

## Submission Classifications – *Chaos, Solitons & Fractals*

### 10: Dynamics

- .1: Lagrangian chaos
- .01: applications to mechanics of particles and systems
- .2: perturbation theory
- .02: approximation methods
- .03: bifurcation theory
- .04: celestial mechanics
- .05: cellular automata
- .06: collective behaviour
- .07: computational methods in nonlinear dynamics
- .08: control of chaos
- .09: Hamiltonian systems
- .11: Lie groups
- .12: low-dimensional chaos
- .13: maps and coupled lattice maps
- .14: non-linear dynamics
- .15: non-linear ordinary differential equations
- .16: non-linear oscillations
- .17: non-linear partial differential equations
- .18: non-linear waves
- .19: PDE in hydrodynamics
- .21: signal processing
- .22: solitons
- .23: space-time chaos
- .24: stability theory
- .25: symmetry breaking
- .26: symplectic mechanics
- .27: synchronization
- .28: vibrations

## **20: Non-equilibrium processes in physics, chemistry and geophysics**

- .1: hydrodynamics
- .01: applications to astrophysics
- .2: spin glasses
- .02: applications to particle physics and cosmology
- .03: applications to other physics disciplines
- .04: coherent phenomena
- .05: complex matter and networks
- .06: critical phenomena
- .07: decay of particles
- .08: dynamical phase transition
- .09: granular matter
- .11: kinetic and transport theory
- .12: Lévy flight
- .13: microfluidics
- .14: non-equilibrium phase transition
- .15: non-equilibrium quantum field theory
- .16: non-equilibrium statistical physics
- .17: non-equilibrium/irreversible thermodynamics
- .18: seismic fluctuations and geophysical complexity
- .19: self-organized criticality
- .21: symmetry breaking
- .22: turbulence

## **30: Complex matter and networks**

- .01: brain dynamics
- .02: complex matter
- .03: complex networks
- .04: complex systems
- .05: internet dynamics, e-mail communication
- .06: neural networks
- .07: neurophysiological processes

.08: new materials synthesis

#### **40: Mathematical models**

.1: non-linear ordinary differential equations

.01: approximation methods

.2: synchronization

.02: cellular automata

.03: dynamical systems

.04: ergodic and mixing properties

.05: ergodic theory

.06: Kolmogorov-Sinai entropy

.07: Lie groups

.08: maps and coupled lattice maps

.09: mathematical physics

.11: non-linear waves

.12: non-linear partial differential equations

.13: perturbation theory

.14: Shanon entropy

.15: signal processing

.16: singularity theory

.17: solitons

.18: stability theory

.19: symmetry breaking

#### **50: Computational biology**

.01: biodynamics

.02: biological networks

.03: biological systems

.04: cognitive processes

.05: computational biology

.06: decision making

.07: medicine

.08: neural networks

.09: neuroscience, brain dynamics

## **60: Applications to quantum and mesoscopic phenomena**

.01: applications to quantum information

.02: nanotechnology

.03: nonequilibrium quantum statistical mechanics

.04: open quantum systems

.05: quantum chaos

.06: quantum decoherence

.07: quantum dynamics

.08: quantum measurement processes

## **70: Fluctuations and random processes**

.1: turbulence

.01: fluctuations in physics and biology

.02: fractional calculus

.03: kinetic and transport theory in physics and chemistry

.04: Lévy processes

.05: random signal processing

.06: Shannon entropy

.07: stable processes

.08: stochastic control

.09: synchronization

## **80: Self-organization**

.01: complex matter

.02: fractals

.03: information theory

.04: pattern formation

.05: self-organized criticality

.06: Shannon entropy

## **90: Social phenomena**

.01: applications to economics

.02: environmental science

.03: applications to social sciences

.04: ecology

.05: game theory

**100: Engineering**

.01: applications to engineering

.02: vibrations in engineering sciences