Discrete Dynamics in Nature and Society

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Special Issue on

Time Delayed Equations as Models in Nature and Society

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The mathematical modeling of most phenomena occurring in nature and society requires the definition of discrete and continuous variables and the introduction of time lags to take into account that the processes appearing at different scales have not an immediate effect but appear with some delay. Recently, the interest in retarded ordinary or partial differential equations has gained much attention, especially in applied mathematics and economics, where it has been proved that the introduction of time delays allows the capturing of more complex dynamics thus enriching the description of the whole system. The main aim of this special issue is to provide a platform for the discussion of the major research challenges and achievements on this topic. Theoretical as well as computational investigations are welcome.

Potential topics include, but are not limited to:

- Time-delay systems
- Chaos and bifurcations analysis
- Predator-prey models
- Stability analysis
- Stochastic processes
- Computational methods
- Discrete optimization methods
- Development and population dynamics
- Infectious diseases and epidemic dynamics

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Lead Guest Editor
Luca Guerrini, Marche Polytechnic University, Ancona, Italy
luca.guerrini@univpm.it

Guest Editors
Luca Gori, University of Genoa, Genoa, Italy
luca.gori@unige.it

Akio Matsumoto, Chuo University, Hachioji, Japan
akiom@tamacc.chuo-u.ac.jp

Mauro Sodini, University of Pisa, Pisa, Italy
mauro.sodini@unipi.it

Zizhen Zhang, Anhui University of Finance and Economics, Bengbu, China
zzzhaida@163.com

Carlo Bianca, Sorbonne University, Paris, France
bianca@lptmc.jussieu.fr

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