Resoures for Outreach Activities

Zhiyang Ong *

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Abstract

This is a list of resources for my outreach activities, which includes helping people explore careers in science, technology, engineering, and mathematics (STEM). It also includes resources to help parents and teachers of youths prepare youths for college; in addition, it has a list of scholarship resources. Furthermore, it has a list of resources that I use to help me with academic writing. Moreover, it also has resources to help people learn about various markets through publications based on market surveys of industries, such as semiconductors, biotechnology, and green technology. It also has resources for small and home businesses, and start-up entrepreneurship. Finally, it has a list of resources to help people learn material from K-12 through advanced topics for graduate students.

Contents

*Email correspondence to: ongz@acm.org

1 General Outreach Resources

General outreach resources:

1. volunteering opportunities:
   (a) Engineers Without Borders: http://www.ewb-international.org/
   (b) Australian Volunteers International: http://www.australianvolunteers.com/
   (c) Youth Challenge Australia: http://www.youthchallenge.com.au/
   (d) Go Volunteer: http://www.govolunteer.com.au/
   (e) Volunteer Search: http://www.volunteersearch.gov.au/
   (f) Conservation Volunteers: http://www.conservationvolunteers.com.au/volunteer
   (g) Volunteering Australia: http://www.volunteeringaustralia.org/html/s01_home/home.asp
   (h) :
   (i) :
2. awards:
   (a) Alexander von Humboldt-Stiftung/Foundation:
      i. Hezekiah Wardwell Fellowship (musician or musicologist from Spain): http://www.humboldt-foundation.de/web/wardwell-en.html
      ii.

2 Youth Outreach

Resources for youth outreach:

1. The Gilder Lehrman Institute of American History:
   (a) http://www.gilderlehrman.org/
   (b) Resources for teachers and schools: http://www.gilderlehrman.org/teachers/
   (c) Civil War Essay Contest (for students in selected K-12 schools): http://www.gilderlehrman.org/affiliate/civil_war.php
2. educational (computer) games:
   (a) Robocode: http://en.wikipedia.org/wiki/Robocode and http://robocode.sourceforge.net/
3. competitions for youths:
   (a) International Geography Olympiad (for high school students): http://www.geoolympiad.org/
   (b) International Linguistic Olympiad (for high school students): http://en.wikipedia.org/wiki/International_Linguistics_Olympiad
   (c) International Philosophy Olympiad (for high school students): http://www.philosophy-olympiad.org/
4. educational resources:
   (a) NaMaYa: http://www.namaya.com/
   (b) NIXTY: http://nixty.com/
   (c) K12 Open Ed: http://www.k12opened.com/wiki/index.php/Main_Page
   (d) Learning Is For Everyone: http://www.learningis4everyone.org/
   (e) The Smithsonian Commons Prototype: http://www.si.edu/commons/prototype/
5. underrepresented minorities:
   (a) The University of North Carolina at Chapel Hill:
      i. Gary Bishop, *Research*, Department of Computer Science, The University of North Carolina at Chapel Hill. Available at: http://wwwx.cs.unc.edu/~gb/wp/research/; last accessed on September 3, 2010. [Has plenty of information and resources (including learning aids and material) to help people who are visually or mobility impaired learn.]
   (b)

3 Internship Opportunities

3.1 Internship Opportunities in Australia

Internship Opportunities in Australia:

1. The Association of Professional Engineers, Scientists and Managers, Australia: http://www.apesma.asn.au/index.asp — Ask for guide to internships in your region/major; free student membership

2. Engineers Australia: http://www.engineersaustralia.org.au/ — Ask for guide to internships in your region/major; free student membership
3. CPA Australia: http://www.cpaaustralia.com.au/cps/rde/xchg/cpa/hs.xsl/index.html and http://www.cpaaustralia.com.au/cps/rde/xchg/careers/site/index_ENA_HTML.htm/cps/rde/xchg/SID-3F57FECB-EEFEF50E/careers/site/204_ENA_HTML.htm
4. Institute of Chartered Accountants in Australia: http://www.charteredaccountants.com.au/
5.

4 College Preparation

College preparation:

1. *Guide to Online Schools* [or *GuideToOnlineSchools.com*], *The Top 53 College Preparation Resources for Students*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/college-prep-resources; last accessed on August 25, 2010.
2. U.S. Department of Education's resources for parents to help their children learn: http://www2.ed.gov/parents/academic/help/hyc.html and http://www2.ed.gov/parents/academic/help/homework/index.html
3. The College Board (information about SATs, college preparation, and financial aid): http://www.collegeboard.com/
4. *Accreditation.org*:
   (a) Information about the accreditation of engineering degree programs around the world
   (b) http://www.accreditation.org/
5. *New York Times*:
   (a) The Learning Network: http://learning.blogs.nytimes.com/category/test-yourself/
6. University of Southern California, USC:
   (a) USC Office of Continuing Education and Summer Programs:
      i. http://cesp.usc.edu/
      ii. These programs allow students in K-12 to earn credit at USC, and exposes them to different majors/professions, like medicine, engineering, creative writing, or film making.
      iii. Students can benefit from these programs, and learn about different academic disciplines before applying to college. This would help them in their college applications.
      iv. Underrepresented minority students can get scholarships to attend these programs. So, if parents have financial difficulty paying for the programs, they can seek financial aid for this.
      v. Also, current undergraduates can also sign up for programs to learn about marketing, finance, and entrepreneurship. They can also do summer research with USC researchers.
   (b) Summer sports programs for youths:

i. SC Futbol Academy (USC Soccer Camps): http://www.usctrojans.com/sports/w-soccer/spec-rel/021610aaa.html
ii. Mick Haley's USC Girls Volleyball Camp: http://www.usctrojans.com/sports/w-volley/spec-rel/volley-camp.html
iii. Salo Swim Camp: http://www.saloswimcamp.com/on-line/default.asp
iv. USC NYSP Trojan KidSCamp: http://sait.usc.edu/recsports/site_content/youth_sports/nysptk.html
v. After School Sports Connection, ASSC (operates in fall, spring, and summer): http://sait.usc.edu/recsports/site_content/youth_sports/assc.html

7. Telluride Association:
   (a) Telluride Association Summer Program (TASP) [for high school students]: http://www.telluridassociation.org/programs/high_school_students/tasp/tasp_general_info.html
   (b) Telluride Association Sophomore Seminar (TASS) [for high school students]: http://www.telluridassociation.org/programs/high_school_students/tass/tass_general_info.html
   (c) Resources for high school educators to nominate summer program applicants: http://www.telluridassociation.org/programs/high_school_students/hs_resources/hs_resources_general_information.html

Resources for financial aid:

1. *Guide to Online Schools* [or *GuideToOnlineSchools.com*], *Financial Aid*. Available at: http://www.guidetoonlineschools.com/financial-aid; last accessed on August 25, 2010.
2. The Institute for College Access & Success, *Links* [Resources that provide information about student loans and student debt]. Available at: http://projectonstudentdebt.org/links.vp.html; last accessed on September 4, 2010.

Information about colleges and universities:

1. The Institute for College Access & Success, *College InSight*. Available at: http://college-insight.org/; last accessed on September 4, 2010.
2.

5 Outreach for Students in Colleges and Universities

Resources to reach out to students in colleges and universities:

1. Film contests:
   (a) Ed Wood Film Festival [@ USC]:
      i. Celebrating independent filmmaking at USC and named for the famous director, the Ed Wood Film Festival is put on by a committee of Residential Education staff members at New Residential College, chaired by the Cinema Floor RA's.
      ii. Teams of students come together to obtain the year's secret theme in which to write, shoot, and edit their very own short film within 24 hours. A week later, the films are shown at USC's Norris Cinema and a panel of judges selects the Festival winners in a variety of categories.
      iii. http://sait.usc.edu/resed/Programs.aspx

(b) Reel LA: Parkside International Film Festival [or USC Reel LA Film Festival at USC]; see http://www-scf.usc.edu/~pirc/areagov/government.php

2. residential education:
   (a) Telluride Association:
      i. Information about how to reside at the Cornell Branch (also known as Telluride House or CBTA) and the Michigan Branch of Telluride Association, which are "residential colleges": http://www.telluridassociation.org/programs/university_students.html
      ii. Awards for residents at the Cornell or Michigan Branch: http://www.telluridassociation.org/programs/university_students/us_awards.html
3.

