

DOINA CARAGEA

Education

- B.S., 1996, Department of Computer Science, Faculty of Mathematics, University of Bucharest, Romania.
- M.S., 1997, Department of Computer Science, Faculty of Mathematics, University of Bucharest, Romania. Thesis advisor: Professor Luminita State.
- Ph.D., 2004. Artificial Intelligence Research Lab, Department of Computer Science, Iowa State University. Dissertation advisor: Professor Vasant Honavar.

Positions Held

- Assistant Professor (August 2006-) Computing and Information Sciences, Kansas State University.
- Associate Director (January 2007-) Bioinformatics Center, Kansas State University.
- Post-Doctoral Research Associate (August 2004-August 2006) Center for Computational Intelligence, Learning and Discovery, Computer Science Department, Iowa State University.
- IBM Intern (2002, 2003) IBM Rochester, MN.
- IBM Graduate Research Fellow (2002-2004) Artificial Intelligence Research Lab, Department of Computer Science, Iowa State University.
- Graduate Research Assistant (1998-2002) Artificial Intelligence Research Laboratory, Department of Computer Science, Iowa State University.
- Research Assistant (1996-1998) Institute of Micro-technology AI Group, Bucharest, Romania.

Five Publications Most Closely Related to the Project

1. **Caragea, D.**, Silvescu, A., Pathak, J., Bao, J., Andorf, C., Dobbs, D., and Honavar, V. (2005). Information Integration and Knowledge Acquisition from Semantically Heterogeneous Biological Data Sources. In: Proceedings of Data Integration in Life Sciences (DILS 2005). Lecture Notes in Computer Science. Berlin: Springer-Verlag. Vol. 3615, pp. 175-190.
2. **Caragea, D.**, Zhang, J., Bao, J., Pathak, J., and Honavar, V. (2005). Invited paper. Algorithms and Software for Collaborative Discovery from Autonomous, Semantically Heterogeneous, Distributed, Information Sources. In: Proceedings of the Conference on Algorithmic Learning Theory (ALT 2005). Lecture Notes in Computer Science. Berlin: Springer-Verlag. Vol. 3734. pp. 13-44.
3. Bao, J., **Caragea, D.**, and Honavar, V. (2006). Modular Ontologies - A Formal Investigation of Semantics and Expressivity. *Best Paper Award*. In: Proceedings of the First Asian Semantic Web Conference (ASWC 2006). September 2-7, 2006, Beijing, China. R. Mizoguchi, Z. Shi, and F. Giunchiglia (Eds.) LNCS 4185, pp. 616–631, Springer-Verlag.
4. Honavar, V. and **Caragea, D.** (2008). Invited Chapter. Towards Semantics-Enabled Infrastructure for Knowledge Acquisition from Distributed Data. In: Next Generation of Data Mining. Eds.: Kargupta, H., Han, J., Yu, P., Motwani, R., and Kumar, V. CRC Press.
5. **Caragea, D.**, Bahirwani V., Aljandal, W. and Hsu, W. (2009). Ontology-Based Link Prediction in the LiveJournal Social Network. In: Proceedings of the Eight Symposium on Abstraction, Reformulation and Approximation (SARA'09), Lake Arrowhead, CA. AAAI press.

Five Other Related Publications

6. **Caragea, D.**, Silvescu, A., and Honavar, V. (2004). A Framework for Learning from Distributed Data Using Sufficient Statistics and its Application to Learning Decision Trees. Invited Paper. In: International Journal of Hybrid Intelligent Systems. Vol. 1, No. 2, Pp. 80-89.
7. Bao, J., Hu, Z., **Caragea, D.**, Reecy, J., and Honavar, V. (2006). A Tool for Collaborative Construction of Large Biological Ontologies. In: Proceeding of the Fourth International Workshop on Biological Data Management (BIDM 2006) co-located with the 17th International Conference on Database and Expert Systems Applications (DEXA'06). Krakov, Poland, pp. 191-195, IEEE Press.

