

Andrea Bajcsy

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Education

- May 2021 **Ph.D. in Electrical Engineering and Computer Science**,
University of California Berkeley.
- May 2016 **B.S. in Computer Science, Minor in Mathematics**,
University of Maryland College Park.
Overall GPA: 3.96
Honors College, Gemstone Honors Program: Multidisciplinary 4-year research program

Research

- Summer 2016 **Graduate Research Assistant**, *Dr. Stefan Schaal*, Max Planck Institute for Intelligent Systems, Tübingen, Germany.
 - Vision-based control for the automatic learning of feedback controllers
- Sept. 2015–
May 2016 **Research Assistant**, *Dr. Yiannis Aloimonos*, University of Maryland College Park.
 - Investigated algorithms for collaborative, vision-based robotic homing
- Summer 2015 **Engineering Research Fellow**, *Dr. Ronald Fearing*, University of California Berkeley.
 - Developed a system for safe cooperative terrain exploration with expendable millirobots using a monocular webcam with Robot Operating System (ROS), Point Cloud Library (PCL), and OpenCV
- Sept. 2014–
May 2015 **Research Assistant**, *Dr. David Jacobs*, University of Maryland College Park.
 - Evaluated Shannon entropy over images preprocessed with Fourier transform, Wavelet transform, and gray-level co-occurrence matrix computed from graph-based visual saliency maps to quantify visual entropy and aesthetics
- Sept. 2013–
May 2016 **Research Team Member, Team Haptic**, *Gemstone Honors Program*, University of Maryland College Park.
 - Researching the design of a haptic electrostatic device and accompanying software to translate 2D digital images to 3D tactile representation for blind and visually impaired mathematics education
- Summer 2014, **Summer Undergraduate Research Fellow, Information Technology Lab**, *National Institute of Standards and Technology*, Gaithersburg, MD.
 - Established quantitative measurements of voting ballot markings and designed 8 custom image features in order to provide an automated and objective classification of ballot-mark types
 - Designed a workflow of automated computational steps in Java which translates 2D graph and map images into 3D printed models based on the gathered requirements from the blind community

Publications

- Horton, E. L., Renganathan, R., Toth, B. N., Cohen, A. J., **Bajcsy, A. V.**,... & Oliveira, M. A. (2016). A review of principles in design and usability testing of tactile technology for individuals with visual impairments. *Assistive Technology*. Advance online publication. doi:10.1080/10400435.2016.1176083
- **Bajcsy, A.**, Li-Baboud, Y.S., & Brady, M. (2015). Systematic measurement of marginal mark types on voting ballots. NIST IR 8069. <http://nvlpubs.nist.gov/nistpubs/ir/2015/NIST.IR.8069.pdf>
- **Bajcsy, A.**, Li-Baboud, Y.S., & Brady, M. (2013). Depicting Web images for the blind and visually impaired. SPIE Newsroom. <http://spie.org/x104896.xml>

Skills

- **Technical Languages:** Java, C/C++, MATLAB, Ruby, Python, HTML/CSS, Javascript
- **Software:** Robot Operating System (ROS), OpenCV, MATLAB, Point Cloud Library (PCL), Adobe Creative Suite, interfacing with Makerbot 3D printers

Honors & Awards

- National Science Foundation Graduate Research Fellowship (April 2016)
- Berkeley Fellowship for Graduate Study (March 2016)
- Berkeley EECS Excellence Award (March 2016)
- Student Researchers of the Year Award, an award for the top five undergraduate researchers in all disciplines at the University of Maryland (April 2016)
- CRA Outstanding Undergraduate Research Award Honorable Mention (Dec. 2015)
- Brendan Iribe Scholar, 1st student to receive scholarship from university (June 2015)

Extracurricular Activities

- Computer Science Education Committee (Sept. 2015 – May 2016)
- Ambassador for College of Computational, Mathematical, and Natural Sciences (Sept. 2014 – May 2016)

References

- Available upon request