

Erin Summers

Education

- 2007 - Aug 2012 **Ph.D. Electrical Engineering and Computer Science**, *University of California at Berkeley*, Berkeley.
GPA: 3.8
Major: Control Systems
Minors: Statistic and Computational Science Engineering
- 2009–2012 **Management of Technology**, *Haas Business School, University of California at Berkeley*, Berkeley.
The Haas Management of Technology Certificate bridges the gap between engineering and business by providing collaborative courses for graduate engineers and MBA students from the Haas Business School.
- 2002–2006 **B.S. Electrical Engineering and Computer Engineering**, *North Carolina State University*, Raleigh.
GPA: 4.0
Minor: German

Experience

- Aug - Sept 2012 **Data Science Fellowship**, *Insight*, Palo Alto, CA.
A six week training fellowship bridging the gap between academia and data science. Working on big-data problems in industry with Facebook, Twitter, Square, LinkedIn, Pinterest, etc...
- Mar -July 2012 **ACC Mobile App**, *acc2012mobile.com*, Berkeley, CA.
Founded, created, developed and managed a Android and iPhone schedule organizer app for the 2012 American Control Conference
- Founder and lead engineer
 - Designed and created SQLite database, and custom user interface for Android and iPhone;
 - Managed three other developers working on backend, iPhone development and marketing
- June - Aug 2011 **Flight Safety Control Engineer**, *NASA*, Mountain View, CA.
Created and developed verification software for the Adaptive Control and Evolvable Systems Group to ensure stability of aircraft.
- Significantly improved the stability bound for an adaptive flight control system;
 - Contributed to an AIAA publication on research findings.
- 2007 **Operating Systems Test Engineer**, *Tekelec*, Morrisville, NC.
Tested new releases of operating systems for blade servers, built on Linux.
- 2006 **Software Design Researcher**, *I-Cubed*, Raleigh, NC.
Designed software prototypes for new ventures at I-Cubed, a CAD-software company, to foster innovation and expand I-Cubed's market.
- 2005-2006 **Nuclear Intern**, *Duke Energy*, Huntersville, NC.
Ensured operability and safety of a nuclear plant through modifications and updates.
- Coordinated a site-wide computer modeling upgrade for the control room simulator;
 - Researched, created and updated a database of radiation monitors and relays for the entire power plant.

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Technical skills

Languages	Python, Java, Matlab, SQL, C++, C, Hadoop, Scala
Software & OS	Linux, Windows, Mac OS, Android, iPhone, Eclipse, xCode
Interests	Data Science, Data Mining, Big Data, Optimization, Machine Learning, Android Development, iPhone Development, Network Systems, Power Systems, Robotics

Honors and Awards

- Insight Data Science Fellowship (2012)
- Best Presentation of Session, American Control Conference (2011 & 2012)
- Bosch Robotics Business Model Innovation Challenge Winner (2011)
- Zonta Amelia Earhart Fellow (2011)
- NASA Harriett Jenkins Fellow (2010)
- National Science Foundation Graduate Research Fellow (2008)
- Graduated Valedictorian, Summa Cum Laude, North Carolina State University (2006)

Leadership and Activities

President of Women in Computer Science and Engineering (WICSE).

After significant budget cuts, I tripled the revenue by building long-lasting partnerships companies. I organized events for WICSE, including outreach to other student organizations, visit day activities, recruitment opportunities.

Outreach Officer for WICSE.

Organized, planned and recruited WICSE members to volunteer in various outreach events that teach girls in grades K-12 about science and engineering.

Entrepreneurs Association & Women in Leadership.

Member of the Haas Business School affiliated Entrepreneurs Association and the Women in Leadership Organization.

Lead Singer, Erinbot and the Positive Eigenvalues.

I am the lead signer in a rock and roll band composed of EECS professors and graduate students.

Publications

- [1] Summers E. et. al. Quantitative local analysis for nonlinear systems (submitted). *International Journal of Robust and Nonlinear Control*, 2011.
- [2] N. Nguyen and E. Summers. On time delay margin estimation for adaptive control and optimal control modification. In *AIAA Guidance, Navigation, and Control Conference*. Citeseer, 2011.
- [3] E. Summers, M. Arcak, and A. Packard. Delay robustness of interconnected passive systems: An integral quadratic constraint approach (submitted). *IEEE Trans. Automatic Control*, 2011.
- [4] E. Summers, M. Arcak, and A. Packard. Evaluating the delay robustness of interconnected passive systems with a frequency-dependent integral quadratic constraint. In *American Control Conference*, pages 4237–4242. IEEE, 2011.
- [5] E. Summers, M. Arcak, and A. Packard. Further results on delay robustness of interconnected passive systems. In *American Control Conference*. IEEE, 2012.
- [6] E. Summers and A. Packard. L2 gain verification for interconnections of locally stable systems using integral quadratic constraints. In *2010 49th IEEE Conference on Decision and Control*, pages 1460–1465. IEEE.

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