

# Publication List

## 2005

1. **Astakhov, SA**; Lee, EA; Farrelly, D  
Formation of Kuiper-belt binaries through multiple chaotic scattering encounters with low-mass intruders  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 360 (2): 401-415 JUN 21 2005
2. Bauer, WR; **Nadler, W**  
Stationary flow, first passage times, and macroscopic Fick's first diffusion law: Application to flow enhancement by particle trapping  
JOURNAL OF CHEMICAL PHYSICS 122 (24): Art. No. 244904 JUN 22 2005
3. Davidsen, J; **Grassberger, P**; Paczuski, M  
Earthquake recurrence as a record breaking process  
e-print physics/0507082 (2005)
4. **Grassberger, P**  
Temporal scaling at Feigenbaum points and non-extensive thermodynamics  
PHYSICS REVIEW LETTER 95, 140601 (2005); e-print cond-mat/0508110 (2005)
5. **Grassberger, P**  
"Tricritical directed percolation in 2+1 dimensions"  
e-print cond-mat/0510428 (2005)
6. **Grassberger, P**  
Simulations of grafted polymers in a good solvent  
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, 38 (2): 323-331 JAN 14 2005
7. **Hsu, HP**; **Nadler, W**; **Grassberger, P**  
Statistics of lattice animals  
COMPUTER PHYSICS COMMUNICATIONS, 169 (1-3): 114-116 JUL 1 2005
8. **Hsu, HP**; **Nadler, W**; **Grassberger, P**  
Violating conformal invariance: Two-dimensional clusters grafted to wedges, cones, and branch points of Riemann surfaces  
PHYSICAL REVIEW E, 71 (6): Art. No. 065104 Part 2 JUN 2005
9. **Hsu, HP**; **Grassberger, P**  
Collapsing lattice animals and lattice trees in two dimensions  
JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT, : Art. No. P06003 JUN 2005

10. **Hsu, HP; Grassberger, P**  
The coil-globule transition of confined polymers  
JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT,  
: Art. No. P01007 JAN 2005
11. **Hsu, HP; Nadler, W; Grassberger, P**  
Simulations of lattice animals and trees  
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, 38 (4):  
775-806 JAN 28 2005
12. **Kraskov, A; Stogbauer, H; Andrzejak, RG; Grassberger, P**  
Hierarchical clustering using mutual information  
EUROPHYSICS LETTERS, 70 (2): 278-284 APR 2005
13. Mormann, F; **Kreuz, T**; Rieke, C; et al.  
On the predictability of epileptic seizures  
CLINICAL NEUROPHYSIOLOGY 116 (3): 569-587 MAR 2005
14. Smirnov, DA; **Andrzejak, RG**  
Detection of weak directional coupling: Phase-dynamics approach versus  
state-space approach  
PHYSICAL REVIEW E 71 (3): Art. No. 036207 Part 2 MAR 2005

## 2004

15. **Astakhov, SA**; Farrelly D  
Capture and escape in the elliptic restricted three-body problem  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 354  
(4): 971-979 NOV 11 2004
16. **Astakhov, SA; Stogbauer, H; Kraskov, A; Grassberger, P**;  
Spectral Mixture Decomposition by Least Dependent Component Analysis  
e-print physics/0412029 (2004)
17. Berg, BA; **Hsu, HP**  
Metropolis simulations of Met-Enkephalin with solvent-accessible area parametriza-  
tions  
PHYSICAL REVIEW E 69 (2): Art. No. 026703 Part 2 FEB 2004
18. **Grassberger, P**  
Sequential Monte Carlo Methods for Protein Folding  
in "NIC Symposium 2004", Hrsg. D. Wolf at el. (NIC, Juelich, 2004);  
e-print cond-mat/0408571
19. **Hsu, HP**; Berg, BA, **Grassberger, P**  
Monte Carlo Protein Folding: Simulations of Met-Enkephalin with Solvent-  
Accessible Area Parameterizations

in "NIC Symposium 2004", Hrsg. D. Wolf et al. (NIC, Juelich, 2004);  
e-print cond-mat/0408572

