ISABELLA TROMBA

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY   *Cambridge, MA*
BS in Mathematics and Computer Science   *Expected 2014*

- Student Ambassadors Program
- Founder and President of MIT Women's Club Soccer Team
- Gordon Engineering Leaders Program

EXPERIENCE

APPLE INC.   *Cupertino, CA*
Software Engineering Intern, Graphics Engineering   *June-August 2012*

MIT MEDIA LABORATORY   *Cambridge, MA*
Research Assistant, Biomechatronics Group   *January, 2012- Present*

- Designed image processing framework to automatically calculate 3D bone to skin distance in MRI scans of amputated limbs.
- Designed process to build prosthetic sockets based on this data that are more comfortable and lower the risk of injury

SANTA CRUZ INSTITUTE FOR PARTICLE PHYSICS (SCIPP)   *Santa Cruz, CA*
Research Assistant, Proton Computed Tomography   *Summer 2011*

- Studied radiation effects on silicon detectors used in the ATLAS experiment at the Large Hadron Collider at CERN.
- Developed algorithms to improve rendering of proton computed tomography used in cancer treatment. PCT is a promising method for imaging in cancer patients because the low entry dose of protons spares healthy tissue.
- Performed Monte Carlo Simulations of particle trajectories utilizing ROOT, GEANT4, C++
- http://scipp.ucsc.edu/pCT/people.html

MIT RICH LABORATORY   *Cambridge, MA*
Research Assistant   *February-May 2011*

- Research on Z-DNA, a conformation of DNA linked to the proliferation of pox viruses.
- Training in lab techniques for biological research including PCR, gel electrophoresis, DNA cloning via bacterial transformation

FINALIST IN THE INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR (ISEF) 2010 *San Jose, CA*
                                                                                 Summer 2009

- Utilizing the Isotopic Signature of Macroalgae to Identify the Source of Nitrogen in Streams and Rivers Flowing into Monterey Bay, California
- First Place Award in California State Science Fair Environmental Science Category

PERSONAL

SKILLS

- Python, OpenCV, Objective C, OpenGL, MATLAB, Java, HTML, CSS
- AutoCAD, Solidworks, LASERcamm, Working Model 2D, Drill Press, ROOT, GEANT4
- Experience with CE Instruments NE2500 Elemental Analyser, ThermoFinnigan Delta Plus XP isotope ratio mass sppectrometer(IRMS)

LANGUAGES

- German Speaker from German/English Bilingual Home–Lived in Germany 3+ years