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Hal L. Smith obtained his PhD in mathematics at the University of Iowa and is currently Professor of Mathematics at Arizona State University. He has held visiting professor positions at the University of Utah, Brown University, Georgia Institute of Technology, and the University of Minnesota. His research interests include nonlinear analysis, differential equations, dynamical systems, and applications to the biological sciences.

Monotone Dynamical Systems: Reflections on New Advances & Applications

Abstract

I offer some reflections on recent developments in a very select portion of the now vast subject of monotone dynamical systems. Continuous time dynamics generated by cooperative systems of ordinary differential equations, delay differential equations, parabolic partial differential equations, and control systems are the main focus. Results are included which the author feels have had a major impact in the applications. These include especially the theory of competition between two species or two teams and the theory of monotone control systems.