20. **Hsu, HP; Grassberger, P**  
Effective interactions between star polymers  
EUROPHYSICS LETTERS, 66 (6): 874-880 JUN 2004
21. **Hsu, HP; Nadler, W; Grassberger, P**  
Scaling of star polymers with 1-80 arms  
MACROMOLECULES, 37 (12): 4658-4663 JUN 15 2004
22. **Hsu, HP; Grassberger, P**  
Polymers confined between two parallel plane walls  
JOURNAL OF CHEMICAL PHYSICS, 120 (4): 2034-2041 JAN 22 2004
23. **Kraskov, A; Kreuz, T; Andrzejak, RG; Stogbauer, H; Nadler, W;  
Grassberger, P**  
Extracting Phases from Aperiodic Signals  
e-print cond-mat/0409382 (2004)
24. **Kraskov, A; Stogbauer, H; Grassberger, P**  
Estimating mutual information  
PHYSICAL REVIEW E, 69 (6): Art. No. 066138 Part 2 JUN 2004
25. **Kraskov, A; Nadler, W; Stogbauer, H; et al.**  
Comment on "Linguistic analysis of the human heartbeat using frequency  
and rank order statistics"  
PHYSICAL REVIEW LETTERS, 92 (10): Art. No. 109801 MAR 12 2004
26. **Kreuz, T; Mormann, F; Kraskov, A; et al.**  
Measuring synchronization and directionality in EEG time series from epilepsy  
patients: An application to seizure prediction  
EPILEPSIA, 45: 243-244 Suppl. 7 2004
27. **Kreuz, T; Andrzejak, RG; Mormann, F; et al.**  
Measure profile surrogates: A method to validate the performance of epilep-  
tic seizure prediction algorithms  
PHYSICAL REVIEW E, 69 (6): Art. No. 061915 Part 1 JUN 2004
28. Mormann, F; **Kraskov, A; Kreuz, T; et al.**  
Seizure prediction: Influence of EEG band-pass filtering on the predictive  
performance of synchronization measures  
EPILEPSIA 45: 62-63 Suppl. 7 2004
29. **Stoegbauer, H; Grassberger, P**  
Stationary and recurrent source distributions in the hippocampus during  
sleep  
EPILEPSIA, 45: 105-105 Suppl. 7 2004

30. **Stogbauer, H; Kraskov, A; Astakhov, SA;** et al.  
Least-dependent-component analysis based on mutual information  
PHYSICAL REVIEW E, 70 (6): Art. No. 066123 Part 2 DEC 2004
31. **Stogbauer, H; Andrzejak, RG; Kraskov, A;** et al.  
Reliability of ICA estimates with mutual information  
LECTURE NOTES IN COMPUTER SCIENCE, 3195: 209-216 2004
32. **Stogbauer, H; Kraskov, A; Andrzejak, RG;** et al  
Hierarchical Clustering Based on Mutual Information  
e-print q-bio.QM/0311039 (2004)
33. Rieke, C; **Andrzejak, RG;** Mormann, F;, et al.  
Improved statistical test for nonstationarity using recurrence time statistics  
PHYSICAL REVIEW E 69 (4): Art. No. 046111 Part 2 APR 2004

