

Indexes to Volume 84

SUBJECT INDEX

Mathematical Methods in Physics

- New exact wave solutions for Hirota equation *M Eslami, M A Mirzazadeh and A Neirameh* 3–8
- Analytical solution of population balance equation involving aggregation and break-age in terms of auxiliary equation method *Zehra Pinar, Abhishek Dutta, Guido Bény and Turgut Öziş* 9–21

General Relativity and Gravitation

- Finite escape fraction for ultrahigh energy collisions around Kerr naked singularity *Mandar Patil and Pankaj S Joshi* 491–501
- Ghost quintessence in fractal gravity *Habib Abedi and Mustafa Salti* 503–516

Statistical Physics, Thermodynamics and Nonlinear Dynamical Systems

- Stability analysis of fractional-order generalized chaotic susceptible–infected–recovered epidemic model and its synchronization using active control method *Sana P Ansari, Saurabh K Agrawal and Subir Das* 23–32
- Increased-order generalized synchronization of chaotic and hyperchaotic systems *K S Ojo, S T Ogunjo, A N Njah and I A Fuwape* 33–45
- Robust antisynchronization of chaos using sliding mode control strategy *Amit Mondal, Mitul Islam and Nurul Islam* 47–67
- Synchronization-optimized networks for coupled nearly identical oscillators and their structural analysis *Suman Acharyya and R E Amritkar* 173–182
- Coupled chaotic attractors and driving-induced bistability: A brief review *Manish Agrawal* 183–192
- Early signatures of regime shifts in complex dynamical systems *Indrani Bose and Mainak Pal* 193–202
- Control of partial synchronization in chaotic oscillators *R Banerjee, E Padmanaban and S K Dana* 203–215
- Preventing catastrophes in spatially extended systems through dynamic switching of random interactions *Anshul Choudhary, Vivek Kohar and Sudeshna Sinha* 217–228

- Chimera states in a population of identical oscillators under planar cross-coupling
C R Hens, A Mishra, P K Roy, A Sen and S K Dana 229–235
- Suppression of oscillations in mean-field diffusion
Neeraj Kumar Kamal, Pooja Rani Sharma and Manish Dev Shrivali 237–247
- Dynamic random links enhance diversity-induced coherence in strongly coupled neuronal systems
Neeraj Kumar Kamal and Sudeshna Sinha 249–256
- Synchronization enhancement via an oscillatory bath in a network of self-excited cells
B R Nana Nbandjo, H G Enjieu Kadji and Hilda A Cerdeira 257–272
- Coverage maximization under resource constraints using proliferating random walks
Sudipta Saha, Niloy Ganguly and Abhijit Guria 273–284
- Importance of randomness in biological networks: A random matrix analysis
Sarika Jalan 285–293
- Matrix models with Penner interaction inspired by interacting ribonucleic acid
Pradeep Bhadola and N Deo 295–308
- Distribution of level spacing ratios using one- plus two-body random matrix ensembles
N D Chavda 309–316
- Analysing correlations after the financial crisis of 2008 and multifractality in global financial time series
Sunil Kumar and Nivedita Deo 317–325
- Dynamics of solitons in multicomponent long wave–short wave resonance interaction system
T Kanna, K Sakkaravarthi, M Vijayajayanthi and M Lakshmanan 327–338
- Breathers and rogue waves: Demonstration with coupled nonlinear Schrödinger family of equations
N Vishnu Priya, M Senthilvelan and M Lakshmanan 339–352
- Empirical questions for collective-behaviour modelling
Nicholas T Ouellette 353–363
- Classification of periodic, chaotic and random sequences using approximate entropy and Lempel–Ziv complexity measures
Karthi Balasubramanian, Silpa S Nair and Nithin Nagaraj 365–372
- Generalized virial theorem for the Liénard-type systems
José F Cariñena, Anindya Ghose Choudhury and Partha Guha 373–385
- Effect of heat source on the growth of dendritic drying patterns
Kiran M Kolwankar, Pulkit Prakash, Shruthi Radhakrishnan, Swadhini Sahu, Aditya K Dharmadhikari, Jayashree A Dharmadhikari and Deepak Mathur 387–394
- Thermalized solutions, statistical mechanics and turbulence: An overview of some recent results
Samridhhi Sankar Ray 395–407
- Rolling motion in moving droplets
Sumesh P Thampi and Rama Govindarajan 409–421

