

RESEARCH PROFILE



First Name: Tomasz **Middle Initial:** G. **Last Name:** Smolinski
Title: Assistant Professor (Tenure-track)
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PROFESSIONAL EDUCATION:

- Ph.D. in Computer Science and Engineering, University of Louisville, Louisville, Kentucky, USA (2000-2004)
- M.S. in Computer Science, Polish-Japanese Institute of Information Technology, Warsaw, Poland (1998-2000)
- B.E. in Computer Engineering, Polish-Japanese Institute of Information Technology, Warsaw, Poland (1995-1998)

RESEARCH INTEREST AREA(S)

Computational intelligence, machine learning, data mining and knowledge discovery, computational biology and bioinformatics, science education and innovative teaching techniques

PROFESSIONAL AFFILIATIONS

- Institute of Electrical and Electronics Engineers (IEEE)
- International Rough Sets Society (IRSS)
- Society for Neuroscience (SfN)
- Tau Beta Pi, The Engineering Honor Society

HONORS & AWARDS RECEIVED (LAST FIVE YEARS)

- Postdoctoral Scholar, Faculty Institutes for Reforming Science Teaching, Fourth Edition (FIRST IV), a national dissemination project sponsored by the National Science Foundation (NSF).
- Postdoctoral Fellow, Howard Hughes Medical Institute (HHMI) Undergraduate Biological Sciences Program Curriculum Development / Teaching Fellowship.
- Conference travel awards: South-East Nerve Net (SENN) 2009, Computational Neuroscience (CNS) 2009, 2010.

SELECTED PUBLICATIONS (LAST THREE YEARS)

EDITED BOOKS

Smolinski T.G., Milanova M.G., Hassanien A.-E. (eds.), *Computational Intelligence in Biomedicine and Bioinformatics: Current Trends and Applications*, Springer, 2008.

Smolinski T.G., Milanova M.G., Hassanien A.-E. (eds.), *Applications of Computational Intelligence in Biology: Current Trends and Open Problems*, Springer, 2008.

BOOK CHAPTERS

- Prinz A.A., Smolinski T.G., and Hudson A.E., "Understanding Animal-to-Animal Variability in Neuronal and Network Properties," In: Ding M. and Glanzman D. (eds.), *Neuronal Variability and its Functional Significance*, Oxford University Press, forthcoming.
- Hassanien A.-E., Milanova M.G., Smolinski T.G., and Abraham A., "Computational Intelligence in Solving Bioinformatics Problems: Reviews, Perspectives, and Challenges," In: Smolinski T.G., Milanova M.G., and Hassanien A.-E. (eds.), *Computational Intelligence in Biomedicine and Bioinformatics: Current Trends and Applications*, Chapter I, Springer, 2008, pp. 3–48.
- Günay C., Smolinski T.G., Lytton W.W., et al., "Computational Intelligence in Electrophysiology: Trends and Open Problems," In: Smolinski T.G., Milanova M.G., and Hassanien A.-E. (eds.), *Applications of Computational Intelligence in Biology: Current Trends and Open Problems*, Chapter XIV, Springer, 2008, pp. 325–359.
- Smolinski T.G., Prinz A.A., and Zurada J.M., "Hybridization of Rough Sets and Multi-Objective Evolutionary Algorithms for Classificatory Signal Decomposition," In: Hassanien A.-E., Suraj Z., Slezak D., and Lingras P. (eds.), *Rough Computing: Theories, Technologies, and Applications*, Information Science Reference, Hershey, NY, 2007, pp. 204–227.

REFEREED PUBLICATIONS (journals, conference proceedings, and abstracts)

- Smolinski T.G., "Computer Literacy for Life Sciences: Helping the Digital-Era Biology Undergraduates Face Today's Research," *CBE—Life Sciences Education*, in press.
- Smolinski T.G. and Prinz A.A., "Rough Sets for Solving Classification Problems in Computational Neuroscience, Lecture Notes in Artificial Intelligence," *Proc. of the 7th International Conference on Rough Sets and Current Trends in Computing (RSCTC 2010)*, Warsaw, Poland, June 2010, *Lecture Notes in Artificial Intelligence* 6086, pp. 620–629.
- Smolinski T.G. and Prinz A.A., "Multi-Objective Evolutionary Algorithms for Model Neuron Parameter Value Selection Matching Biological Behavior Under Different Simulation Scenarios," *BMC Neuroscience* 10(Suppl 1):P260, 2009.
- Smolinski T.G. and Prinz A.A., "Computational Intelligence in Modeling of Biological Neurons: A Case Study of an Invertebrate Pacemaker Neuron," *Proc. of the International Joint Conference on Neural Networks (IJCNN 2009)*, Atlanta, Georgia, June 2009, pp. 2964–2970.
- Smolinski T.G., Soto-Treviño C., Rabbah P., Nadim F., and Prinz A.A., "Systematic Selection of Model Parameter Values Matching Biological Behavior Under Different Simulation Scenarios," *BMC Neuroscience* 9(Suppl 1):P53, 2008.
- Smolinski T.G., Soto-Treviño C., Rabbah P., Nadim F., and Prinz A.A., "Systematic Computational Exploration of the Parameter Space of the Multi-Compartment Model of the Lobster Pyloric Pacemaker Kernel Suggests that the Kernel Can Achieve Functional Activity Under Various Parameter Configurations," *BMC Neuroscience* 8(Suppl 2):P164, 2007.

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