1056-46-258 **Hueytzen J Wu*** (kfhjw00@tamuk.edu), Department of Mathematics, Texas A & M University - Kingsville, Kingsville, TX 78363-8202, and **Wan-Hong Wu** (dd1273@yahoo.com), 7703 Floyd Curl Drive, San Antonio, TX 78229. *A Generalized Ston-Wierstrass theorem for Cz-vector lattices and Cz-algebras.* Preliminary report.

By defining an equivalence relation on an arbitrary topological space Y, a Tychonoff space X is induced such that there is an isometry G from C*(X) to C*(Y), where both C*(X) and C*(Y) are equipped with the supremum norm. For any Hausdorff compactifica- tion (Z, h) of the Tychonoff space X induced by Y, let S be the set of all f o h for f in C(Z), and T be the set of all G(g) for g in S. Then S and T are a complete vector sublattice and complete subalgebra of C*(X) and C*(Y), respectively. T will be called a Cz-vector lattice or a Cz-algebra on Y. A sufficient and necessary condition for any vector sublattice or subalgebra V of T to be dense in T is provided. If Y is Tychonoff, then Y = X and if (Z, h) is the Stone-Cech compactification of X, then T = C*(X) = C*(Y) and an extension of the generalized Stone-Weierstrass theorem with a sufficient and necessary condition to C*(X) is achieved. (Received August 21, 2009)