

**Special Issue**  
on  
*Dynamic Equations on Time Scales:  
Qualitative Analysis and Applications*

Research in the area of dynamic equations on time scales has followed a rapidly successful path since its beginning 20 years ago with Stefan Hilger's seminal work. A large part of this success is due to how topics involving the unification and extension of discrete and continuous dynamical systems have attracted the attention of researchers in a wide variety of scientific disciplines including pure and applied mathematics as well as biology, economics, engineering, and physics.

The purpose of this special issue is to appeal to that large cross-section of researchers by focusing on the interplay between dynamical systems theory and applications of time scales analysis. This collection of papers includes authors from all over the world each with a fundamentally new contribution to the field. While much progress has been made, there is an ever increasing supply of nontrivial questions that push the boundaries of the theory to new and exciting places. We hope that the readers of this special issue will find one or more papers here that resonate with them and in turn help drive the theory in another new direction.

This special issue on dynamic equations on time scales contains altogether fifteen carefully selected research papers, authored by thirty-one world-leading experts from eight different countries. Contributors are D. Anderson (USA), F. Atici (USA), E. Bairamov (Turkey), M. Benchohra (Algeria), F. Berhoun (Algeria), H. Berger (USA), J. DaCunha (USA), R. Dahal (USA), T. Doan (Germany), L. Erbe (USA), R. Ferreira (Portugal), S. Hamani (Algeria), T. Hassan (Egypt), J. Henderson (USA), Adil Huseynov (Turkey), Aydin Huseynov (Turkey), A. Kalauch (Germany), E. Kaufmann (USA), N. Kosmatov (USA), C. McMahan (USA), S. Ntouyas (Greece), R. Oberste-Vorth (USA), A. Ouahab (Algeria), A. Peterson (USA), I. Purnaras (Greece), S. Saker (Saudi Arabia), S. Siegmund (Germany), F. Topal (Turkey), D. Torres (Portugal), J. Weiss (USA), and A. Yantir (Turkey). We appreciate the contribution of each one above as well as the numerous referees whose behind the scenes work ensured the quality of this issue.

We are also grateful to Professor A.A. Martynyuk, Editor-in-Chief, for inviting us to guest edit this special issue.

May the next 20 years of research in dynamic equations on time scales be as successful as the first 20!

Martin Bohner<sup>1</sup> and John M. Davis<sup>2</sup>,  
Guest Editors

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# NONLINEAR DYNAMICS AND SYSTEMS THEORY

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## List of papers

to be published in issues 2-4, 2009  
as a continuation of the Special Issue on  
*Dynamic Equations on Time Scales:  
Qualitative Analysis and Applications*

Dominant and Recessive Solutions of Self-Adjoint Matrix Systems on Time Scales (Submitted by J. Davis)

*Douglas R. Anderson*

Dynamic Inequalities, Bounds, and Stability of Systems with Linear and Nonlinear Perturbations (Submitted by J. Davis)

*Jeffrey J. DaCunha*

Some Linear and Nonlinear Integral Inequalities on Time Scales in Two Independent Variables (Submitted by M. Bohner)

*R.A.C. Ferreira and D.F.M. Torres*

Positive Solutions of Semipositone Singular Dirichlet Dynamic Boundary Value Problems (Submitted by M. Bohner)

*R. Dahal*

The Fell Topology for Dynamic Equations on Time Scales (Submitted by M. Bohner)

*R.W. Oberste-Vorth*

Positive Solutions of a Second Order  $m$ -Point BVP on Time Scales (Submitted by M. Bohner)

*S. Gulsan Topal and Ahmet Yantir*