6 Science & Engineering Outreach

6.1 Precollege Science & Engineering Outreach

Science and engineering outreach to high-school (and middle-school) students, and their parents, teachers, and career counselors:

1. *MentorNet*:
   (a) http://www.mentornet.net/
   (b) Enables people to network with scientists, engineers, and professors in Science, Technology, Engineering, and Mathematics (STEM)
   (c) Is very supportive of minorities, so that more minorities (particularly underrepresented minorities) can be attracted to STEM careers
2. International Science Olympiad (for high school students):
   (a) International Olympiad in Informatics: http://en.wikipedia.org/wiki/International_Olympiad_in_Informatics and http://www.ioinformatics.org/index.shtml
   (b) International Mathematical Olympiad: http://www.imo-official.org/
   (c) International Physics Olympiad: http://www.jyu.fi/tdk/kastdk/olympiads/
   (d) International Chemistry Olympiad: http://www.icho.sk/
   (e) International Biology Olympiad: http://www.ibo-info.org/
   (f) http://scienceolympiads.org/
3. International Astronomy Olympiad: http://www.issp.ac.ru/iao/
4. International Earth Science Olympiad: http://en.wikipedia.org/wiki/International_Earth_Science_Olympiad
5. International Junior Science Olympiad (for students younger than 15 years old): http://www.ijso-official.org/home
6. Teen Leadership Institute Science, Technology, Engineering, and Math (STEM) programs @ YWCA Greater Pittsburgh; see http://www.ywcapgh.org/STEM_Programs.asp
7. For Inspiration and Recognition of Science and Technology (FIRST): http://www.usfirst.org/ (including resources and guides to mentoring); scholarships @ http://www.usfirst.org/aboutus/content.aspx?id=508; and robotics programs @ http://www.usfirst.org/roboticsprograms/frc/default.aspx?=966

8. Mac Hyman, "Good Choices for Great Careers in the Mathematical Sciences," talk given at 2008 SIAM Annual Meeting. Available at: http://client.blueskybroadcast.com/siam08/hyman/index.html; last accessed on August 25, 2010. Also, see http://meetings.siam.org/program.cfm?CONFCODE=AN08, http://www.siam.org/meetings/an08/program.php, and http://www.siam.org/meetings/an08/.
9. *RoboCup*™ competitions:
   (a) Junior category for K-12 students involves contests the these areas of challenges:
      i. soccer
      ii. dance
      iii. rescue operations
   (b) http://www.robocup.org/
10. *Curriki*, which is an online educational resource for teachers, students, and parents in K-12: http://www.curriki.org/xwiki/bin/view/Main/About
11. Electrical and computer engineering and/or computer science:
   (a) *TopCoder* coding and design contests:
      i. High School category
      ii. http://www.topcoder.com/
   (b) Student Cluster Competition (SCC):
      i. During SC10, teams consisting of six students, undergraduate and/or high school, will showcase the amazing power of clusters and the ability to utilize open source software to solve interesting and important problems. They will compete in real-time on the exhibit floor to run a workload of real-world applications on clusters of their own design while never exceeding the dictated power limit.
      ii. During SC10 in New Orleans, teams will assemble, test and tune their machines and run the HPCC benchmarks until the starting bell rings on Monday night at the Exhibit Opening Gala where they will be given the competition data sets. In full view of conference attendees, teams will execute the prescribed workload while showing progress and science visualization output on large high-resolution displays in their areas. Teams race to correctly complete the greatest number of application runs during the competition period until the close of the exhibit floor on Wednesday evening.
      iii. http://sc10.supercomputing.org/?pg=studentcluster.html
   (c) IEEE:
      i. *IEEE Educational Activities* recommended resources: http://www.ieee.org/education_careers/education/preuniversity/resources/index.html
      ii. Engineering Projects in Community Service (EPICS) in IEEE:
         A. High school students collaborate with college students in engineering projects to benefit the community
         B. http://www.ieee.org/education_careers/education/preuniversity/epics_high.html
      iii. Talk given by John Cohn at the IEEE International Symposium on Circuits and Systems (ISCAS), May 18-21, 2008. The talk is titled, "Kids these days. How we can inspire the next generation of Engineers and Scientists?" See http://ewh.ieee.org/soc/icss/IEEE-ISCAS-08-Tue-Keynote-JC/IEEE-ISCAS-08-Tue-Keynote-

HTML. [Alternatively, go to: IEEE Circuits and Systems Society, http://www.ieee-cas.org/: Select the "Resources" tab in the menu bar, and select the "ISCAS Keynote Videos" option. Click on the video link with the appropriate title.]

(d) Silicon Valley StRUT:
   i. Students Recycling Used Technology, StRUT, Competition; StRUT Competition consists of:
      A. Disassemble and Reassemble A Computer
      B. Create and Present a Powerpoint Presentation
      C. Computer Parts Identification and Challenge Test
      D. Team Quiz Bowl on Computer Technology and Related Subjects
      E. http://www.svstrut.org/cms/content/section/1/5/
      F. Teacher Resources: http://www.svstrut.org/cms/component/option,com_weblinks/catid,11/Itemid,10/
   ii. Resources to Support Curriculum for Engineering and Computer Technology Education: http://www.svstrut.org/cms/content/view/8/18/

(e) Google Code Jam (programming contest): http://code.google.com/codejam/ and http://en.wikipedia.org/wiki/Google_Code_Jam

12. Engineering Education Service Center (EESC):
   (a) Has lists of:
      i. Educational material:
         A. books
         B. DVDs
         C. resource kits for teachers
      ii. engineering camps (for the summer in the United States): http://www.engineeringedu.com/camps/
      iii. *Women in Engineering* programs at US engineering schools: http://www.engineeringedu.com/wie.html
      iv. US engineering schools: http://www.engineeringedu.com/engrschools.htm
      v. competitions for youths, including high school students: http://www.engineeringedu.com/competitions.html
      vi. online resources
      vii. list of professional organizations in engineering (or engineering societies): http://www.engineeringedu.com/soc1.html
      viii. scholarships: http://www.engineeringedu.com/scholars.html
   (b) It has resources for K-12 students, and their teachers and parents. It also has information for girls who are seeking careers in engineering; in addition, it provides their parents and teachers with information to guide the girls.
   (c) It runs a workshop (in the US) for mother-daughter pairs to encourage girls to pursue careers in engineering.
   (d) http://www.engineeringedu.com/

13. TryNano.org:
   (a) Information about educational opportunities and careers in nanotechnology and nanoscience

(b) TryNano.org

14. *Lego Digital Designer (LDD)*:
    (a) CAD software for building Lego toys on Windows and Mac OS X platforms
    (b) Free software, as in free beer
    (c) http://designbyme.lego.com/en-us/Default.aspx and http://ldd.lego.com/
15. *Mathematical Association of America* (MAA):
    (a) Middle/High School Students: http://www.maa.org/students/middle_high/
    (b) Parents: http://www.maa.org/students/Parents.html
    (c) MAA American Mathematics Competitions:
        i. *Students* [resources]. Available at: http://amc.maa.org/a-activities/a4-for-students/s-index.shtml; last accessed on September 2, 2010.
        ii. It includes tips to help students do well in math contests and Olympiads, a reading list for students interested in mathematics, problems from past math contests and Olympiads, and other resources from the World Wide Web.
    (d) *Fun Math Sites*. Available at: http://www.maa.org/students/funsites.html; last accessed on September 2, 2010.
    (e) Special Interest Group on Mathematics and the Arts (SIGMAA-ARTS): Resources, see http://myweb.cwpost.liu.edu/aburns/sigmaa-arts/resources.html.
    (f) Special Interest Group of the MAA on Quantitative Literacy (SIGMAA QL): http://sigmaa.maa.org/ql/
16. eGFI (Engineering, Go For It!):
    (a) Provides information for students, parents, and teachers about educational pathways and careers in engineering
    (b) http://egfi-k12.org/
17. *Sloan Career Cornerstone Center*:
    (a) Career exploration resources in STEM (science, technology, engineering, mathematics, computing, and healthcare)
    (b) http://www.careercornerstone.org/
18. *TryEngineering*:
    (a) Career exploration resources for engineering
    (b) http://www.tryengineering.org/
19. *Women in Science, Technology, Engineering, and Mathematics ON THE AIR!*:
    (a) Audio resources that describe stories about women in science, technology, engineering, and mathematics (STEM) fields
    (b) http://www.womeninscience.org/
20. *Junior Engineering Technical Society, JETS*:
    (a) Career exploration resources for engineering
    (b) http://www.jets.org/
21. *American Society of Mechanical Engineers, ASME*:
    (a) K-12 Student Resources: http://www.asme.org/Communities/Students/K12/ and http://www.asme.org/Education/PreCollege/EngineeringResources/

