Review articles
A gauge-theoretic approach to gravity
K. Krasnov

Research articles
Estimation of electrical heating load-shares for sintering of powder mixtures
T. I. Zohdi

Effects of the constraint’s curvature on structural instability: tensile buckling and multiple bifurcations
D. Bigoni, D. Mosseroni, G. Noselli & D. Zaccaria

Quantitative measure of hysteresis for memristors through explicit dynamics
P. S. Georgiou, S. N. Yaliraki, É. M. Dralakis & M. Barahona

Analytical stability conditions for elastic composite materials with a non-positive-definite phase
D. M. Kochmann & W. J. Drugan

A new variant of the Zhang neural network for solving online time-varying linear inequalities
D. Guo & Y. Zhang

Toner print removal from paper by long and ultrashort pulsed lasers
D. R. Leal-Ayala, J. M. Allwood, M. Schmidt & I. Alexeev

Revisiting the rocking block: closed-form solutions and similarity laws
E. G. Dimitrakopulos & M. J. Delong

A viscoplastic theory of shape memory polymer fibres with application to self-healing materials
G. Li & A. Shojaei

On the number of limit cycles of a class of polynomial differential systems
J. Liub & C. Valls

Algebraic structure of stochastic expansions and efficient simulation
K. Ebrahimi-Fard, A. Lundervold, S. J. A. Malham, H. Munthe-Kaas & A. Wiese

On the anomalous laminar heat transfer intensification in developing region of nanofluid flow in channels or tubes
J. T. C. Liu

Quantitative measurement of plastic strain field at a fatigue crack tip
Y. Yang, M. Crimp, E. A. Tomlinson & E. A. Patterson

Trends, noise and re-entrant long-term persistence in Arctic sea ice
S. Agarwal, W. Moon & J. S. Wettlaufer