

## Publications by D. Beeman:

- Kudela P, Boatman-Reich D, Beeman D and Anderson WS (2018) Modeling Neural Adaptation in Auditory Cortex. *Front. Neural Circuits*, 05 September 2018. (<https://doi.org/10.3389/fncir.2018.00072>)
- Beeman D, Kudela P, Boatman-Reich D, Anderson WS (2017) Understanding Adaptation in Human Auditory Cortex with Modeling. *BMC Neuroscience* 2017, 18(Suppl 1):P5. (<https://bmcnurosci.biomedcentral.com/articles/017-0371-2>)
- Beeman D (2013,2015) Hodgkin-Huxley Model. In: Jaeger D., Jung R. (Ed.) *Encyclopedia of Computational Neuroscience*, Springer, New York. print ISBN (2015): 978-1-4614-6674-1, online ISBN (2013): 978-1-4614-7320-6, DOI: 10.1007/978-1-4614-7320-6\_127-3.
- Bower, J. M., Cornelis, H., Beeman, D. (2013) GENESIS, the GEneral NEural SImulation System In: Jaeger D., Jung R. (Ed.) *Encyclopedia of Computational Neuroscience*: SpringerReference ([www.springerreference.com](http://www.springerreference.com)). Springer-Verlag Berlin Heidelberg.
- Beeman D (2013) A modeling study of cortical waves in primary auditory cortex. *BMC Neuroscience*, 14(Suppl 1):P23 doi:[10.1186/1471-2202-14-S1-P23](https://doi.org/10.1186/1471-2202-14-S1-P23).
- Beeman, D. (2013) “A history of neural simulation software” In: J. Bower (Ed),*20 Years of Computational Neuroscience*. Chapter 3, pp. 33-77. Springer Series in Computational Neuroscience 9. Springer, New York.
- Rodriguez, A.L., Cornelis, H., Beeman, D., and Bower, J.M. (2012) Multiscale modeling with GENESIS 3, using the G-shell and Python. *BMC Neuroscience* 2012, 13(Suppl 1):P176 doi:[10.1186/1471-2202-13-S1-P176](https://doi.org/10.1186/1471-2202-13-S1-P176).
- Cornelis H, Coop AC, Rodriguez AL, Beeman D and Bower JM (2011) Backwards-compatibility in GENESIS 3.0 and beyond: bridging between procedural and declarative modeling. *BMC Neurosci*. 12(Suppl 1): 17.
- Bower, J. M. and Beeman, D. (2007) Constructing Realistic Neural Simulations with GENESIS. In: Methods in Molecular Biology, vol. 401: Neuroinformatics, (C. Crasto, ed.) Humana Press, Totowa, NJ, Chapter 7, pp. 103-125.
- Bower, J. M. and Beeman, D. (2007) GENESIS (simulation environment) Scholarpedia, 2:1383.
- Brette R, Rudolph M, Carnevale T, Hines M, Beeman D, Bower JM, Diesmann M, Morrison A, Goodman PH, Harris Jr FC, Zirpe M, Natschlager T, Pecevski D, Ermentrout B, Djurfeldt M, Lansner A, Rochel O, Vieville T, Muller E, Davison AP, El Boustani S, and Destexhe A (2007). Simulation of networks of spiking neurons: a review of tools and strategies. *J. Comput. Neurosci.* **23**: 349-398.
- Beeman D and Bower JM (2004) “Simulator-independent representation of ionic conductance models with ChannelDB”, *Neurocomputing* **58-60**:1085–1090
- Bower JM, Beeman D, and Hucka M. (2003) “The GENESIS Simulation System” in *The Handbook of Brain Theory and Neural Networks*, Second edition (M.A. Arbib, Ed.), Cambridge, MA, MIT Press, pp. 475–478 (2003)
- Hucka, M., Shankar, K., Beeman, D. and Bower, J. M. (2002) “The Modeler’s Workspace: Making model-based studies of the nervous system more accessible”. Chapter 5 in *Computational Neuroanatomy: Principles and Methods*, G. Ascoli, (Ed.), Humana Press Inc..