State variable participation in the limit cycle of induction motor	<i>Krishnendu Chakrabarty and Urmila Kar</i>	423–441
Non-linear dynamics in pulse combustor: A review	<i>Sirshendu Mondal, Achintya Mukhopadhyay and Swarnendu Sen</i>	443–453
Building better oscillators using nonlinear dynamics and pattern formation	<i>M C Cross, Eyal Kenig and John-Mark A Allen</i>	455–471
Nonlinear dynamics of spin transfer nano-oscillators	<i>B Subash, V K Chandrasekar and M Lakshmanan</i>	473–485
Oscillatory dynamics of a charged microbubble under ultrasound	<i>Thotreithem Hongray, B Ashok and J Balakrishnan</i>	517–541
On symmetry groups of a 2D nonlinear diffusion equation with source	<i>Rodica Cimpoiasu</i>	543–553

Particle Physics

Form factors and charge radii in a quantum chromodynamics-inspired potential model using variationally improved perturbation theory	<i>Bhaskar Jyoti Hazarika and D K Choudhury</i>	69–85
Two-nucleon Hulthen-type interactions for few higher partial waves	<i>U Laha and J Bhoi</i>	555–567
Thermalization and isotropization in heavy-ion collisions	<i>Michael Strickland</i>	671–684
The initial stages of heavy-ion collisions in the colour glass condensate framework	<i>François Gelis</i>	685–701
Hydrodynamic modelling for relativistic heavy-ion collisions at RHIC and LHC	<i>Huichao Song</i>	703–715
Transport models for relativistic heavy-ion collisions at Relativistic Heavy Ion Collider and Large Hadron Collider	<i>Subrata Pal</i>	717–730
Long-range correlations in high multiplicity pp and pA collisions	<i>Gunther Roland</i>	731–746
Freeze-out dynamics in heavy-ion collisions: Recent advances	<i>Francesco Becattini</i>	747–755
QCD critical point: The race is on	<i>Rajiv V Gavai</i>	757–771
Experimental studies of the quantum chromodynamics phase diagram at the STAR experiment	<i>Lokesh Kumar and Declan Keane</i>	773–786
Developments in lattice quantum chromodynamics for matter at high temperature and density	<i>Gert Aarts</i>	787–799
Jet-quenching and correlations	<i>Fuqiang Wang</i>	801–819
Jet modification in the next decade: A pedestrian outlook	<i>Abhijit Majumder</i>	821–843
Photon and dilepton production in high-energy heavy-ion collisions	<i>Takao Sakaguchi</i>	845–859

- Electromagnetic probes of strongly interacting matter *Jan-e Alam* 861–880
- Quarkonia at finite temperature in relativistic heavy-ion collisions *Saumen Datta* 881–899
- Anomalous transport effects and possible environmental symmetry ‘violation’ in heavy-ion collisions *Jinfeng Liao* 901–926
- Neutron stars as probes of extreme energy density matter *Madappa Prakash* 927–941

Nuclear Physics

- Systematic of signature inversion in $(h_{11/2})_p \otimes (i_{13/2})_n$ for odd–odd nuclei in rare-earth nuclei *Kawalpreet Kalra, Alpna Goel, Sukhjeet Singh, Sushil Kumar and A K Jain* 87–99
- On the momentum distribution of particles participating in nuclear stopping *Mandeep Kaur and Suneel Kumar* 101–111
- Alpha decay properties of heavy and superheavy elements *G M Carmel Vigila Bai and J Umai Parvathiy* 113–116
- Evaluated activation cross-sections and intercomparison of the production parameters for the medically relevant radioisotopes ^{64}Cu and ^{86}Y *A Sayed, A Elbinawi, M Al-Abyad, U Seddik and I I Bashter* 569–579
- Simulated nucleon–nucleon and nucleon–nucleus reactions in the frame of the cascade exciton model at high and intermediate energies *A Abdel-Hafiez, Shaker El-Shater and M F Zaki* 581–590
- Characteristics of disintegration of different emulsion nuclei by relativistic ^{28}Si nuclei at 3.7 A GeV *Ashwini Kumar, A Prakash, Ashok Kumar, R K Jain and B K Singh* 591–608