(b) Engineering Camps: http://www.asme.org/Communities/Students/K12/Camps.cfm

22. *American Society of Civil Engineers, ASCE*:
    (a) Outreach resource for K-12 students, and their parents and teachers
    (b) http://content.asce.org/asceville/index.html
23. *Science.gov* (USA.gov for Science): Internship and Fellowship Opportunities in Science (for high school students); see http://www.science.gov/internships/k-12.html
24. *iTunes U*:
    (a) *iTunes* is required to listen to or watch these lectures, talks, and presentations.
    (b) Access *iTunes U* at: http://deimos3.apple.com/indigo/main/main.html?v0=WWW-AMUS-ITUNESU070521-N48LX
    (c) WGBH's Teachers' Domain – Boston's PBS Station: Video presentation on "Engineering for the Red Planet"; see http://deimos3.apple.com/WebObjects/Core.woa/Browse/wgbh.org.1416254059.01416254061.1416793683?i=1951581658. Also, check out its video clip on "Carbon Fiber Car of the Future".
    (d) *iTunes U* is a set of webcast and podcasts, where you can easily find audio and video clips for lectures, seminars, announcements, virtual tours, and so on. For example, some professors from schools like MIT or Berkeley will provide audio/video clips of their lectures on *iTunes U*.
    (e) This can help in exploring different majors during the college application process, or before a college student declares her/his major(s). If a student is not sure if she/he wants to double major in deaf studies and linguistics, this student can check out some linguistics lectures from her/his (preferred) college/university, if it uses *iTunes U*, or those from other universities.
25. High School Ace's College Prep Guide: http://highschoolace.com/ace/colleges.cfm
26. *Dr. Sally Ride* (Americas first woman in space):
    (a) *Sally Ride Science*'s resources for educators: https://www.sallyridescience.com/for_educators
    (b) Sally Ride Science Educator Institutes (to educate K-12 teachers about science): https://www.sallyridescience.com/for_educators/institutes
    (c) *Sally Ride Science Academy* helps teachers to increase their students' interest in science: https://www.sallyridescience.com/academy
    (d) *Sally Ride Science*'s resources for teachers: https://www.sallyridescience.com/resources
    (e) *Sally Ride Science Festivals* are events for girls from the 5^{th} grade to the 8^{th} grade: https://www.sallyridescience.com/festivals
    (f) *Sally Ride Science Camps* are summer camps for girls from the 4^{th} grade to the 9^{th} grade: http://www.sallyridecamps.com/
    (g) GRAIL MoonKAM:
        i. "GRAIL MoonKAM (Moon Knowledge Acquired by Middle school students) is GRAIL's signature education and public outreach program."

ii. "GRAIL MoonKAM will engage middle schools across the country in the GRAIL mission and lunar exploration."
iii. https://www.grailmoonkam.com/

(h) EarthKAM:
i. EarthKAM (Earth Knowledge Acquired by Middle school students) is a NASA educational outreach program enabling students, teachers and the public to learn about Earth from the unique perspective of space.
ii. https://earthkam.ucsd.edu/

27. *American Association for the Advancement of Science, AAAS*:
(a) ENTRY POINT! for Students With Disabilities (in STEM): http://www.aaas.org/careercenter/fellowships/ and http://ehrweb.aaas.org/entrypoint/
(b) AAAS Mass Media Science & Engineering Fellows Program (for STEM grad students to intern in mass media companies): http://www.aaas.org/programs/education/MassMedia/
(c) Diversity Issues: http://sciencecareers.sciencemag.org/career_magazine/diversity_issues/
(d) Internships involving science and journalism, human rights, scientific freedom, responsibility, or law: http://www.aaas.org/careercenter/ and http://www.aaas.org/careercenter/internships/scienceminority.shtml (AAAS Minority Science Writers Internship)

28. *NASA* resources for students: http://www.nasa.gov/audience/forstudents/index.html and http://www.nasa.gov/offices/education/programs/national/summer/education_resources/index.html (NASA Summer of Innovation)
29. *National Academy of Engineering*'s technological literacy program for people (students, parents, and educators) to learn more about technology: http://www.nae.edu/nae/techlithome.nsf
30. *American Chemical Society* Science for Kids program (for students in K-12): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_TRANSITIONMAIN&nod id=878&use_sec=false&sec_url_var=region1&__uuid=984d4ee7-4214-4d35-9899-bc2f91dee
31. *California Digital Educator Consortium*, "Digital Educator," Digital Learning Center: http://www.digitaleducator.com/
32. Kenny Felder, "Selected Other Educational Sites on the Web". Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/kenny/edulinks.html; last accessed on August 28, 2010.
33. FHSST (Free High School Science Texts); free textbooks for grades 10-12 in Physics, Chemistry, and Mathematics. Available at: http://www.fhsst.org/; last accessed on August 28, 2010.
34. John Baez, *Usenet Physics FAQ*, Department of Mathematics, University of California, Riverside, September 2009. Available at: http://math.ucr.edu/home/baez/physics/; last accessed on August 28, 2010.
35. *Women Scientists in History*: http://www.hypatiamaze.org/
36. *American Society for Engineering Education*:
(a) Science and Engineering Apprenticeship Program (SEAP):

i. "The Science and Engineering Apprenticeship Program (SEAP) provides an opportunity for students to participate in research at a Department of Navy (DoN) laboratory during the summer."
ii. "The goals of SEAP are to encourage participating students to pursue science and engineering careers, to further their education via mentoring by laboratory personnel and their participation in research, and to make them aware of DoN Research and technology efforts, which can lead to employment within the DoN."
iii. "High school students who have completed at least Grade 9. A graduating senior is eligible to apply."
iv. "Must be 16 years of age for most laboratories. Some laboratories may accept a 15 year old applicant. Please check individual lab description for more details."
v. "Applicants must be US citizens and participation by Permanent Resident Aliens is limited. Please check individual lab descriptions for participation of Permanent Resident Aliens."
vi. http://seap.asee.org/

37. robots.net, *Robot Competitions* (list of robot competitions and contests) : http://robots.net/rcfaq.html
38. International Council on Systems Engineering (INCOSE):
    (a) Careers in Systems Engineering: http://www.incose.org/educationcareers/careersinsystemseng.aspx
    (b) Frequently Asked Questions for Students [about Systems Engineering]: http://www.incose.org/educationcareers/faqsforstudents.aspx
    (c) What is Systems Engineering?: http://www.incose.org/practice/whatissystemseng.aspx
39. *National Society of Professional Engineers*:
    (a) A Sightseer's Guide to Engineering: http://www.engineeringsights.org/
40. *Engineers Dedicated to a Better Tomorrow (a.k.a., DedicatedEngineers)*:
    (a) The "K-12 Crowd" (Students, Teachers, Guidance Counselors and Parents): http://www.dedicatedengineers.org/intro_for_K-12.htm
    (b) http://www.dedicatedengineers.org/
41. National Engineers Week Foundation:
    (a) Discover Engineering: http://www.discoverengineering.org/
    (b) Introduce A Girl to Engineering: http://www.eweek.org/EngineersWeek/IntroduceAGirl.aspx
    (c) All About Engineering: http://www.eweek.org/AboutEngineering/AboutEngineering.aspx
42. Scholarships:
    (a) IEEE Presidents' Scholarship: http://www.ieee.org/education_careers/education/preuniversity/scholarship.html
    (b) *P. O. Pistilli scholarship*:
        i. Supported by the Design Automation Conference which ACM/SIGDA sponsors, the objective of the P. O. Pistilli Scholarship is to increase the pool of professionals in Electrical Engineering and Computer Science from underrepresented groups (Women, African American, Hispanic, American Indian, and Disabled).

ii. Scholarships of $4000 per year, renewable for up to 5 years, are awarded annually to 2-7 high school seniors from the above mentioned under represented groups who have a 3.00 GPA or better (on a 4.00 scale), have demonstrated high achievement in math and science courses, have expressed a strong desire to pursue careers in electrical engineering, computer engineering, or computer science, and who have demonstrated substantial financial need.
iii. U.S. citizenship is not required, but applicants must be U.S. residents when they apply and must plan to attend an accredited US college or university.
iv. http://www.sigda.org/pistilli.html

