

ANDRÁS CZIRÓK: LIST OF PUBLICATIONS

Total of 676 alien citations. Cumulative impact factor: 172

Book chapters

- A. Czirok, E.A. Zamir, M.B. Filla, C.D. Little and B.J. Rongish: Extracellular matrix macro-assembly dynamics in early vertebrate embryos. in *Current Topics in Developmental Biology*; Ed. J. Schatten; Elsevier (in press). [IF: 6.7, CITED: 2]
- A. Czirók: Bacterial colonies; in *Fluctuations and scaling in biology*; Ed: T. Vicsek; Oxford University Press (2001). [CITED: 3]
- A. Czirók and T. Vicsek: Flocking: collective motion of self-propelled particles; in *Fluctuations and scaling in biology*; Ed: T. Vicsek; Oxford University Press (2001). [CITED: 3]

Peer reviewed research papers*on embryonic development*

1. E.A. Zamir, A. Czirok, B.J. Rongish, C.D. Little: A digital image-based method for computational tissue fate mapping during early avian morphogenesis. *Ann Biomed Eng.* **33**:854-65 (2005). [IF: 1.7]
2. M.B. Filla, A. Czirok, E.A. Zamir, C.D. Little, T.J. Chevront and B.J. Rongish: Dynamic imaging of cell, extracellular matrix, and tissue movements during avian vertebral axis patterning. *Birth Defects Res C* **72**: 267-76 (2004). [IF: 1.0]
3. P. Rupp, A. Czirók and C. D. Little: Endothelial cell dynamics during embryogenesis. *Development* **131**: 2887-97 (2004). [IF: 8.6, CITED:7]
4. A. Czirók, B. J. Rongish and C. D. Little: Extracellular matrix dynamics during vertebrate axis formation. *Developmental Biology* **268**: 147-57 (2004). [IF: 5.6, CITED:6]
5. P. Rupp, A. Czirok and C.D. Little: Novel approaches for the study of vascular assembly and morphogenesis in avian embryos. *Trends Cardiovasc Med.* **13**: 283-8 (2003). [IF: 1.7, CITED:6]
6. A. C. LaRue, W. S. Argraves, A. Czirók, V. A. Mironov and C. J. Drake: Patterning of embryonic blood vessels. *Dev. Dyn.* **228**: 21-9 (2003). [IF: 3.4, CITED:5]
7. P. A. Rupp, B. J. Rongish, A. Czirók and C. D. Little: Culturing avian embryos for time-lapse imaging; *Biotechniques* **34** :274–8 (2003). [IF: 1.8, CITED:1]
8. A. Czirók, P. A. Rupp, B. J. Rongish and C. D. Little: Multi-field 3D scanning light microscopy of early embryogenesis; *J. Microscopy* **206**, 9–17 (2002). [IF: 1.2, CITED:3]

on in vitro cell motility

9. P. Sivakumar, A. Czirok, B.J. Rongish, V.P. Divakara, Y.P. Wang and S.L. Dallas: New insights into extracellular matrix assembly and reorganization from dynamic imaging of extracellular matrix proteins in living osteoblasts. *J Cell Sci.* **119**:1350-60 (2006). [IF: 6.0]
10. A. Czirok, J. Zach, B.A. Kozel, R.P. Mecham, E.C. Davis and B.J. Rongish: Elastic fiber macro-assembly is a hierarchical, cell motion-mediated process. *J Cell Physiol.* **207**:97-106 (2006). [IF: 5.2, CITED:2]
11. B.A. Kozel, B.J. Rongish, A. Czirok, J. Zach, C.D. Little, E.C. Davis, R.H. Knutsen, J.E. Wagenseil, M.A. Levy, R.P. Mecham: Elastic fiber formation: A dynamic view of extracellular matrix assembly using timer reporters. *J Cell Physiol.* **207**:87-96 (2006). [IF: 5.2, CITED:2]
12. K. Tarnok, A. Czirok, K. Czondor and K. Schlett: Cerebellar granule cells show age-dependent migratory differences in vitro. *J Neurobiol.* **65**:135-45. (2005). [IF: 3.9]
13. E. Mehes, A. Czirok, B. Hegedus, B. Szabo, T. Vicsek, J. Satz, K. Campbell and V. Jancsik Dystroglycan is involved in laminin1 stimulated motility of Muller glial cells; a combined velocity and directionality analysis *Glia* **49**: 492-500 (2005). [IF: 4.8, CITED:1]
14. Zs. Kornyei, V. Szlavik, B. Szabo, E. Gocza, A. Czirok and E. Madarasz: Humoral and contact interactions in astroglia/stem cell co-cultures in the course of glia-induced neurogenesis. *Glia* **49**: 430-444 (2005). [IF: 4.8, CITED:2]