Electromagnetism, Optics, Acoustics, Heat Transfer, Classical Mechanics and Fluid Dynamics

- Half-width at half-maximum, full-width at half-maximum analysis for resolution of asymmetrically apodized optical systems with slit apertures *Andra Naresh Kumar Reddy and Dasari Karuna Sagar* 117–126
- The influence of atomic coherence and dipole–dipole interaction on entanglement of two qubits with nondegenerate two-photon transitions *E K Bashkirov and M S Mastuygin* 127–135

Plasma Physics

- Dust-ion-acoustic Gardner double layers in a dusty plasma with two-temperature electrons *M M Masud, I Tasnim and A A Mamun* 137–144
- Planar dust-acoustic waves in electron–positron–ion–dust plasmas with dust-size distribution under higher-order transverse perturbations *Hong-Yan Wang and Kai-Biao Zhang* 145–153

Condensed Matter Physics

- Effect of doping of N and B atoms on thermoelectric properties of C₆₀ molecule
Mojtaba Yaghobi and Fazel Ardeshir Larijani 155–165
- Impact of size and temperature on thermal expansion of nanomaterials
Madan Singh and Mahipal Singh 609–619
- Influence of Cu doping on the structural, electrical and optical properties of ZnO
*Arindam Ghosh, Navnita Kumari
and Ayon Bhattacharjee* 621–635
- Electronic structure of Fe-based superconductors *Kalobaran Maiti* 947–956
- Understanding metal–insulator transition in sodium tungsten bronze
Sanhita Paul and Satyabrata Raj 957–966
- Magnetoresistance studies of double perovskites *Abhishek Nag and Sugata Ray* 967–975
- Magnetocaloric effect in rare-earth intermetallics: Recent trends
R Nirmla, A V Morozkin and S K Malik 977–985
- Site-specific doping, tunable dielectric properties and intrinsic paramagnetism in Mn-doped SrTiO₃ *D Choudhury* 987–997
- Correlation effects driven by reduced dimensionality in magnetic surface alloys
U Manju 999–1009
- Growth and photoemission spectroscopic studies of ultrathin noble metal films on graphite
S K Mahatha and Krishnakumar S R Menon 1011–1022
- Quantum confinement effects in low-dimensional systems *D Topwal* 1023–1032
- A model for the direct-to-indirect band-gap transition in monolayer MoSe₂ under strain
Ruma Das and Priya Mahadevan 1033–1040
- Mechanical behaviour of nanoparticles: Elasticity and plastic deformation mechanisms
Celine Gerard and Laurent Pizzagalli 1041–1048
- Narrowing the size distribution of CdTe nanocrystals using digestive ripening
Mona Mittal and Sameer Sapra 1049–1054
- Effect of transition metal dopants on the optical and magnetic properties of semiconductor nanocrystals
Ranjani Viswanatha 1055–1064
- Recent advances in the preparation of nanocrystal solids *Rekha Mahadevu,
Dev Kumar Thapa and Anshu Pandey* 1065–1071
- High-capacity electrode materials for electrochemical energy storage: Role of nanoscale effects
Jagjit Nanda, Surendra K Martha and Ramki Kalyanaraman 1073–1086
- Colloidal transparent conducting oxide nanocrystals: A new infrared plasmonic material
Bharat Tandon, Aswathi Ashok and Angshuman Nag 1087–1098
- Carbon nanostructure composite for electromagnetic interference shielding
Anupama Joshi and Suvarna Datar 1099–1116

Geophysics, Astronomy and Astrophysics

- Cylindrical and spherical dust-acoustic wave modulations in dusty plasmas with non-extensive distributions *M Eghbali and B Farokhi* 637–651
- Comparative studies of chemically synthesized and RF plasma-polymerized poly(*o*-toluidine) *Shama Islam, G B V S Lakshmi, M Zulfequar, M Husain and Azher M Siddiqui* 653–665