

1116-47-1737      **Scott A. Atkinson\*** ([saa6uy@virginia.edu](mailto:saa6uy@virginia.edu)). *Convex Sets Associated to  $C^*$ -Algebras.*

Given a separable  $C^*$ -algebra  $\mathfrak{A}$ , we can associate to it an invariant given by weak approximate unitary equivalence classes of certain  $*$ -homomorphisms on  $\mathfrak{A}$ . One can show that this object takes the form of a closed, bounded, convex subset of a separable Banach space. This can be thought of as a convex version of the semigroup  $\text{Ext}(\mathfrak{A})$ . This invariant is closely related (and sometimes affinely homeomorphic) to the trace space of  $\mathfrak{A}$ , but its data is different from that of the trace space in general. We will discuss structure and properties of this object along with some related consequences and open problems. (Received September 21, 2015)