(c) Engineering Education Service Center (EESC): http://www.engineeringedu.com/scholars.html
(d) ASME-ASME Auxiliary FIRST Clarke Scholarships: http://www.asme.org/Education/College/FinancialAid/High_School_Seniors.cfm and http://www.asme.org/Education/College/FinancialAid/Auxiliary_FIRST_Clarke.cfm
(e) International Petroleum Institutes High School Scholarships (for individuals entering a college program in engineering): http://www.asme-ipti.org/public/pagscholarshipprogra aspx
(f) American Institute of Chemical Engineers (AIChE):
i. Fuels and Petrochemicals Division Scholarship (for high school students entering undergraduate programs in engineering or science that are related to fuels and petrochemicals): http://www.aiche.org/Students/Awards/F_PDScholarship.aspx
ii. Minority Scholarship Awards for Incoming College Freshmen (for underrepresented minorities entering an undergraduate chemical engineering program): http://www.aiche.org/Students/Awards/MinorityScholarshipAwardsIncomingFreshmen.aspx

(g) Sallie Mae Fund:
i. http://www.thesalliemaefund.org/smfnew/index.html
ii. List of scholarship resources: http://www.thesalliemaefund.org/smfnew/sections/search.html
iii. Top 10 Tips for Planning and Paying for College: http://www.thesalliemaefund.org/smfnew/fin_aid/index.html
iv. Scholarships: http://www.thesalliemaefund.org/smfnew/scholarship/index.html and http://www.thesalliemaefund.org/smfnew/sections/apply.html
v. Important information for parents about saving for college and getting financial aid:
A. http://www.thesalliemaefund.org/smfnew/sections/download.html
B. This information is also available in Spanish. Summaries are also available in other languages such as:
- French
- German
- Italian
- Korean
- Russian
- Simplified and Traditional Chinese

- Tagalog
- Vietnamese

C. Top 10 Tips for Planning and Paying for College: http://www.thesalliemaefund.org/smfnew/fin_aid/index.html

vi. Kids2College program: http://www.thesalliemaefund.org/smfnew/initiatives/kidscollege.html

vii. For African-American individuals entering college:
   A. Black College Dollars: http://www.thesalliemaefund.org/smfnew/scholarship_directory/index.html
   B. http://www.thesalliemaefund.org/smfnew/initiatives/aa.html

viii. For Hispanic Americans, or Latinos/Latinas:
   A. http://www.thesalliemaefund.org/smfnew/pdf/Scholarship_Directory.pdf
   B. Latino College Dollars: http://www.latinocollegedollars.org/

(h) *American Chemical Society*:
   i. ACS Scholars Program (for underrepresented minorities in, or entering, an undergraduate program in chemistry, biochemistry, or chemical engineering): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=1650&use_sec=false&sec_url_var=region1&__uuid=b3b583cf-18ae-4fb0-9375-33f75a0ccf49
   ii. Project SEED Scholarships (for high school seniors who have worked at least one summer at a science institute under the Project SEED program): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=2031&use_sec=false&sec_url_var=region1&__uuid=99bc6a62-3e78-4b2a-be3f-50b28f7ff265

(i) The Posse Foundation: http://www.possefoundation.org/

(j) Hispanic Scholarship Fund (HSF) scholarship programs for high school students: http://www.hsf.net/innerContent.aspx?id=426

(k) Asian & Pacific Islander American Scholarship Fund (APIASF): scholarships for individuals entering college as freshmen; see http://www.apiasf.org/scholarship_apiasf.html

(l) Nationally Coveted College Scholarships, Graduate School Fellowships & Postdoctoral Awards: http://scholarships.fatomei.com/

(m) *SPIE* Scholarship Program (for high school students entering college to study optics, photonics, imaging, optoelectronics, or related program): http://spie.org//x1733.xml?WT.svl=mddm14

(n) Susan G. Komen for the Cure®: The Komen College Scholarship Program, http://ww5.komen.org/ResearchGrants/CollegeScholarshipAward.html

(o) National Society of Professional Engineers's list of scholarships for high school students: http://www.nspe.org/Students/Scholarships/index.html

43. Competitions outside of electrical engineering and computer science:

(a) AWM Essay Contest: Biographies of Contemporary Women in Mathematics; see http://www.awm-math.org/biographies/contest.html

(b) National Engineers Week Future City Competition (students from 6^{th}–8^{th} grades): http://www.futurecity.org/

44. Resources for teachers:
    (a) IEEE Teacher In-Service Program (TISP):
        i. http://www.ieee.org/education_careers/education/preuniversity/tispt/index.html
        ii. Lesson Plans for Pre-university Instructors: http://www.ieee.org/education_careers/education/preuniversity/resources/index.html
    (b) Global Challenge Award: http://www.globalchallengeaward.org/display/public/Home
    (c) Teachers' Domain (to teach students about science, engineering, and the arts): http://www.teachersdomain.org/
    (d) *TeachEngineering* digital library:
        i. The *TeachEngineering* digital library provides teacher-tested, standards-based engineering content for K-12 teachers engineering content for K12 teachers to use in science and math classrooms. Engineering lessons connect real-world experiences with curricular content already taught in K-12 classrooms. Mapped to educational content standards, *TeachEngineering*'s comprehensive curricula are hands-on, free, and relevant to children's daily lives.
        ii. http://www.teachengineering.com/index.php
    (e) Engineering Pathway: http://www.engineeringpathway.com/ep/index.jhtml
    (f) *American Society of Mechanical Engineers, ASME*: http://www.asme.org/Education/PreCollege/TeacherResources/
    (g) *National Science Foundation* resources for the K-12 classroom: http://nsf.gov/news/classroom/engineering.jsp
    (h) *NASA*: http://www.nasa.gov/audience/foreducators/index.html
    (i) The Mathematical Association of America:
        i. Pre-College Programs: http://www.maa.org/funding/pre_college.html. Also, see http://www.maa.org/funding/undergraduate.html.
        ii. Special Interest Group of the Mathematical Association of America on the use of the World-Wide Web in Undergraduate Mathematics Instruction (Web SIGMAA). Available at: http://math.chapman.edu/websigmaa/index.php/Main_Page; last accessed on September 2, 2010.
        iii. SIGMAA TAHSM (Teaching Advanced High School Mathematics). Available at: http://sigmaa.maa.org/tahsm/; last accessed on September 2, 2010.
        iv. Special Interest Group on Statistics Education: http://sigmaa.maa.org/stat-ed/
    (j) Math for America:
        i. MfA Master Teacher Fellowship program:
            A. The Math for America Master Teacher Fellowship program rewards exceptional public secondary school math teachers with a four-year Fellowship.
            B. MfA Master Teacher Fellowships are currently available in Berkeley, Boston and New York City.
            C. http://www.mathforamerica.org/web/guest/master-teachers
        ii. MfA Early Career Fellows:
            A. The Math for America Early Career Fellowship is awarded to public secondary school math teachers early in their careers.
            B. The MfA Early Career Fellowship requires a commitment of four years and is available in New York City.

C. http://www.mathforamerica.org/early-career-fellows

iii. MfA Fellows:

A. http://www.mathforamerica.org/web/guest/mfa-fellows

iv. Teachers resources: http://www.mathforamerica.org/web/guest/teacher-resources and http://www.mathforamerica.org/teacher-resources/classroom (classroom resources)

v. Resources for professional development (teachers): http://www.mathforamerica.org/teacher-resources/professional

vi. http://www.mathforamerica.org/home

(k) Association for Symbolic Logic (ASL):

i. Guidelines on Logic Education: http://www.ucalgary.ca/aslcle/guidelines

ii. Educational Logic Software: http://www.ucalgary.ca/aslcle/logic-courseware

45. Underrepresented minorities:

(a) University of Washington:

i. Department of Computer Science and Engineering:

A. *AccessComputing*:

- http://www.washington.edu/accesscomputing/
- Has resources to help students with disabilities to pursue "undergraduate and graduate degrees and careers in computing fields".
- It runs the "Summer Academy for Advancing Deaf & Hard of Hearing in Computing" for youths who are hearing impaired: http://www.washington.edu/accesscomputing/dhh/academy/index.html

(b) Engineer Girl:

i. Resources for students, parents, and teachers to encourage girls to explore careers and educational opportunities in engineering

ii. Created by the National Academy of Sciences and The National Academy of Engineering

iii. Contests for K-12 students: http://www.engineergirl.org/?id=4436

iv. http://www.engineergirl.org/

(c) Engineering Your Life: http://www.engineeryourlife.org/

(d) GirlGeeks: http://www.girlgeeks.org/

(e) National Society of Black Engineers (NSBE) competitions for high school/K-12 students: http://www.nsbe.org/Programs/Competitions/NSBE-Jr-.aspx

