AV-Courant Algebroids and Generalized CR Structures

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Abstract. We construct a generalization of Courant algebroids that are classified by the third cohomology group $H^3(A, V)$, where $A$ is a Lie Algebroid, and $V$ is an $A$-module. We see that both Courant algebroids and $E^3(M)$ structures are examples of them. Finally we introduce generalized CR structures on a manifold, which are a generalization of generalized complex structures, and show that every CR structure and contact structure is an example of a generalized CR structure.