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CS7 Repeating patterns from cultured neural networks
*김준만, 최준호, 이준석 (고려대)

CS8 Incorporation of Quantum Dots into the Lipid Bilayer of Giant Unilamellar Vesicles using Spin-Coating Electroformation.
*Sung Jin Kim¹, Kyuyong Lee², Hyuk Kyu Pak¹ (¹부산대, ²한국산업대)

CS9 Comparison of various fractal measurement methods applied on fractal lattices *문응영, 김순환 (POSTECH)

CS10 Noise characteristics of the repressorator system
*한영훈, 고중일, 김인우 (고려대)

CS11 Uniqueness of the fixed point of the Egen model and the parallel model under changing environments with sharp-peak fitness function
Mark Ancill and *Jeong-Man Park (The Catholic University of Korea)

CS12 Observation of a colloidal particle dynamics between two parallel walls using oscillating optical tweezers
*Chungil Han¹, Daniel Cu-Yong², Hyuk Kyu Pak³ (¹Department of Physics, Pusan National University, Busan, Korea 609-735; ²Department of Physics, Lehigh University, Bethlehem, PA, USA)

CS13 The Mechanism of Anderson Localization in Disordered Materials
*Vincent Sacksteder (APCTP)

CS14 Torus-Doubling in Symmetrically Coupled Period-Doubling Systems
*김영배, 임우정(아주대), 김상윤(경원대)


CS16 Elastic behavior for head-on collision of spherical nanoclusters
김상혁(경기대)
CS14 Torus-Doubling in Symmetrically Coupled Period-Doubling Systems

As a representative model for Poincare maps of coupled period-doubling oscillators, we consider symmetrically coupled Henon maps. Each invertible Henon map has a constant Jacobian $b$ ($0 < b < 1$) which is the degree of dissipation. Instead of period-doubling bifurcations, anti-phase periodic orbits (with time shift of half a period) lose their stability via Hopf bifurcations, and then smooth tori, encircling the anti-phase mother orbits, appear. We study the fate of these tori by varying $b$. Double tori appear via torus-doubling bifurcations for large $b$. This is in contrast to the case of the coupled logistic maps without torus-doubling bifurcations. With decreasing $b$, mechanisms for disappearance of torus-doubling are investigated. The torus-doubling phenomena are also observed in symmetrically coupled pendulums.

CS15 A Novel Method for Numerically Solving a Specific Form of the Wiener-Hopf Equation

Shawn Young Kang, Wonki Jeon, and Sang-Hee Lee
(National Institute for Mathematical Sciences, Daejeon, Korea)

In this paper, we propose a novel method to numerically solve a specific form of the Wiener-Hopf equation, which arises in the modeling of both neutron and classical radiative transfer from a stellar object. Our method was based on the Clasnow-Curtis quadrature for the equation. The new method showed more accurate and computationally economical results in comparison with other existing approaches, reported by Graham et al. (1981) and Mastromeni et al. (1997). The present method can be effectively used in the similar integral equations occurring in traffic noise simulation, in diffraction of electromagnetic waves, and in crack problems in elasticity theory.

CS16 Elastic behavior for head-on collision of spherical nanoclusters

The elastic behavior of head-on collision of spherical nanoclusters are investigated using molecular dynamics. We focused on the initial compressing phase of the colliding process. The simulation results are analyzed with Hertz model of elastic balls.