(f) The Society of Mexican American Engineers and Scientists (MAES): MAES PreCollege Outreach Programs, http://www.maes-natl.org/index.php?module=ContentExpress&f
display&ceid=16&meid=236

(g) *Center for the Advancement of Hispanics in Science and Engineering Education* (CAHSEE):

i. STEM - The Science, Technology, Engineering & Mathematics Institute (for students from grades 5 through 11): http://www.cahsee.org/2programs/stem.asp.htm

ii. YEP - Young Educators Program (fellows would learn how to train students in the aforementioned STEM Institute): http://www.cahsee.org/2programs/yep.asp.htm

iii. CAYSA - Central American Young Scholar Awards: http://www.cahsee.org/2programs/caysa.asp.htm. "The CAYSA ceremonies honor more than 60 Washington, D.C. area high school seniors of Central American descent who have demonstrated remarkable success throughout all four years of high school. Students must be of Central American descent and have at least a 3.0 gpa."
iv. Scholarships: http://www.cahsee.org/6resources/scholarships.asp.htm
v. http://www.cahsee.org/about/about.asp.htm

6.2 Science & Engineering Outreach for Undergraduates and Grad Students

Science, mathematics, and engineering outreach to undergraduates and graduate students outside of electrical and computer engineering, and computer science:

1. Mac Hyman, "Good Choices for Great Careers in the Mathematical Sciences," talk given at 2008 SIAM Annual Meeting. Available at: http://client.blueskybroadcast.com/siam08/hyman/index.html; last accessed on August 25, 2010. Also, see http://meetings.siam.org/program.cfm?CONFCODE=AN08, http://www.siam.org/meetings/an08/program.php, and http://www.siam.org/meetings/an08/.
2. *Accreditation.org*:
   (a) Information about the accreditation of engineering degree programs around the world
   (b) http://www.accreditation.org/
3. John Baez, "How to Learn Math and Physics," Department of Mathematics, University of California, Riverside, December 24, 2007. Available at: http://math.ucr.edu/home/baez/books.html; last accessed on August 28, 2010.
4. *MentorNet*:
   (a) http://www.mentornet.net/
   (b) Enables people to network with scientists, engineers, and professors in Science, Technology, Engineering, and Mathematics (STEM)
   (c) Is very supportive of minorities, so that more minorities (particularly underrepresented minorities) can be attracted to STEM careers
5. *National Society of Professional Engineers*:
   (a) Student Resources:
      i. http://www.nspe.org/Students/Resources/index.html
      ii. An Employment Guidelines Checklist for the Engineer Job Applicant: http://www.nspe.org/Students/Resources/checklist.html
   (b) Career Center: http://www.nspe.org/CareerCenter/index.html
   (c) A Sightseer's Guide to Engineering: http://www.engineeringsights.org/
6. *JustGarciaHill* "Study Skills for Budding Scientists": http://www.justgarciahill.org/index.php/science-study-skills.html
7. *NASA* resources for students: http://www.nasa.gov/audience/forstudents/index.html
8. *iTunes U*:
   (a) *iTunes* is required to listen to or watch these lectures, talks, and presentations.

(b) Access *iTunes U* at: http://deimos3.apple.com/indigo/main/main.html?v0=WWW-AMUS-ITUNESU070521-N48LX

(c) *iTunes U* is a set of webcast and podcasts, where you can easily find audio and video clips for lectures, seminars, announcements, virtual tours, and so on. For example, some professors from schools like MIT or Berkeley will provide audio/video clips of their lectures on *iTunes U*.

(d) This can help in exploring different majors before a college student declares her/his major(s). If a student is not sure if she/he wants to double major in deaf studies and linguistics, this student can check out some linguistics lectures from her/his (preferred) college/university, if it uses *iTunes U*, or those from other universities.

9. Rochester Institute of Technology, "Biology & Biotechnology Paid Co-op/Internships for 2011," Department of Biological Sciences, Rochester Institute of Technology: http://people.rit.edu/gtfsbi/Symp/summer.htm
10. *Mathematical Association of America (MAA)* information on educational pathways and career opportunities:
    (a) Undergraduate Students: http://www.maa.org/students/undergrad/
    (b) Graduate Students: http://www.maa.org/students/grad/
    (c) Underrepresented Groups: http://www.maa.org/programs/underrep.html
    (d) Mathematical Association of America (MAA) MathFest (for students in mathematics): http://www.maa.org/mathfest/
    (e) MAA Online Columns: http://www.maa.org/news/columns.html
11. New Zealand Institute of Mathematics and its Applications (NZIMA):
    (a) *MathsReach*: Careers (information about careers based on a higher education in mathematics or related field): http://www.mathsreach.org/Careers
12. *Engineers Dedicated to a Better Tomorrow (a.k.a., DedicatedEngineers)*:

Resources for College Students and Faculty/Staff Members: http://www.dedicatedengineers.org/intro_for_college.htm

    (a) http://www.dedicatedengineers.org/
13. competitions:
    (a) INFORMS Doing Good with Good OR - Student Competition:
        i. Doing Good with Good OR-Student Competition is held each year to identify and honor outstanding projects in the field of operations research and the management sciences conducted by a student or student group that have a significant societal impact.
        ii. http://www.informs.org/Recognize-Excellence/INFORMS-Prizes-Awards/Doing-Good-with-Good-OR
    (b) AWM Essay Contest: Biographies of Contemporary Women in Mathematics; see http://www.awm-math.org/biographies/contest.html
    (c) American Society of Mechanical Engineers (ASME):
        i. Student Design Competition: http://www.asme.org/Events/Contests/DesignContest/Student_Design_Competition.cfm
        ii. ASME Student Mechanism and Robot Design Competition: http://www.asme.org/Events/Contests/Student_Mechanism_Robot_2.cfm

(d) American Institute of Chemical Engineers (AIChE) competitions: http://www.aiche.org/Students/Awards/index.aspx

14. *icademic.org* resources for the life sciences and engineering: http://www.icademic.org/
15. underrepresented minorities:
    (a) The Society of Women Engineers: http://societyofwomenengineers.swe.org/
    (b) Association for Women in Science (AWIS): http://www.awis.org/
    (c) Association for Women in Mathematics (AWM): http://www.awm-math.org/
    (d) Sigma Delta Epsilon-Graduate Women in Science (GWIS): http://www.gwis.org/
    (e) Society of Hispanic Professional Engineers (SHPE):
        i. Advancing Hispanic Excellence in Technology, Engineering, Math and Science (AHETEMS) Foundation: http://www.ahetems.org/
        ii. AHETEMS Scholarship Program: http://www.ahetems.org/scholarships/
        iii. Graduate & Young Professional Fellowship Program (encourage young professionals to engage in public policy): http://www.ahetems.org/graduate/graduate-young-
        iv. SHPE/GEM Fellowship (for graduate students in STEM at GEM Member Universities): http://www.ahetems.org/graduate/shpe-gem-graduate-award/. See http://www.gemfellowship.org/gem-universities/university-members for a list of GEM member universities.
        v. Internship opportunities: http://www.ahetems.org/scholar-internships/
        vi. http://oneshpe.shpe.org/wps/portal/national
    (f) National Society of Black Engineers (NSBE):
        i. Scholarships: http://www.nsbe.org/Programs/Scholarships.aspx
        ii. Competitions for undergraduates and graduate students: http://www.nsbe.org/Programs/Competitions/Collegiate.aspx
        iii. http://www.nsbe.org/
    (g) The Society of Mexican American Engineers and Scientists (MAES):
        i. MAES Undergraduate and Graduate Outreach Programs (including "GRE/Graduate Application Fee Waivers"): http://www.maes-natl.org/index.php?module=ContentExpress&func=display&ceid=90&meid=238
        ii. Scholarships & Awards: http://www.maes-natl.org/index.php?meid=328
        iii. MAES Scholarship Program: http://www.maes-natl.org/index.php?module=ContentExpress&func=display&ceid=518&meid=241
    (h) SACNAS (Society for Advancement of Chicanos and Native Americans in Science):
        i. Scholarships: http://www.sacnas.org/webadindex.cfm?webadcategory_id=7
        ii. Fellowships: http://www.sacnas.org/webadIndex.cfm?webadcategory_id=5
    (i) *Center for the Advancement of Hispanics in Science and Engineering Education* (CAHSEE):
        i. YESP - Young Engineers & Scientists Program: http://www.cahsee.org/2programs/yesp.asp.htm. "This program places talented Hispanic college students in the research labs of government agencies."
        ii. Scholarships: http://www.cahsee.org/6resources/scholarships.asp.htm
16. List of professional organizations:
    (a) Association for Women in Science (AWIS): http://www.awis.affiniscape.com/displaycommon.cfm?an=1&subarticlenbr=19

