on  $\mathcal{H}$ ,  $G$  a complete separable metric group and  $\phi : G \rightarrow \mathcal{U}(\mathcal{H})$  an algebraic isomorphism. Then  $\phi$  is a topological isomorphism. The theorem is false for  $\mathcal{U}(\mathcal{H})$  if  $\mathcal{H}$  is finite dimensional. (Received September 18, 2007)