

İlknur KUŞBEYZİ AYBAR



Dr. Instructor

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Research Interest

Computational Science
Dynamical Systems
Numerical Simulation

Biography

BA: Yıldız Technical University 2004
MS: Yıldız Technical University 2006
Phd. Gebze Technical University 2010

Papers

- 1- Aybar, I. Kusbeyzi, Aybar, O.O., Dukaric, M., Fercec, B., Dynamical analysis of a two prey-one predator system with quadratic self interaction, 2018, APPLIED MATHEMATICS AND COMPUTATION
- 2- Kusbeyzi Aybar, I.; Aybar, O. O.; Fercec, B.; Romanovski, V. G.; Samal, S. S.; Weber, A., Investigation of Invariants of a Chemical Reaction System with Algorithms of Computer Algebra, 2015, MATCH-COMMUNICATIONS IN MATHEMATICAL AND IN COMPUTER CHEMISTRY
- 3- Shpotyuk, O.; Balitska, V.; Kozdras, A.; Hacinliyan, A. S.; Skarlatos, Y.; Aybar, I. Kusbeyzi; Aybar, O. O., Chaotic behavior of lightassisted physical aging in arsenoselenide glasses, 2014, CHAOS
- 4- Hacinliyan, A. S.; Skarlatos, Y.; Aybar, I. Kusbeyzi; Aybar, O. O.; Shpotyuk, O.; Golovchak, R.; Balitska, V.; Kozdras, A., Natural physical aging in glassy As-Se: A comparative study of chaotic behavior with enhanced results analysis, 2014, JOURNAL OF NONCRYSTALLINE SOLIDS
- 5- Aybar, O.O.; Kusbeyzi Aybar, I.; Hacinliyan, A.S., Bifurcations in Van der Pol-Like Systems, 2013, MATHEMATICAL PROBLEMS IN ENGINEERING
- 6- Kusbeyzi, I.; Aybar, O. O.; Hacinliyan, A., Stability and bifurcation in two species predator-prey models, 2011, NONLINEAR ANALYSIS-REAL WORLD APPLICATIONS
- 7- Hacinliyan, A. S.; Kusbeyzi, I.; Aybar, O. O., Approximate solutions of Maxwell Bloch equations and possible Lotka Volterra type behavior, 2010, NONLINEAR DYNAMICS

Projects

- 1- "Lotka-Volterra systems and some applications to biology, chemistry and physics", TÜBİTAK-Slovenia (ARRS) Joint Research Project (2508), Project no: 113F383 (2014-2016) – Project Leader
- 2- "Generalized power exponential parametrization as an advanced creative tool in functionally - improved sensing electronics", TÜBİTAK - Ukraine (DKNII) Joint Research Project (2514), Project no: 111T805 (2012-2014) - Researcher

Book Chapters

- 1- Chaos Theory: Modeling, Simulation and Applications, A Predator - Prey Model with the Nonlinear Self Interaction Coupling $x^k y$, ISBN: 9814350346, 2011
- 2- Chaos Theory: Modeling, Simulation and Applications, Chaoticity in the Time Evolution of Foreign Currency Exchange Rates in Turkey, ISBN: 9814350346, 2011
- 3- Chaotic Systems: Theory and Applications , Maxwell-Bloch Equations as Predator-Prey System, ISBN: 978-981-4299-71-8981, 2010

Courses

Fall: CET 211 Introduction to Algorithms and Programming
CET 487 Authoring Tools in E-Learning
CET 301 Design and Development of Educational Games
CET 491 Mobile Application Development
Spring: CET 212 Fundamentals of Object Oriented Programming for Education
CET 308 Operating Systems
CET 310 Database Management Systems