6.3 Other Science and Engineering Outreach

Other Science and Engineering Outreach:

1. Frontiers of Engineering (networking event for mid-career engineers): http://www.naefrontiers.org/

6.4 Electrical and Computer Engineering & Computer Science Outreach

Electrical and computer engineering, and computer science outreach:

1. *MentorNet*:
   (a) http://www.mentornet.net/
   (b) Enables people to network with scientists, engineers, and professors in Science, Technology, Engineering, and Mathematics (STEM)
   (c) Is very supportive of minorities, so that more minorities (particularly underrepresented minorities) can be attracted to STEM careers
2. IEEE:
   (a) *IEEE-USA Salary Service* provides a survey of jobs in electrical and computer engineering: http://www.ieeeusa.org/careers/salary/
   (b) *IEEE Santa Clara Valley Section PACE*: Professional Activities Committee for Engineers (PACE); see http://www.ewh.ieee.org/r6/scv/PACE/
   (c) *IEEE Santa Clara Valley Section*: http://ewh.ieee.org/r6/scv/ and http://www.ieee.org/scv
   (d)
3. VLSI design and verification:
   (a) *DVClub* for individuals interested in VLSI verification: http://www.dvclub.org/
   (b) *DeepChip.com*: http://www.deepchip.com
   (c)
4. *The Indus Entrepreneurs (TiE)* for networking among high-tech entrepreneurs, start-up co-founders, venture capitalists, and angel investors: http://www.tie.org/
5. *Accreditation.org*:
   (a) Information about the accreditation of engineering degree programs around the world
   (b) http://www.accreditation.org/
6. *iTunes U*:
   (a) *iTunes* is required to listen to or watch these lectures, talks, and presentations.
   (b) Access *iTunes U* at: http://deimos3.apple.com/indigo/main/main.html?v0=WWW-AMUS-ITUNESU070521-N48LX
   (c) *iTunes U* is a set of webcast and podcasts, where you can easily find audio and video clips for lectures, seminars, announcements, virtual tours, and so on. For example, some professors from schools like MIT or Berkeley will provide audio/video clips of their lectures on *iTunes U*.
   (d) This can help in exploring different majors before a college student declares her/his major(s). If a student is not sure if she/he wants to double major in deaf studies and linguistics, this student can check out some linguistics lectures from her/his (preferred) college/university, if it uses *iTunes U*, or those from other universities.

7. undergraduates:
   (a) *Humanitarian FOSS Project*:
      i. Where FOSS refers to Free and Open Source Software
      ii. For computer science and engineering students
      iii. http://www.hfoss.org/
   (b) *SIGDA Design Automation Summer School*:
      i. *NSFSRCSIGDADAC Design Automation Summer School*
      ii. http://www.sigda.org/dass.html
   (c) *Young Student Support Program at DAC*:
      i. Also known as *DAC Young Student Support Program*
      ii. http://www.sigda.org/youngstudent.html
   (d) *ACM Student Research Competition at Design Automation Conference*:
      i. Sponsored by *Microsoft Research*
      ii. http://www.sigda.org/studentcomp.html
      iii. Also, see *ACM Student Research Competition* @ http://src.acm.org/.
   (e) Job database for positions in the Video Game, Animation, VFX, and Software/Technology industries: http://www.creativeheads.net/
8. graduate students:
   (a) *SIGDA Design Automation Summer School*:
      i. *NSFSRCSIGDADAC Design Automation Summer School*
      ii. http://www.sigda.org/dass.html
   (b) *Young Student Support Program at DAC*:
      i. Also known as *DAC Young Student Support Program*
      ii. http://www.sigda.org/youngstudent.html
   (c) *ACM Student Research Competition at Design Automation Conference*:
      i. Sponsored by *Microsoft Research*
      ii. http://www.sigda.org/studentcomp.html
      iii. Also, see *ACM Student Research Competition* @ http://src.acm.org/.
   (d) *SIGDA University Booth at DAC*:
      i. Or, *SIGDA/DAC University Booth*
      ii. http://www.sigda.org/ubooth.html
   (e) *SIGDA Ph.D. Forum at DAC*:
      i. http://www.sigda.org/phdforum.html
      ii. http://www.sigda.org/daforum/
   (f) *DAC Graduate Scholarship*:
      i. *A. Richard Newton Graduate Scholarships* to Support Graduate Research and Study
      ii. http://www.sigda.org/gradscholarship.html
9. competitions, and programming contests and challenges:
   - *SIGDA CADathlon at ICCAD*:
     (a) http://www.sigda.org/programs/cadathlon/
     (b) http://www.sigda.org/cadathlon.html
   - *DAC/ISSCC Student Design Contest*:
     (a) http://www.dac.com
   - *ACM/IEEE International Conference on Formal Methods and Models for Codesign – Design Contest*:

(a) MEMOCODE Hardware/Software Co-Design Contest (MEMOCODE HW/SW co-design contest)
(b) http://www-memocode2010.imag.fr/
(c) http://memocode2010.csail.mit.edu/redmine/wiki/memocode2010/Results

- *International Low Power Design Contest*:
  (a) ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED) – Design Contest
  (b) The International Symposium on Low Power Electronics and Design is holding the International Low Power Design Contest to provide a forum for universities and research organizations to showcase original "power-aware" designs and to highlight the innovations and design choices targeted at low power.
  (c) The goal is to encourage and highlight design-oriented approaches to power reduction.
  (d) http://www.islped.org/2010/index.html
- *University LSI Design Contest @ ASP-DAC*:
  (a) Application areas or types of circuits of the original LSI circuit designs include (but are not limited to):
    i. Analog, RF and Mixed-Signal Circuits
    ii. Digital Signal Processing
    iii. Microprocessors
    iv. Custom ASIC
  (b) Methods or technology used for implementation include:
    i. Full Custom and Cell-Based LSIs
    ii. Gate Arrays
    iii. FPGA/PLDs.
  (c) http://www.aspdac.com/aspdac2011/cfd/
- IEEE Asian Solid-State Circuits Conference (A-SSCC) Student Design Contest: http://a-sscc2010.a-sscc.org/contest.html
- *VLSI Conference 2011 - Design Contest*:
  (a) Design/project fields include (but not limited to):
    i. Digital Integrated Circuits
    ii. Analog Integrated Circuits
    iii. FPGA based designs
    iv. Computer Architectures/ Processors
    v. Reconfigurable Computing Systems
    vi. SoC / Platform-based designs
    vii. Embedded Systems
    viii. MEMS/Optics/Bio-Chips
    ix. Innovative Design Methodologies and Verification Techniques.
  (b) http://vlsiconference.com/vlsi2011/submissions_design_contest.html
- *Satisfiability Modulo Theories Competition* (SMT-COMP):
  (a) Competition for SMT solvers
  (b) http://www.smtcomp.org/2010/
- *SAT Competition 201X*, where $X > 0$ & $X mod 2 = 1$:
  (a) The purpose of the competition is to identify new challenging benchmarks and to promote new solvers for the propositional satisfiability problem (SAT) as well as to compare them with state-of-the-art solvers.

