



## Publications and Preprints

1. R.O.W. Franz and B.A. Earnshaw. A constructive enumeration of meanders. *Ann. Combin.* **6** 7-17 (2002).
2. B.A. Earnshaw and P.C. Bressloff. Biophysical model of AMPA receptor trafficking and its regulation during long-term potentiation/long-term depression. *J. Neurosci.* **26** 12362-12373 (2006).
3. P.C. Bressloff and B.A. Earnshaw. Diffusion-trapping model of receptor trafficking in dendrites. *Phys. Rev. E* **75** 041915 (2007).
4. P.C. Bressloff, B.A. Earnshaw and M.J. Ward. Diffusion of protein receptors on a cylindrical dendritic membrane with partially absorbing traps. *SIAM J. Appl. Math.* **68** 1223-1246 (2008).
5. B.A. Earnshaw and P.C. Bressloff. Modeling the role of lateral membrane diffusion in AMPA receptor trafficking along a spiny dendrite. *J. Comput. Neurosci.* **25** 366-289 (2008).
6. P.C. Bressloff and B.A. Earnshaw. A dynamic corral model of receptor trafficking at a synapse. *Biophys. J.* **96** 1786-1802 (2009).
7. B.A. Earnshaw and J.P. Keener. Global asymptotic stability of solutions of nonautonomous master equations. *Submitted*.
8. B.A. Earnshaw and P.C. Bressloff. A diffusion-activation model of CaMKII translocation waves in dendrites. *Submitted*.
9. B.A. Earnshaw and J.P. Keener. Invariant manifolds of binomial-like nonautonomous master equations. *Submitted*.

## Invited Talks

- 6/09 *A diffusion-activation model of CaMKII translocation waves in dendrites*  
NJIT Conference on Frontiers in Applied and Computational Mathematics, Newark, NJ
- 5/09 *A diffusion-activation model of CaMKII translocation waves in dendrites*  
SIAM Conference on Applications of Dynamical Systems, Snowbird, UT
- 3/09 *Multiple spatial scales of AMPA receptor trafficking: from synapse to spiny dendrite*  
Department of Mathematics, BYU
- 1/09 *Global asymptotic stability of solutions of nonautonomous master equations*  
Mathematical Biology Seminar, Univ. Utah
- 9/08 *Global stability of solutions of linear Chapman-Kolmogorov equations*  
Department of Mathematics, BYU
- 8/08 *Diffusion-trapping model of AMPA receptor trafficking along a spiny dendrite*  
SIAM Conference on the Life Sciences, Montreal, Quebec, Canada
- 6/08 *Diffusion-trapping models of protein receptor trafficking along a spiny dendrite*  
Gordon Research Conference on Theoretical Biology and Biomathematics, Il Ciocco, Italy
- 10/07 *Modeling lateral membrane diffusion in AMPA receptor trafficking along a spiny dendrite*  
Department of Mathematics, BYU-Idaho
- 6/07 *AMPA receptor trafficking across multiple dendritic spines*  
Department of Biomathematics, UCLA
- 10/06 *Biophysical model of AMPA receptor trafficking and its regulation during LTP/LTD*  
Physiologie Cellulaire de la Synapse, Univ. Bordeaux 2
- 9/06 *Biophysical model of AMPA receptor trafficking and its regulation during LTP/LTD*  
Department of Mathematics, BYU

## Professional Service

- 5/09 Minisymposium organizer: *Molecular diffusion and transport in cells*  
SIAM Conference on Applications of Dynamical Systems, Snowbird, UT
- 3/09 Research Talk Sessions cochair  
MAA Intermountain Section Meeting, BYU, Provo, UT

## Professional Memberships

American Mathematical Society (AMS)  
Mathematical Association of America (MAA)  
Society for Industrial and Applied Mathematics (SIAM)  
Society for Mathematical Biology (SMB)

## Computer Skills

Programming: C, C++, C#/.NET, HTML, XML, MATLAB, Maple,  $\LaTeX$   
Platforms: Unix/Linux, Mac OS X, Windows

## Languages

Fluent in Portuguese, competent in Spanish, some competence in French.

## References

Upon request.