

List of Publications

2008

SRIVASTAVA V, PARKER DJ & EDWARDS SF
The nervous system might 'orthogonalize' to discriminate
Journal of Theoretical Biology, **253**, 514-517 (2008)

EDWARDS SF

The distribution of forces in a granular system under external stress is a spinglass problem
J. Phys. A, **41** 324019 (2008)

2007

CRAIG A, TERENTJEV EM & EDWARDS SF
Polymer localization in random potential
Journal of Physics A, **384**, 150-164 (2007)

BLUMENFELD R & EDWARDS SF

Granular entropy: Explicit calculations for planar assemblies - Reply
Physical Review Letters, **99**, 089402 (2007)

EDWARDS SF & BLUMENFELD R

Thermodynamics of granular materials
in "*Physics of Granular Materials*", ed. A. Mehta (Cambridge University Press, Cambridge) (2007)

2006

BLUMENFELD R. & EDWARDS SF

Geometric partition functions of cellular systems: Explicit calculation of the entropy in two and three dimensions
European Physical Journal, **19**, 23-30 (2006)

2005

KATZAV E, EDWARDS SF & SCHWARTZ M
Structure below the growing surface
Europhysics Letters, **361**, 751 (2005)

BLUMENFELD R, EDWARDS SF & BALL RC

Granular matter and the marginal rigidity state
Journal of Physics: Condensed Matter, **24**, 17 (2005)

EDWARDS SF

The full canonical ensemble of a granular system
Physica A, **353**, 114-118 (2005)

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The full canonical ensemble of a granular system
Powders and Grains, **1**, 3-5 (2005)

2004

EDWARDS SF

New kinds of entropy

Journal of Statistical Physics, **116**, 29-42 (2004)

EDWARDS SF

Renormalization methods: A guide for beginners

Journal of Fluid Mechanics, **516**, 378 (2004)

KOGA T & EDWARDS SF

Jamming concepts in cold polymeric glasses

Journal of Chemical Physics, **120**, 8283-8291 (2004)

SCHWARTZ M & EDWARDS SF

Persisting roughness when deposition stops

Physical Review E, **70**, 61602 (2004)

SRIVASTAVA V & EDWARDS SF

A mathematical model of capacious and efficient memory that survives trauma

Physica A, **333**, 465-477 (2004)

2003

EDWARDS SF, BRUJIC J & GRINEV D

Jamming systems in slow flow need a new statistical mechanics

Philosophical transactions of the Royal Society of London Series A-Mathematical Physical and Engineering Sciences, **361**, 741-750 (2003)

EDWARDS SF, BRUJIC J, TUZUN U, SHERRINGTON D & McLEISH TCB

Jamming systems in slow flow need a new statistical mechanics - Discussion

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BLUMENFELD R & EDWARDS SF

Granular entropy: Explicit calculations for planar assemblies

Physical Review Letters, **90**, 114303 (2003)

EDWARDS SF & GRINEV D

Statistical mechanics of granular materials: stress propagation and distribution of contact forces

Granular Matter, **4**, 147-153 (2003)

EDWARDS SF & SCHWARTZ M

Statistical mechanics in collective coordinates

Journal of Statistical Physics, **110**, 497-502 (2003)

EDWARDS SF, GRINEV DV & BRUJIC J

Fundamental problems in statistical physics of jammed packings

Physica A., **330**, 61-76 (2003)

BRUJIC J, EDWARDS SF, HOPKINSON I, MAKSE HA

Measuring the distribution of interdroplet forces in a compressed emulsion system

Physica A., **327**, 201-212 (2003)

EDWARDS SF, BRUJIC J, GRINEV DV, HOPKINSON I, BRUJIC J, MAKSE HA
3D bulk measurements of the force distribution in a compressed emulsion system
Faraday Discuss., **123**, 207-220 (2003)

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Granular materials: towards the statistical mechanics of jammed configurations
Advances in Physics, **51**, 1669-1684 (2002)

EDWARDS SF & SCHWARTZ M
Stretched exponential in non-linear stochastic field theories
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EDWARDS SF & SCHWARTZ M
Lagrangian statistical mechanics applied to non-linear stochastic field equations
Physica A, **303**, 357-386 (2002)

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Statistical Physics of the Jamming Transition: The Search for Simple Models
Jamming and Rheology, Eds. A. Liu and S. R. Nagel, 80, Taylor & Francis, New York (2001)

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Statistical Mechanics of Stress Transmission in Static Arrays of Rigid Grains
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The missing stress-geometry equation in granular media
Physica A, **294**, 57-66 (2001)

EDWARDS SF & GRINEV D
The tensorial formulation of volume function for packings of particles
Chemical Engineering Science, **56**, 5451-5455 (2001)

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Transmission of Stress in Granular Materials as a Problem of Statistical Mechanics
Physica A, **302**, 162-186 (2001)

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Can one learn about Glasses from advances from Granular Materials?
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The Nature of the long-time decay at a second-order transition point
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Proceedings of the XIII International Congress of Rheology, 2-407, Cambridge (2000)

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Dynamic mechanical response of polymer networks
Journal of Chemical Physics, **113**, (13), 5531-5538 (2000)

EDWARDS SF & GRINEV D

Equations of Granular Material: Transmission of Stress
Soft Condensed Matter: Configurations, Dynamics and Functionality, 135-144 (2000)

EDWARDS SF & GRINEV D

Equations of Granular Material: Compactivity and Compaction
Soft Condensed Matter: Configurations, Dynamics and Functionality, 145-156 (2000)

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Equations of Granular Materials: Deposition Theory
Soft Condensed Matter: Configurations, Dynamics and Functionality, 127-134 (2000)

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Journal of Polym. Sci. Pol. Phys., **37**, (7), 619-621 (1999)

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Effective elastic properties of composites of ellipsoids II. Nearly dish-shaped and needle-like inclusions
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Statistical Mechanics of Vibration-Induced Compaction of Powders
Physical Review E, **58**, (4), 4758-4762 (1998)

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EDWARDS SF (Co-author)

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A theoretical model for the stress distribution in granular matter. I. Basic Equations
Phys. A., **226**, 1-11 (1996)

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