- N. H. Goddard, D. Beeman, R. Cannon, H. Cornelis, M.-O. Gewaltig, G. Hood, F. Howell, P. Rogister, E. De Schutter, K. Shankar, and M. Hucka (2002) “NeuroML for plug and play neuronal modeling”, *Neurocomputing* **44-45**, 1077–1081.
- Goddard N, Hucka M, Howell F, Cornelis H, Shankard K and Beeman D (2001) “Towards NeuroML: Model Description Methods for Collaborative Modelling in Neuroscience”, *Philosophical Transactions of the Royal Society B*. **356**, 1209-1228.
- J. Forss, D. Beeman, J. M. Bower and R. Eichler-West, “The Modeler’s Workspace: a distributed digital library for neuroscience”, *Future Generation Computer Systems* **16**, 111-121 (1999).

- J. M. Bower and D. Beeman, *The Book of GENESIS: Exploring Realistic Neural Models with the GEneral NEural SImulation System*, second edition, Springer-Verlag (1998).
- D. Beeman, J. M. Bower, E. De Schutter, E. N. Efthimiadis, N. Goddard, and J. Leigh, “The GENESIS Simulator-based Neuronal Database”, Chapter 4 in *Neuroinformatics: An Overview of the Human Brain Project*, S. H. Koslow and M. F. Huerta (eds.), pp. 57–80, Lawrence Erlbaum Associates, Mahwah, NJ (1997)
- H. Wachtel, D. Beeman and P. Gailey, Human heart rate variation in response to intermittent exposures to 60 Hz magnetic fields may be due to an inherent hypersensitivity of pacemaker cells, Proceedings of the Annual Conference of the Bioelectromagnetics Society 1996, Victoria, BC. (1996).
- J. M. Bower and D. Beeman, *The Book of GENESIS: Exploring Realistic Neural Models with the GEneral NEural SImulation System*, Springer-Verlag (1994).
- D. Beeman “Simulation-based Tutorials for Education in Computational Neuroscience”, in *Computation in Neurons and Neural Systems*, F. H. Eeckman (ed.), Kluwer Academic Press, pp. 65–70. (1994).
- D. Beeman and J. M. Bower, “GENESIS: Use of a Computer Simulation Environment for Undergraduate and Graduate Instruction in Neurobiology,” *Soc. Neurosci. Abstr.* **17**, 522 (1991).
- D. Beeman, “Computational Physics at Harvey Mudd College,” *Proceedings of the Conference on Computing in Advanced Undergraduate Physics*, Lawrence University (1990)
- N. Maley, D. Beeman and J. S. Lannin, “Dynamics of Tetrahedral Networks: Amorphous Si and Ge,” *Phys. Rev.* **B38**, 10611 (1988).
- D. Beeman, R. Tsu and M. F. Thorpe, “Structural Information from the Raman spectrum of amorphous silicon,” *Phys. Rev.* **B32**, 874 (1985).
- E. P. O'Reilly, J. Robertson and D. Beeman, “Electronic structure of amorphous carbon,” *J. Non-Cryst. Solids* **77-78**, 83 (1985).
- D. Beeman, “Raman spectra of an amorphous B<sub>2</sub>O<sub>3</sub> model,” *Bull. Am. Phys. Soc.* **30**, 327 (1985).
- D. Beeman, J. Silverman, R. Lynds and M.R. Anderson, “Modeling studies of amorphous carbon,” *Phys. Rev.* **B30**, 870 (1984).
- D. Beeman, R. Lynds and M. R. Anderson, “Structural and Vibrational Properties of a Model of Vitreous As<sub>2</sub>O<sub>3</sub>,” *J. Non-Cryst. Solids* **42**, 61 (1980).
- D. Beeman, “Vibrational spectra of models of amorphous arsenic and phosphorous,” *Bull. Am. Phys. Soc.* **24**, 309 (1979).