15. B. Szabo, Zs. Kornyei, J. Zach, D. Selmeczi, G. Csucs, A. Czirik and T. Vicsek: Auto-reverse nuclear migration in bipolar mammalian cells on micropatterned surfaces. *Cell Motil Cytoskeleton*. **59**: 38-49 (2004). [IF: 3.0, CITED:2]
16. B. Hegedus, J. Zach, A. Czirik, J. Lovey and T. Vicsek: Irradiation and Taxol Treatment Result in Non-Monotonous, Dose-Dependent changes in the Motility of Glioblastoma Cells; *Journal of Neuro-Oncology* **67**: 147-57 (2004). [IF: 1.9, CITED:3]
17. E. Méhes, A. Czirók, B. Hegedűs, T. Vicsek and V. Jancsik: Laminin-1 increases motility, path-searching, and process dynamism of rat and mouse Muller glial cells in vitro; *Cell Motility and the Cytoskeleton* **53**, 203–213 (2002). [IF: 3.0, CITED:3]
18. W. O. Twal, A. Czirók, B. Hegedűs, C. Knaak, M. R. Chintalapudi, H. Okagawa, Y. Sugi and W. S. Argraves: Fibulin-1 suppression of adhesion and motility; *J. Cell Sci.* **114**, 4587–98 (2001). [IF: 6.0, CITED:22]
19. Zs. Kornyei, A. Czirók, T. Vicsek and E. Madarász: Proliferative and migratory responses of astrocytes to *in vitro* injury; *J. Neurosc. Res.* **61**, 421 – 429 (2000). [IF: 2.4, CITED:12]
20. B. Hegedűs, A. Czirók, I. Fazekas, T. Bábel, E. Madarász and T. Vicsek: Locomotion and proliferation of glioblastoma cells *in vitro*: statistical evaluation of videomicroscopic observations; *J. Neurosurgery* **92**, 428–434 (2000). [IF: 3.0, CITED:14]
21. K. Schlett, A. Czirók, K. Tárnok, T. Vicsek and E. Madarász: Dynamics of cell aggregation during in vitro neurogenesis by immortalized neuroectodermal progenitors; *J. Neurosc. Res.* **60**, 184–194 (2000). [IF: 2.4, CITED:9]
22. A. Czirók, K. Schlett, E. Madarász and T. Vicsek: Exponential Distribution of Locomotion Activity in Cell Cultures; *Phys. Rev. Lett.* **81**, 3038 (1998). [IF: 6.6, CITED:14]

on theoretical analysis of collective migration

23. A. Czirók and T. Vicsek: Collective behavior of interacting self-propelled particles; *Physica A* **281** 17–29 (2000). [IF: 1.3, CITED:27]
24. T. Vicsek, A. Czirók, I. J. Farkas and D. Helbing: Application of statistical mechanics to collective motion in biology; *Physica A* **274** 182–189 (1999). [IF: 1.3, CITED:5]
25. A. Czirók, M. Vicsek and T. Vicsek: Collective motion of organisms in three dimensions; *Physica A* **264** 299–304 (1999). [IF: 1.3, CITED:10]
26. A. Czirók, A.-L. Barabási and T. Vicsek: Collective motion of self-propelled particles: kinetic phase transition in one dimension; *Phys. Rev. Lett.* **82**, 209 (1998). [IF: 6.6, CITED:18]
27. A. Czirók, H.E. Stanley and T. Vicsek: Spontaneously ordered motion of self-propelled particles; *J. Phys A* **30**, 1375 (1997). [IF: 1.8, CITED:28]
28. T. Vicsek, A. Czirók, E. Ben-Jacob, O. Shochet and I. Cohen: Novel type of phase transition in a system of self-driven particles; *Phys. Rev. Lett.* **75**, 1226 (1995). [IF: 6.6, CITED:110]

on modeling bacterial colony formation

29. I.M. Jánosi, A. Czirók, D. Silhavy and A. Holczinger: Is bioconvection enhancing bacterial growth in quiescent environments? *Environmental Microbiology*; **4**, 525-31 (2002). [IF: 3.4, CITED:3]
30. A. Czirók, M. Matsushita and T. Vicsek: Theory of periodic swarming of bacteria: application to *Proteus mirabilis*; *Phys. Rev. E* **63**, 031915 (2001). [IF: 2.1, CITED:6]
31. A. Czirók, I. M. Jánosi and J. O. Kessler: Oxytactic Bioconvection Patterns in Suspensions of *Bacillus subtilis* ; *J. Exp. Biol* **203**, 3345–3354 (2000). [IF: 1.9, CITED:4]
32. Z. Csehók and A. Czirók: Hydrodynamics of bacterial motion; *Physica A* **243**, 304 (1997). [IF: 1.3, CITED:1]
33. E. Ben-Jacob, I. Cohen, A. Czirók, T. Vicsek and D.L. Gutnick: Chemomodulation of cellular movement, collective formation of vortices by swarming bacteria, and colonial development; *Physica A* **238** 181 (1997). [IF: 1.3, CITED:20]
34. A. Czirók, E. Ben-Jacob, I. Cohen and T. Vicsek: Formation of complex bacterial colonies via self-generated vortices; *Phys. Rev. E* **54**, 1791 (1996). [IF: 1.3, CITED:21]
35. E. Ben-Jacob, O. Shochet, I. Cohen, A. Tenenbaum, A. Czirók and T. Vicsek: Response of bacterial colonies to imposed anisotropy; *Phys. Rev. E* **53**, 1835 (1996). [IF: 2.1, CITED:10]
36. I. Cohen, A. Czirók and E. Ben-Jacob: Chemotactic-based adaptive self organization during colonial development; *Physica A* **233** 678 (1996). [IF: 1.3, CITED:14]