## 2003

34. **Andrzejak, RG; Kraskov, A; Stogbauer, H;** et al.  
Bivariate surrogate techniques: Necessity, strengths, and caveats  
PHYSICAL REVIEW E 68 (6): Art. No. 066202 Part 2 DEC 2003
35. **Andrzejak, RG;** Mormann, F; **Kreuz, T;** et al.  
Testing the null hypothesis of the nonexistence of a preseizure state  
PHYSICAL REVIEW E 67 (1): Art. No. 010901 Part 1 JAN 2003
36. **Grassberger, P**  
Critical percolation in high dimensions  
PHYSICAL REVIEW E, 67 (3): Art. No. 036101 Part 2 MAR 2003
37. **Grassberger, P**  
Entropy Estimates from Insufficient Samplings  
e-print physics/0307138 (2003)
38. **Hsu, HP; Grassberger, P**  
2-Dimensional polymers confined in a strip  
EUROPEAN PHYSICAL JOURNAL B, 36 (2): 209-214 NOV 2003
39. **Hsu, HP; Mehra, V; Grassberger, P**  
Structure optimization in an off-lattice protein model  
PHYSICAL REVIEW E, 68 (3): Art. No. 037703 Part 2 SEP 2003
40. **Hsu, HP; Mehra, V; Nadler, W;** et al.  
Growth-based optimization algorithm for lattice heteropolymers  
PHYSICAL REVIEW E, 68 (2): Art. No. 021113 Part 1 AUG 2003
41. **Hsu, HP; Mehra, V; Nadler, W;** et al.  
Growth algorithms for lattice heteropolymers at low temperatures  
JOURNAL OF CHEMICAL PHYSICS, 118 (1): 444-451 JAN 1 2003

42. Mormann, F; **Kreuz, T; Andrzejak, RG**; et al.  
Epileptic seizures are preceded by a decrease in synchronization  
EPILEPSY RESEARCH 53 (3): 173-185 MAR 2003
43. Mormann, F; **Andrzejak, RG; Kreuz, T**; et al.  
Automated detection of a pre-seizure state based on a decrease in synchronization in intracranial electroencephalogram recordings from epilepsy patients  
PHYSICAL REVIEW E 67 (2): Art. No. 021912 Part 1 FEB 2003
44. Quiroga, RQ; **Kraskov, A; Kreuz, T; et al.**  
Reply to "Comment on 'Performance of different synchronization measures in real data: A case study on electroencephalographic signals'"  
PHYSICAL REVIEW E, 67 (6): Art. No. 063902 Part 1 JUN 2003
45. **Yang, L** Comment on "Finite heat conduction in a 2D disorder lattice" -  
Reply  
PHYSICAL REVIEW LETTERS 90 (11): Art. No. 119402 MAR 21 2003
46. **Yang, L; Grassberger, P**;  
Are there really phase transitions in 1-d heat conduction models?  
e-print cond-mat/0306173 (2003);

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47. Bauer, WR; **Nadler, W**  
Spin dephasing in the extended strong collision approximation  
PHYSICAL REVIEW E 65 (6): Art. No. 066123 Part 2 JUN 2002
48. Causo, MS; Coluzzi, B; **Grassberger, P**  
A simple model for DNA denaturation transition  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, 314 (1-4): 607-612 NOV 1 2002
49. **Grassberger, P; Nadler, W; Yang, L**  
Heat conduction and entropy production in a one-dimensional hard-particle gas  
PHYSICAL REVIEW LETTERS, 89 (18): Art. No. 180601 OCT 28 2002
50. **Grassberger, P**  
Go with the winners: a general Monte Carlo strategy  
COMPUTER PHYSICS COMMUNICATIONS, 147 (1-2): 64-70 AUG 1 2002
51. **Grassberger, P**  
Data Compression and Entropy Estimates by Non-sequential Recursive Pair Substitution  
e-print physics/0207023 (2002)