8. **Caragea, D.**, Cook, D., Wickham, H., and Honavar, V. (2008). Invited Chapter. Visual Methods for Examining SVM Classifiers. In: Visual Data Mining: Theory, Techniques, and Tools for Visual Analytics. Lecture Notes in Computer Science. Berlin: Springer-Verlag. Vol. 4404, pp. 136-153.
9. Xia, J., **Caragea, D.** and Brown, S.J. (2009). Prediction of Alternatively Spliced Exons Using Support Vector Machines. International Journal on Data Mining and Bioinformatics (IJDMB), 2009. To appear.
10. Travers, S.E., Tang, Z., **Caragea, D.**, Garrett, K.A., Hulbert, S.H., Leach, J.E., Bai, J., Saleh, A., Knapp, A.K., Fay, P.A., Nippert, J., Schnable, P.S. and Smith, M.D. Spatial and temporal variation of big bluestem (*Andropogon gerardii*) transcription profiles with climate change. Submitted: Molecular Ecology.

Synergistic Activities

- Reviewer and panelist for NSF, *CISE Directorate, IIS Division* (2008-2009).
- Book co-editor (with Das, S., Hsu, W. and Welch, S.) *Computational Methodologies for Gene Regulatory Networks*. IGI Publishers, New York. To appear, 2009.
- Reviewer for: *TKDE, TKDD, TCBB, DKE, Expert Systems*.
- Program Committee Member for: *SDM (2008), ICTAI (2009), ISBRA (2008), BIBM (2007-2009) and PAKDD (2008-2009)*.
- Organizing Committee Member, *Workshop on Semantic Web for Collaborative Knowledge Acquisition (SWeCKa 2007)*. In conjunction with the *Twentieth International Joint Conference on Artificial Intelligence (IJCAI 2007)*, Hyderabad, India, January 2007.
- Participant in the *Kansas IDeA Network of Biomedical Research Excellence (K-INBRE)* monthly videoconferences and quarterly graduate student summit.
- Developed computer science and bioinformatics graduate and undergraduate level courses: *CIS 590/798 - Introduction to Bioinformatics* (4 credits), *CIS 890 - Machine Learning for Bioinformatics* (3 credits), *CIS 890 - Information Retrieval and Text Mining* (3 credits).
- Developed a two-day bioinformatics workshop called "It's a BLAST!" - targeted at faculty, students and staff that would like to understand the logic behind the most popular bioinformatics alignment tools.
- ADVANCE Distinguished Lecture Speaker Award (2007, 2008, 2009). Invited speakers: *Dr. Volker Brendel from ISU, Dr. Michael Lynch from IU, Dr. Raghu Ramakrishnan from UW-Madison*.
- Received two *WESP Making a Difference Awards*, Fall 2008 (nominated by two female students for making a difference for them during their time at K-State)
- Presenter, *KSU Girls Researching Our World* (2007, 2008). Lectures on "What makes blood red?"
- Discussion group leader, *WESP Learning Community discussion group for graduate female students* (book discussed: "How to complete and survive a Ph.D. Thesis").
- Invited presenter at the second annual *STAR (Science, Technological Advancements and Research) Tech Conference*, January, 2009, Salina High School South, Salina, Kansas. Talk on "Bioinformatics: How will it help society?"

Collaborators: Carson Andorf (ISU), Jie Bao (ISU), Asa Ben-Hur (CSU), Susan J. Brown (KSU), Cornelia Caragea (ISU), Dianne Cook (ISU), Sanjoy Das (KSU), Drena Dobbs (ISU), Karen Garrett (KSU), Ruth Grene (VU), Yoshie Hanzawa (UIUC), Michael Herman (KSU), Vasant Honavar (ISU), William H. Hsu (KSU), Loretta Johnson (KSU), Neeraj Koul (ISU), Todd Mockler (OSU), Yoonseong Park (KSU), Jyotishman Pathak (ISU), Gerald Reeck (KSU), Adrian Silvescu (ISU), Haiyan Wang (KSU), Hadley Wickham (ISU), Stephen Welch (KSU), Changhui Yan (Utah State University), Jun Zhang (Fair Isaac).

Graduate and Postdoctoral Advisors: Luminita State (University of Bucharest); Vasant Honavar (Iowa State University).

Graduate Students: Martin Samuel Rao Paradesi (MS, August 2008), Vikas Bahirwani (MS, December 2008), Vishal Bahirwani (MS, August 2009), Aditi Breed (MS, December 2008), Swarnim Kulkarni (MS, August 2009), Mandar Haridas (M.S., August 2009), Surbhi Mungre (MS, May 2010), Shruti Phanse (MS, May 2010), Rohit Parimi (MS, May 2010), Ezzat El-Sherif (PhD).