37. E. Ben-Jacob, I. Cohen, O. Shochet, A. Tenenbaum, A. Cziráok and T. Vicsek: Cooperative strategies in formation of complex bacterial patterns; *Fractals* **3**, 849 (1995). [IF: 0.5, CITED:4]
38. E. Ben-Jacob, I. Cohen, O. Shochet, A. Cziráok and T. Vicsek: Cooperative formation of chiral patterns during growth of bacterial colonies; *Phys. Rev. Lett.* **75**, 2899 (1995). [IF: 6.6, CITED:27]
39. E. Ben-Jacob, O. Shochet, A. Tenenbaum, I. Cohen, A. Cziráok and T. Vicsek: Communication, regulation and control during complex patterning of bacterial colonies; *Fractals*, **2**, 15 (1994). [IF: 0.5, CITED:20]
40. E. Ben-Jacob, O. Shochet, A. Tenenbaum, I. Cohen, A. Cziráok and T. Vicsek: Generic modeling of cooperative growth patterns in bacterial colonies; *Nature* **368**, 46 (1994). [IF: 25.5, CITED:150]

on fractals and long-range correlations:

41. T. Bíró, A. Cziráok, T. Vicsek and Á. Major: Application of vector space techniques to DNA; *Fractals* **6**, 205 (1998). [IF: 0.5, CITED:1]
42. A. Cziráok, E. Somfai, T. Vicsek: Fractal scaling and power-law landslide distribution in a micromodel of geomorphological evolution; *Geologische Rundschau* **86**, 525 (1997). [IF: 0.4, CITED:1]
43. A. Cziráok, H. E. Stanley and T. Vicsek: Possible origin of power-law behavior in n -tuple Zipf analysis; *Phys. Rev. E* **53**, 6371 (1996). [IF: 2.1, CITED:3]
44. A. Cziráok, R. Mantegna, S. Havlin and H.E. Stanley: Correlations in binary sequences and a generalized Zipf analysis; *Phys. Rev. E* **52**, 446 (1995). [IF: 2.1, CITED:28]
45. I.M. Jánosí and A. Cziráok: Fractal clusters and self-organized criticality; *Fractals*, **2**, 153 (1994). [IF: 0.5, CITED:3]
46. A. Cziráok, E. Somfai and T. Vicsek: Self-affine roughening in a model experiment on erosion in geomorphology; *Physica* **A205**, 355 (1994). [IF: 1.3, CITED:4]
47. E. Somfai, A. Cziráok and T. Vicsek: Power law distribution of landslides in an experiment of the erosion of a granular pile; *J. Phys.* **A27**, L757 (1994). [IF: 1.8, CITED:13]
48. A. Cziráok, E. Somfai and T. Vicsek: Experimental evidence for self-affine roughening in a micro-model of geomorphological evolution; *Phys.Rev.Lett.* **71**, 2154 (1993). [IF: 6.6, CITED:22]
49. A. Cziráok, P. Szépfalusy and T. Vicsek: On the existence of well defined singularities of multifractals; *Fractals*, **1**, 200 (1993). [IF: 0.5, CITED:1]

Invited Oral Presentations

- Gordon Research Conference on Elastin and Elastic Fibers (Kimball, NH, 2005)
- Experimental Biology (San Diego, CA, 2005)
- Experimental Biology (San Diego, CA, 2003)
- Workshop on Bioimaging (The Stowers Institute for Biomedical Research, Kansas City, MO, 2003)
- Workshop on “Traveling waves : Theories and Applications” (Kobe, Japan, 2001)
- Workshop on “Polymer and Cell Dynamics” (Bad Honnef, Germany, 2000).
- STATPHYS Conference (Taipei, Taiwan, 1999).
- Workshop on Traffic and Granular Flow (Duisburg, Germany, 1997).

Seminars

- Institute of Enzimology (Budapest, Hungary, 2006).
- Dept of Physics, University of Missouri (Columbia, MO, USA, 2005).
- Analysis & Biomathematics Seminar, Vanderbilt University (Nashville, TN, USA, 2005).
- NIH Heart and Lung Institute (Bethesda, MD, USA, 2004).
- Institute of Experimental Medicine (Budapest, Hungary, 2003).
- Samuel Lunenfeld Research Institute, Mount Sinai Hospital (Toronto, Canada, 2002).
- Beckman Institute, California Institute of Technology (Pasadena, CA, USA, 2001).
- Dept of Pathology, Northwestern University, (Chicago, IL, USA, 2000).
- Niels Bohr Institute (Kopenhagen, Denmark, 2000).
- Dept of Physics, Academia Sinica, (Taipei, Taiwan, 1999).
- Dept of Biomedical Engineering, Boston University, (Boston, MA, USA, 1997).
- Dept of Physics, University of Notre Dame, (South Bend, IN, USA, 1997).
- Institute for Advanced Study, Collegium Budapest (Budapest, Hungary, 1997).