(b) http://www.satcompetition.org/

- *SAT-Race 201X*, where $X > 0$ & $Xmod2 = 0$:
  (a) SAT-Race 201X is a competitive event for solvers of the Boolean Satisfiability (SAT) problem.
  (b) In contrast to the SAT Competitions, the focus of SAT-Race is on application benchmarks only.
  (c) http://baldur.iti.uka.de/sat-race-2010/
- *CADE ATP System Competition* (CASC):
  (a) It is a yearly competition of fully automated theorem provers for classical first order logic.
  (b) http://www.cs.miami.edu/~tptp/CASC/
- *QBFEVAL'1X*:
  (a) QBF Solver competition for solvers to determine Quantified Boolean Formula (QBF) satisfiability.
  (b) QBFLIB is a collection of instances, solvers, and tools related to Quantified Boolean Formula (QBF) satisfiability. See http://www.qbflib.org/.
  (c) http://www.qbflib.org/index_eval.php
- *Pseudo-Boolean Competition 201X*:
  (a) Competition for pseudo-Boolean solvers.
  (b) http://www.cril.univ-artois.fr/PB10/
- *Answer Set Programming System Competition*:
  (a) http://dtai.cs.kuleuven.be/events/ASP-competition/
- *Max-SAT Evaluation, Max-SAT 201X*:
  (a) Competition for Max-SAT solvers
  (b) http://www.maxsat.udl.cat/
  (c) http://www.maxsat.udl.cat/09/
- *International Constraint Solver Competition*:
  (a) Also known as:
    i. International Constraint Solver Competition (CSP, Max-CSP and Weighted-CSP competition)
    ii. International CSP Solver Competition (CSP, Max-CSP and Weighted-CSP competition)
  (b) The Fourth International Constraint Solver Competition (CSC'2009) is organized to improve our knowledge of what is behind the efficiency of constraint satisfaction algorithms, heuristics, solving strategies, and constraint systems.
  (c) http://cpai.ucc.ie/
- *IEEEXtreme 24 Hour Programming Challenge*:
  (a) Programming contest for college students
  (b) http://portal.ieee.org/web/membership/students/scholarshipsawardscontests/ieeextreme.html
- *ACM International Collegiate Programming Contest* (ACM-ICPC or ICPC):
  (a) Programming contest for college students
  (b) Official web page: http://cm.baylor.edu/welcome.icpc
  (c) Other web resources:
    i. *Wikipedia*: http://en.wikipedia.org/wiki/ACM_International_Collegiate_Programming_Contest

ii. :
iii. :
iv. *Valladolid Online Judge Site*: http://acm.uva.es/
v. *ACMSolver :: Art of Programming Contest, Tips and Tricks for C, C++, Java*: http://www.acmsolver.org/

(d)

- *TopCoder* coding and design contests:
  (a) The contests cover various fields, such as:
    i. Algorithm
    ii. Conceptualization
    iii. Specification
    iv. Architecture
    v. Component Design
    vi. Component Development
    vii. Assembly
    viii. Test Scenarios
    ix. Test Suites
    x. UI Prototype
    xi. Rich Internet Application (RIA) Build
    xii. Bug Race
    xiii. Marathon Match
    xiv. High School (for high school students)
    xv. Copilot Opportunities
  (b) http://www.topcoder.com/
- IEEE Presidents' Change the World competition:
  (a) The IEEE Presidents Change the World Competition recognizes students who develop unique solutions to real-world problems using engineering, science, computing and leadership skills to benefit their community, the world at large, or both.
  (b) http://www.ieeechangetheworld.org/
- Google Code Jam (programming contest): http://code.google.com/codejam/ and http://en.wikipedia.org/wiki/Google_Code_Jam
- *RoboCup*™ competitions:
  (a) Has different categories, including soccer, rescue operations, and home applications.
  (b) http://www.robocup.org/
- ICFP Programming Contest (ICFP refers to International Conference on Functional Programming): http://icfpcontest.org/
- Student Cluster Competition (SCC):
  (a) During SC10, teams consisting of six students, undergraduate and/or high school, will showcase the amazing power of clusters and the ability to utilize open source software to solve interesting and important problems. They will compete in real-time on the exhibit floor to run a workload of real-world applications on clusters of their own design while never exceeding the dictated power limit.
  (b) During SC10 in New Orleans, teams will assemble, test and tune their machines and run the HPCC benchmarks until the starting bell rings on Monday night at the Exhibit Opening Gala where they will be given the competition data sets. In full

view of conference attendees, teams will execute the prescribed workload while showing progress and science visualization output on large high-resolution displays in their areas. Teams race to correctly complete the greatest number of application runs during the competition period until the close of the exhibit floor on Wednesday evening.
    (c) http://sc10.supercomputing.org/?pg=studentcluster.html

- Mentor Graphics:
    (a) PCB Technology Leadership Awards (PCB design contest): http://www.mentor.com/products/pcb-system-design/tla/index.cfm?v=mentorgraphics&p=handout:tla&a=print_card&g=sdd&s=1x1&c=ocid_2203&cmpid=3911, or http://www.mentor.com/go/tla
- INFORMS Data Mining Contest:
    (a) http://ifors.org/web/call-for-participation-informs-data-mining-contest-2
    (b) http://kaggle.com/informs2010
- INFORMS Doing Good with Good OR - Student Competition:
    (a) Doing Good with Good OR-Student Competition is held each year to identify and honor outstanding projects in the field of operations research and the management sciences conducted by a student or student group that have a significant societal impact.
    (b) http://www.informs.org/Recognize-Excellence/INFORMS-Prizes-Awards/Doing-Good-with-Good-OR
- HPC Challenge Award Competition: http://www.hpcchallenge.org/
- Sphere Online Judge, SPOJ (programming contest): http://www.spoj.pl/
- High Performance and Scientific Computing Contest (Argonne National Laboratory, U.S. Department of Energy, DOE): https://wiki.alcf.anl.gov/index.php/HPSC_Contest_Information

10. Sun HPC Software Programming Challenge (Oracle Corporation): http://wikis.sun.com/display/HPCContest/Home
11. News media:
    (a) —
    (b) **News media for Electronic Design Automation**
    (c) *EDACafe*: http://www.edacafe.com/
    (d) *SIGDA E-Newsletter* (SIGDA Electronic Newsletter): http://www.sigda.org/newsletter/
    (e) —
    (f) **News media for Electrical and Computer Engineering**
    (g) *EE Times* (Electronic Engineering Times): http://www.eetimes.com/
    (h) *EDN* (Electrical Design News): http://www.edn.com/
    (i) *IEEE Spectrum*: http://spectrum.ieee.org/
    (j) *The Institute* (from IEEE): http://www.theinstitute.ieee.org
    (k) *IEEE-USA Today's Engineer*: http://www.todaysengineer.org/
    (l) —

(m) **News media for Computer Science and Engineering, Information Systems, and IT**
(n) *ACM TechNews*: http://technews.acm.org/
(o) *TechCareers*: http://www.techcareers.com/
(p) :
(q) :
(r) :
(s) :
(t) :
(u) :
(v) :
(w) —
(x) **Other News Media**
(y) *iTunes U*
(z) *YouTube EDU*

12. underrepresented minorities:
    (a) women:
        i. IEEE Women in Engineering (WIE): http://www.ieee.org/membership_services/membership/women/index.html?WT.mc_id=WIE_nav1
        ii. ACM-W: http://women.acm.org/
        iii. Computer Research Association's Committee on the Status of Women in Computing Research (CRA-W):
            A. http://www.cra-w.org/
            B. Computing Research Association's Committee on the Status of Women (CRA-W) and the Coalition to Diversify Computing (CDC), *CompArch Summer School on Parallel Programming and Architectures*. Available at: http://www.princeton.edu/~archss/; last accessed on September 3, 2010.
        iv. National Center for Women & Information Technology: http://www.ncwit.org/
        v. African-American Women in Technology organization (AAWIT): http://www.aawit.net/09/index.cfm
        vi. :

7 Scholarships, Fellowships, Awards, and Financial Aid

Resources for scholarships, fellowships, and financial aid:

1. —
2. **Scholarships and Fellowships in Electrical and Computer Engineering**
3. IEEE Awards, Competitions, and Scholarships: http://www.ieee.org/membership_services/membership/students/awards/index.html
4. computer architecture:
    (a) The George Michael Memorial HPC Fellowship Program:

   i. The Association of Computing Machinery (ACM), IEEE Computer Society and SC Conference series have established the High Performance Computing (HPC) Ph.D. Fellowship Program.
   ii. Every year, up to three fellowship recipients will each receive a stipend of at least $5,000 (U.S.) for one academic year, plus travel support to attend the SC conference.
   iii. See http://sc10.supercomputing.org/?searchterm=fellowship&pg=GeorgeMichaelM html

