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**Jonathan Rosenberg\*** ([jmr@math.umd.edu](mailto:jmr@math.umd.edu)), Department of Mathematics, University of Maryland, College Park, MD 20742-4015. *Structure and applications of real  $C^*$ -algebras.*

For a long time, practitioners of the art of operator algebras always worked over the complex numbers, and nobody paid much attention to real  $C^*$ -algebras. Over the last thirty years, that situation has changed, and it's become apparent that real  $C^*$ -algebras have a lot of extra structure not evident from their complexifications. At the same time, interest in real  $C^*$ -algebras has been driven by a number of compelling applications, for example in representation theory, in the classification of manifolds of positive scalar curvature, and in the study of orientifold string theories. We will discuss a number of interesting examples of these. (Received August 20, 2014)