- D. Beeman and R. Alben, “Vibrational properties of elemental amorphous semiconductors,” *Advances Phys.* **26**, 339 (1977).
- D. Beeman and R. Alben, “Vibrational properties of models of amorphous arsenic,” **Amorphous and Liquid Semiconductors**, W. E. Spear, ed. (University of Edinburgh, 1977), p. 189.
- R. Alben, S. Kirkpatrick and D. Beeman, “Spin waves in random ferromagnets,” *Phys. Rev.* **B15**, 346 (1977).
- D. Beeman and J. Boswell, “Computer graphics and electromagnetic fields,” *Am. J. Phys.* **45**, 213 (1977).
- M. F. Thorpe and D. Beeman, “Solution of a random Ising model,” *Bull. Am. Phys. Soc.* **21**, 231 (1976).
- D. Beeman and R. Alben, “Density of States and IR Spectra of Models for Amorphous Si and Ge,” *Bull. Am. Phys. Soc.* **21**, 226 (1976).
- M. F. Thorpe and D. Beeman, “Thermodynamics of an Ising model with random exchange interactions,” *Phys. Rev.* **B14**, 188 (1976).
- R. Alben and D. Beeman, “Spin waves in randomly diluted ferromagnets and antiferromagnets,” *A.I.P. Conf. Proc.* **34**, 352 (1976).

- D. Beeman, D. Shasha and R. Alben, "Vibrational properties of amorphous selenium and germanium," *A.I.P. Conf. Proc.* **31**, 245 (1976).
- D. Beeman, "Some multistep methods for use in molecular dynamics calculations," *J. Comp. Phys.* **20**, 130 (1976).
- D. Beeman and B. L. Bobbs, "Computer restructuring of continuous random tetrahedral networks," *Phys. Rev.* **B 12**, 1399 (1975).
- D. Beeman and J. Boswell, "A study of Eulerian angles using computer graphics," *Am. J. Phys.* **43**, 548 (1975).
- D. Beeman and R. P. Wolf, "Computer graphics for upper-division physics courses," *Proceedings of the 6th Conference on Computers in the Undergraduate Curricula, Fort Worth* (1975).
- D. Beeman and P. Schofield, "Transport Coefficients and Correlation Functions in Binary Liquid Mixtures," *AERE Report PR/TP 17*, (1969).
- D. Beeman, "Current-Current Correlations in Classical Liquids," *AERE Report PR/TP 18*, (1969).
- D. Beeman and P. Pincus, "Nuclear Spin-Lattice Relaxation in Magnetic Insulators," *Phys. Rev.* **166**, 359-375, (1968).
- D. Beeman, "Dipolar Induced Nuclear Spin-Lattice Relaxation in Ferromagnetic Insulators," *J. Appl. Phys.* **38**, 1276, (1967).
- N. Kaplan, R. Louden, V. Jaccarino, H. J. Guggenheim, P. Pincus, and D. Beeman, "Nuclear Spin-Lattice Relaxation of F<sup>19</sup> in Antiferromagnetic MnF<sub>2</sub>," *Phys. Rev. Letters* **17**, 357, (1966).
- D. Beeman, H. J. Fink, and D. Shaltiel, "Magnetostatic Modes in the Canted Antiferromagnet MnCO<sub>3</sub>," *Phys. Rev.* **147**, 454-456, (1966).
- D. Beeman, "Magnetostatic Modes in Antiferromagnets and Canted Anti-ferromagnets," *J. Appl. Phys.* **37**, 1136-1137, (1966).
- D. Beeman, P. Pincus, and F. Hartmann-Boutron, "Longitudinal Nuclear Spin-Spin Coupling and Ferromagnets and Antiferromagnets," *Phys. Rev.* **139**, A1880-A1882, (1965).
- D. Beeman, "Magnetic Resonance Linewidth of Gallium Substituted EuIG," *Phys. Letters*, **13**, 194-5, (1964).