52. **Grassberger, P; Hsu, HP**  
Stretched polymers in a poor solvent  
PHYSICAL REVIEW E, 65 (3): Art. No. 031807 Part 1 MAR 2002
53. **Grassberger, P**  
Critical behaviour of the Drossel-Schwabl forest fire model  
NEW JOURNAL OF PHYSICS, 4: Art. No. 17 MAR 21 2002
54. **Hsu, HP; Lin, SC; Hansmann, UHE**  
Energy landscape paving for X-ray structure determination of organic molecules  
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55. **Hsu, HP; Grassberger, P**  
Collapsed two-dimensional polymers on a cylinder  
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, 35 (50): L759-L766 DEC 20 2002
56. Huang, MC; **Hsu, HP**  
Percolation thresholds, critical exponents, and scaling functions on spherical random lattices and their duals  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C 13 (3): 383-395 MAR 2002
57. **Mehra, V; Grassberger, P**  
Transition to localization of biased walkers in a randomly absorbing environment  
PHYSICA D-NONLINEAR PHENOMENA, 168: 244-257 AUG 1 2002
58. **Mehra, V; Grassberger, P**  
Trapping reaction with mobile traps  
PHYSICAL REVIEW E, 65 (5): Art. No. 050101 Part 1 MAY 2002
59. **Quiroga, RQ; Kreuz, T; Grassberger, P**  
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PHYSICAL REVIEW E, 66 (4): Art. No. 041904 Part 1 OCT 2002
60. **Quiroga, RQ; Arnhold, J; Lehnertz, K; et al.**  
Reply to "Comment on 'Kullback-Leibler and renormalized entropies: Applications to electroencephalograms of epilepsy patients' "  
PHYSICAL REVIEW E, 66 (4): Art. No. 043903 Part 1 OCT 2002
61. **Quiroga, RQ; Kraskov, A; Kreuz, T; et al.**  
Performance of different synchronization measures in real data: A case study on electroencephalographic signals  
PHYSICAL REVIEW E, 65 (4): Art. No. 041903 Part 1 APR 2002

62. **Quiroga, RQ**; van Luijtelaar ELJM  
Habituation and sensitization in rat auditory evoked potentials: a single-trial analysis with wavelet denoising  
INTERNATIONAL JOURNAL OF PSYCHOPHYSIOLOGY 43 (2): 141-153 FEB 2002
63. **Yang, L**; Wang, YH; Yang, KQ; et al.  
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INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS 12 (8): 1885-1893 AUG 2002
64. **Yang, L**  
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65. **Bastolla, U**  
Overlap distribution in random and designed heteropolymers  
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66. **Bastolla, U**; **Grassberger, P**  
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PHYSICAL REVIEW E, 63 (3): Art. No. 031901 Part 1 MAR 2001
67. **Grassberger, P**  
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JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, 34 (47): 9959-9963 NOV 30 2001
68. **Grassberger, P**; **Nadler, W**;  
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69. Majumdar, SN; Dean, DS; **Grassberger, P**  
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PHYSICAL REVIEW LETTERS, 86 (11): 2301-2304 MAR 12 2001
70. **Quiroga, RQ**; Sakowitz, OW; Basar, E; et al.  
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71. **Quiroga, RQ**; Rosso, OA; Basar, E; et al.  
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BIOLOGICAL CYBERNETICS 84 (4): 291-299 APR 2001
72. Sakowitz, OW; **Quiroga, RQ**; Schurmann M, et al.  
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73. **Schäfer, W**; **Lövenich, R**; Fromer, NA; Chemla, DS  
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PHYSICAL REVIEW LETTERS 86 (2): 344-347 JAN 8 2001

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75. **Bastolla, U**; **Frauenkron, H**; **Grassberger, P**  
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78. **Causo, MS**; Coluzzi, B; **Grassberger, P** Simple model for the DNA denaturation transition PHYSICAL REVIEW E, 62 (3): 3958-3973 Part B SEP 2000
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82. **Grassberger, P**  
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JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, 33 (48):  
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84. **Quiroga, RQ; Arnhold, J**; Lehnertz, K; et al.  
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grams of epilepsy patients  
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85. **Quiroga, RQ; Arnhold, J; Grassberger, P**  
Learning driver-response relationships from synchronization patterns  
PHYSICAL REVIEW E, 61 (5): 5142-5148 Part A MAY 2000
86. **Quiroga, RQ**  
Obtaining single stimulus evoked potentials with wavelet denoising  
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88. **Schäfer, W; Lövenich, R**; Fromer, N; Chemla, DS  
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