

1070-46-339

Stuart J Sidney* (stuart.sidney@uconn.edu), University of Connecticut, Department of Mathematics, Unit 3009, Storrs, CT 06269-3009. *An introduction to real function algebras.*

If X is a compact Hausdorff space and τ is a self-homeomorphism of X such that $\tau \circ \tau$ is the identity map, a *real function algebra* A on (X, τ) is a uniformly closed point-separating unital real algebra of complex-valued functions f on X that satisfy $\overline{f \circ \tau} = f$; the prototypical example is the real subalgebra of the disc algebra that consists of functions f such that $f(\bar{z}) = \overline{f(z)}$, with complex conjugation on the unit disc as τ . The study of real function algebras, while several decades old, is still in its infancy compared to the study of complex function algebras (or *uniform algebras*), and much of the existing work consists of trying to find real versions of complex results, often by means of a process of complexification. The talk will attempt to give a small sample of some basic results and how complexification is used to prove a few of them.

Program for future research by interested parties: Find instances in which complexification can be used in the opposite direction, beginning with a direct proof in real function algebras of some result, then obtaining a corresponding result in complex function algebras. (Received February 15, 2011)