

## EDUCATION

- 2003 – 2008    **Stanford University:**  
    **B.S.** Mathematics (expected 12/2007, 3.8 GPA in major)  
    **M.S.** Computer Science (expected 06/2008, Bio Computation specialization, 3.8 GPA)  
        with Distinction in Research (M.S. thesis advisors: Daphne Koller, Russ Altman)
- 2000 - 2003    **Maine School of Science and Mathematics**, Limestone, ME

## PEER REVIEWED JOURNAL PUBLICATIONS

- [1]    "Chemoselective Covalent Coupling of Oligonucleotide Probes to Self-Assembled Monolayers";  
    Devaraj, N. K.; Miller, G. P.; Ebina, W.; **Kakaradov, B.**; Collman, J. P.; Kool, E. T.; Chidsey, C. E. D.;  
    *Journal of the American Chemical Society*; 2005; 127(24); 8600-8601.
- [2]    "Ultra-Fast Matrix Multiplication: An Empirical Analysis of Highly Optimized Vector Algorithms";  
    **Boyko Kakaradov**; *Stanford Undergraduate Research Journal*, 2004.

## PEER REVIEWED CONFERENCE PROCEEDINGS

- [3]    "Identifying Protein Complexes in *Saccharomyces cerevisiae*"; **Boyko Kakaradov**; Haidong Wang;  
    Sean Collins; Nevan Krogan; Daphne Koller; *BCATS: Biomedical Computation at Stanford*, 2007.
- [4]    "Effect of Colony Size and Surrounding Substrate on Corals Experiencing a Mild Bleaching Event on  
    Heron Island Reef Flat"; Juan Carlos Ortiz; Zubin Agarwal; **Boyko Kakaradov**; Rahul Vasavada;  
    *ACRS: Australian Coral Reef Society*. Mission Beach, Queensland, Australia, 2006.
- [5]    "ButterflyNet: A Mobile Capture and Access System for Field Biology Research"; Ron B. Yeh;  
    Chunyuan Liao; Scott R. Klemmer; Francois Guimbretiere; Brian Lee; **Boyko Kakaradov**; Jeannie  
    Stamberger; Andreas Paepcke; *CHI: ACM Conference on Human Factors in Computing Systems*.  
    Montreal, Quebec, Canada, 2006.
- [6]    "Clicking Functionality to Azide-Terminated Monolayers on Silica Surfaces" **Boyko Kakaradov**; Neal  
    Devaraj; Chris Chidsey; *SURP: Symposium of Undergraduate Research in Progress*. Stanford, 2004.

## RESEARCH AND TEACHING EXPERIENCE

- 2006 -        **Research Assistant, Stanford Artificial Intelligence Lab, Stanford University**  
    *Principal Investigator: Professor Daphne Koller*
1. Predicted protein-protein interactions using markov network models with approximate inference based on graph cuts (generalized to quadratic pseudo-boolean optimization)
  2. Identified protein complexes in *Saccharomyces cerevisiae* using boosted decision trees for evidence integration and agglomerative clustering for complex identification. Produced high-confidence reference set and collaborative visualization tools for evaluation of predictions.

- 2006 , 2007     **Teaching Assistant, Stanford University Computer Science Department**  
*Course: CS107 Programming Paradigms, Lecturer: Jerry Cain*  
 Held weekly office hours and led weekly discussion section for 110 students.
- 2005 - 2006     **Lead Programmer & Web Developer, EveryTrail.net, Stanford, CA**  
 Co-founded an outdoor enthusiast online community driven by Google -Maps and -Earth.  
 Designed and implemented a prototype GPS-based trail sharing site in a fast-paced startup  
 environment. Web technologies learned on the fly: AJAX, PHP, MySQL.
- 2005 - 2006     **Research Assistant, Human Computer Interaction Lab, Stanford University**  
*Principal Investigators: Professor Scott Klemmer, Professor Ove Hoegh-Guldberg*  
 Conducted a usability study of ButterflyNet, a novel field biology research browser. Deployed a  
 wireless sensor network along the field research browser to facilitate novel marine biology  
 study of coral bleaching at the Great Barrier Reef with collaborators.
- 2004 - 2005     **Research Assistant, Virtual Human Interaction Lab, Stanford University**  
*Principal Investigator: Professor Jeremy Bailenson*  
 Created virtual worlds using various tools for *content creation* (3D objects, face-mapping, 3D  
 sound), *project management*, and *interactive object scripting* (C++/Python). Implemented a  
 networked perspective-shifting virtual world that explores social interaction aspects of  
 negotiation. Conducted a single-blind experiment, which linked poor negotiation skills to  
 virtual empathy (perspective-taking ability).
- 2004            **Research Assistant, Chidsey Surface Chemistry Lab, Stanford University**  
*Principal Investigator: Professor Christopher Chidsey*  
 Conducted original research in semiconductor chemistry and molecular electronics. Co-  
 authored an internal technical report titled “Clicking Functionality to Azide-Terminated Self-  
 Assembled Silane Monolayers on Silica Surfaces.”
- 2003            **Computer Science Teacher, Maine School of Science and Mathematics**  
*Faculty Advisor: Patrick Farrell*  
 Taught the second semester of a Computer Science Fundamentals course based on LISP (Dr.  
 Scheme) programming. Topics included: Induction, Primary Functions, Numerical Calculus,  
 Fractals, and Graphical User Interfaces. Prepared lectures and facilitated student interaction in  
 the programming lab. Taught and evaluated 15 students.

## HONORS AND AWARDS

- 2007            Solon E. Summerfield Scholarship
- 2005 - 2007     CURIS: Undergraduate Research Internship in Computer Science  
 Three competitive summer research grants
- 2004            Chemistry Department Summer Research Grant  
 Competitive funding won by individually-designed summer research proposal.
- 2003 - 2007     MBNA Maine Scholars Program Scholarship
- 2003 - 2007     M. Alton French Scholarship Fund
- 2003            Presidential Award for Excellence