

CURRICULUM VITAE

Ekaterina Taralova

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EDUCATION

Bachelor of Science - Computer Science and Mathematics, May 2007

Minors: Physics and Computer Engineering

The University of Arizona, Tucson, Arizona

Cumulative GPA: 3.91/4.0 Dean's List with Distinction,

College of Science Outstanding Senior, May 2007

PUBLICATIONS

- “Inferring Grammar-based Structure Models from 3D Microscopy Data” - J. Schlecht, K. Barnard, E. Spriggs¹, B. Pryor, in *IEEE Conference on Computer Vision and Pattern Recognition*, June 2007, pp. 1-8
- “Modeling complex 3D structure in *Alternaria* and applications to morphometric analysis” - E. Spriggs¹, J. Schlecht, K. Barnard, B. Pryor, *Annual Meeting of the Mycological Society of America*, July 2007
- “Predicting emotional experience from autonomic physiology using machine learning methods” - E. Spriggs¹, E. Butler, K. Barnard, F. H. Wilhelm, J. J. Gross, *47th Annual Meeting of the Society for Psychophysiological Research*, October 2007

HONORS AND AWARDS

- Computing Research Association 2007 Outstanding Undergraduate Awards Finalist
- College of Science Outstanding Senior and Galileo Circle Scholar, University of Arizona, May 2007
- Computer Science Department Outstanding Senior and Excellence in Undergraduate Research Awards – University of Arizona, Mar 2007
- “Modeling and Visualizing *Alternaria*” - Received First Place in the Undergraduate Student Showcase, Computer Sciences Field and the BIO5 Institute Innovator Award - UA, Nov 2006
- “Pillars of Excellence” - Honors College Scholar, University of Arizona, Feb 2006
- “MCM: The Mathematical Contest in Modeling” - University of Arizona team, Honorable Mention, Adviser: Dr. Bruce Bayly, Mar 2006
- “Detecting Tone and Textual Semantics in the Context of Human Interaction” - First Place in the Undergraduate Student Showcase, Computer Sciences Field - University of Arizona, Nov 2005
- Elected to “Phi Beta Kappa” Undergraduate Honors Society, Dec 2005
- “Detecting Tone and Textual Semantics in the Context of Human Interaction” - University of Arizona Undergraduate Honors Research Grant, Mar 2005 – Feb 2006
- Recipient of the International Student Association “Super Achiever Award” - University of Arizona, Mar 2005
- Selected for the “Beyond Silicon Computing Summer School,” Caltech, Pasadena CA, June 14th - July 9th 2004
- “Flying Robots Capable of Recognizing Man-Made Structures” - University of Arizona Undergraduate Honors Research Grant, Mar 2004 - Feb 2005
- Full tuition waiver scholarship from the University of Arizona, Aug 2002 - May 2006

1 Published under E.Spriggs, now publishing under E. H. Taralova

RESEARCH ACTIVITIES

- “Predicting emotional experience from autonomic physiology and behavior using machine learning methods” – advisers: Dr. Emily Butler, Dr. Kobus Barnard, Aug 2006 - present
- “Modeling and Visualizing *Alternaria*“ - Interdisciplinary Undergraduate Biology Research Program, advisers: Dr. Barry Pryor, Dr. Kobus Barnard, University of Arizona, May 2005 – Aug 2005, Aug 2006 – present
- “Modeling intonation and physiology in emotional conversations” - Honors Thesis, advisers: Dr. Kobus Barnard, Dr. Emily Butler, May 2007
- “Eliminating the need of sensors in human-computer interaction in a CAVE” – adviser: Dr. Kobus Barnard, June 2005 - present
- “Efficient Simulation of Stabilizer States Using the Graph State Approach” - Caltech Beyond Silicon Summer School, Pasadena, CA, June 14th - July 9th 2004, advisers: Dr. Dave Bacon (Caltech), Dr. Isaac Chuang (MIT)
- “Development of an Autonomous Aerial Reconnaissance System” - with the Aerial Robotics Club at University of Arizona, International Aerial Robotics Competition, Fort Benning, GA, June 2003 (Competition best paper), adviser: Dr. Kobus Barnard

OUTREACH AND SERVICE

In my outreach activities I have focused on taking students to research labs and getting them excited about doing science. I have been working with the following organizations:

- Founder and president of “All for Education” - non-profit organization that brings online resources from academia and the community to everyone: www.all-for-education.org, Jan 2007 - present
- Wildcat School, Tucson, AZ - organizing science lab tours for students, Aug 2006 – present
- University of Arizona College of Science Ambassador, April 2005 – May 2007
- SAMEC – Science and Mathematics Education Center volunteer, Tucson, AZ, Sept 2004 - present
- Lunar and Planetary Lab at the University of Arizona, Public Outreach Events volunteer, Sept 2004 – present
- “Quantum and Molecular Computing Club” at the University of Arizona, founder, Sept 2004 – Jan 2005
- Boys and Girls Clubs of Tucson, AZ, volunteer, Jan 2003 – present

PROFESSIONAL EXPERIENCE

- Undergraduate Research Assistant: Computer Science - University of Arizona (May 2004 – May 2005, Mar 2006 – present)
- Systems Support: Ecology and Evolutionary Biology – University of Arizona (Aug 2003 - May 2004, May 2005 – Mar 2006)

ONLINE SOFTWARE SYSTEMS

- Generator of 3D mathematical models for fungi from the genus *Alternaria* using L-systems:
<http://vision.cs.arizona.edu/taralove/lssystem.html>