5. Qualcomm, *Qualcomm Innovation Fellowship* for Ph.D. students in Electrical Engineering and Computer Science at Stanford, UC Berkeley, UCLA, UCSD, and USC: http://www.qualcomm.com/innovation/research/university_relations/innovation_fellowship/qinf10.html
6. —
7. **Scholarships and Fellowships in Computer Science**
8. ACM Special Interest Group on Symbolic and Algebraic Manipulation (SIGSAM): List of Ph.D. positions in computer algebra and symbolic computation, as listed by SIGSAM; see http://www.sigsam.org/opportunities.phtml?searchterm=fellowship
9. Facebook Ph.D. Fellowship: http://www.facebook.com/careers/fellowship.php
10. Qualcomm, *Qualcomm Innovation Fellowship* for Ph.D. students in Electrical Engineering and Computer Science at Stanford, UC Berkeley, UCLA, UCSD, and USC: http://www.qualcomm.com/innovation/research/university_relations/innovation_fellowship/qinf10.html and http://www.qualcomm.com/innovation/research/university_relations/innovation_fellowship/
11. —
12. **Scholarships and Fellowships in Biomedical Engineering**
13. Whitaker International Fellows and Scholars Program:
    (a) For graduate/Ph.D. students and postdocs in biomedical engineering
    (b) http://www.whitaker.org/home
14. —
15. **Scholarships and Fellowships in Optical Engineering**
16. *SPIE* – The International Society for Optical Engineering:
    (a) "SPIE Scholarship Program" for undergraduates or graduate students studying optics, photonics, imaging, or optoelectronics program or related discipline (e.g., physics, electrical engineering): http://spie.org//x1733.xml?WT.svl=mddm14
    (b) Other scholarships (including scholarships for students doing research in nanolithography techniques and lasers): http://spie.org/x1736.xml
17. *Kidger Optics Associates* Michael Kidger Memorial Scholarship (to a college freshman, or sophomore of optical design): http://www.kidger.com/mkms_requirements.html
18. —

19. **Scholarships and Fellowships in Mechanical Engineering**
20. American Society of Mechanical Engineers (ASME):
    (a) Graduate Teaching Fellowships (for Ph.D. students in mechanical engineering): http://www.asme.org/Education/College/FinancialAid/Graduate_Teaching_Fellowships.cfm
    (b) ASME Scholarships:
        i. http://www.asme.org/Education/College/FinancialAid/Scholarships.cfm
        ii. US Undergraduates: http://www.asme.org/Education/College/FinancialAid/US_Undergraduates.cfm
        iii. Graduate Students: http://www.asme.org/Education/College/FinancialAid/Graduate_Students.cfm
        iv. International Students: http://www.asme.org/Education/College/FinancialAid/International_Undergraduates.cfm
    (c) Auxiliary Scholarships:
        i. http://www.asme.org/Education/College/FinancialAid/Auxiliary_Scholarships.cfm
        ii. Undergraduate Scholarships: http://www.asme.org/Education/College/FinancialAid/Undergraduate_Scholarships.cfm
        iii. Graduate Scholarships: http://www.asme.org/Education/College/FinancialAid/Graduate_Scholarships.cfm
        iv. Rice-Cullimore Scholarship (for international graduate students in the US): http://www.asme.org/Education/College/FinancialAid/RiceCullimore_Scholarship.cfm
    (d) International Petroleum Institutes College Scholarships (for undergraduates): http://www.asme-ipti.org/public/pagscholarshipprograms.aspx
    (e) International Petroleum Institutes Graduate Fellowship (for individuals entering a graduate program in mechanical engineering, and has an interest in the petroleum industry): http://www.asme-ipti.org/public/pagscholarshipprograms.aspx and http://www.asme.org/Communities/Students/Grad/Fellowships.cfm
21. —
22. **Scholarships and Fellowships in Civil Engineering**
23. American Society of Civil Engineers (ASCE):
    (a) Jack E. Leisch Memorial National Graduate Fellowship (for graduate students in transportation/traffic engineering): http://www.asce.org/Content.aspx?id=25021
    (b) Scholarships & Fellowships (for undergraduates and graduate students): http://www.asce.org/Content.aspx?id=18337
24. —
25. **Scholarships and Fellowships in Chemical Engineering**
26. American Institute of Chemical Engineers (AIChE) scholarships (includes scholarships for underrepresented minorities): http://www.aiche.org/Students/Scholarships/index.aspx

27. —

28. **Scholarships and Fellowships in Mathematics**

29. Seth Bonder Scholarship for Applied Operations Research in Health Services: http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards/Seth-Bonder-Scholarship-for-Applied-Operations-Research-in-Health-Services

30. —

31. **Scholarships and Fellowships in Science**

32. *Science.gov* (USA.gov for Science):
    (a) Internship and Fellowship Opportunities in Science for Undergraduate Students: http://www.science.gov/internships/undergrad.html
    (b) Graduate Students/Postdoctoral Fellowships: http://www.science.gov/internships/graduate.html

33. Heinz Family Philanthropies:
    (a) Teresa Heinz Scholars for Environmental Research program (for Ph.D./MS students working on their thesis in environmental science/engineering) at selected universities: http://www.heinzfamily.org/programs/environmentalscholars.html
    (b) http://www.heinzfamily.org/

34. Mayo Clinic:
    (a) Postbaccalaureate Research Education Program (PREP): http://www.mayo.edu/mgs/postbac-program.html

35. *American Chemical Society (ACS)*:
    (a) ACS-Hach Land Grant Undergraduate Scholarship (for chemistry undergraduates at a partner institution of ACS, and who plan to become chemistry teachers in US high schools): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=2243&use_sec=false&sec_url_var=region1&__uuid=eb054647-53e0-4594-81e8-8ef49159f3f4
    (b) ACS-Hach Second Career Teacher Scholarship (for graduates in chemistry or related areas who are entering an education masters program or teacher certification program): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=2244&use_sec=false&sec_url_var=region1&__uuid=4c27333f-4aad-481e-aaa4-f1db045d4eb4
    (c) ACS Scholars Program (for undergraduate underrepresented minorities majoring in chemistry, biochemistry, or chemical engineering): http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=1650&use_sec=false&sec_url_var=region1&__uuid=b3b583cf-18ae-4fb0-9375-33f75a0ccf49
    (d) Scholarships: http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_TRANSITIONMAIN&node_id=630&use_sec=false&sec_url_var=region1&__uuid=98e85c05-be75-4283-a97c-7a63ab4c3178

36. European Molecular Biology Organization:
    (a) EMBO Short-Term Fellowships (for junior researchers, including Ph.D. students): http://www.embo.org/programmes/fellowships/short-term.html

(b) EMBO Long-Term Fellowships (for junior researchers/postdocs): http://www.embo.org/programmes/fellowships/long-term.html

37. L'ORÉAL:
    (a) "For Women in Science" program: http://www.lorealusa.com/forwomeninscience or http://www.lorealusa.com/_en/_us/index.aspx?direct1=00008&direct2=00008/00001
    (b) Alternatively, go to http://www.lorealusa.com/_en/_us/ and select the "For Women in Science" tab.
    (c) Check out the "L'Oréal USA Fellowships for Women in Science" (US postdocs), "UNESCO-L'Oréal Fellowships for Women in Science" (for female Ph.D. students and postdocs in the life sciences), and the "L'Oréal-UNESCO Awardss for Women in Science" (for distinguished female scientists)
38. —
39. **Scholarships and Fellowships in Medicine**
40. Sarnoff Medical Student Research Fellowship Program (for US medical students interested in cardiovascular research): http://www.sarnoffendowment.org/
41. Mayo Clinic:
    (a) Postbaccalaureate Research Education Program (PREP): http://www.mayo.edu/mgs/postbac-program.html
42. —
43. **Lists of Scholarships and Fellowships**
44. List of scholarships:
    (a) Engineering Education Service Center, EESC (Engineering): http://www.engineeringedu.com/scholars.html
    (b) High Performance and Embedded Architecture and Compilation, HiPEAC (Computer Science and Engineering): http://www.hipeac.net/all_jobs_op
    (c) Office of Doctoral Programs at USC Viterbi School of Engineering, University of Southern California. External Fellowships and other support: http://viterbi.usc.edu/students/phd/fellowships-and-other-support/external-fellowships.htm. USC Fellowships: http://viterbi.usc.edu/students/phd/fellowships-and-other-s
    usc-fellowships.htm
    (d) Columbia College, Columbia University in the City of New York: http://www.college.columbia.edu/students/fellowships/catalog
    (e) New York University School of Law: http://www.law.nyu.edu/financialaid/supplementalaid/fellowships/index.htm
    (f) Swedish Institute scholarships:
        i. The Swedish Institute, a government agency, administers over 500 scholarships each year for students and researchers coming to Sweden to pursue their objectives at a Swedish university.
        ii. http://www.studyinsweden.se/Scholarships/

(g) Center for the Advancement of Hispanics in Science and Engineering Education (CAHSEE): http://www.cahsee.org/6resources/scholarships.asp.htm
(h) Association for Women in Mathematics (AWM): http://www.awm-math.org/education.html
(i) University of Wisconsin-Madison:
    i. Grants Information Collection: A Cooperating Collection of the Foundation Center Library Network, http://grants.library.wisc.edu/

45. —

46. **Scholarships and Fellowships in Science and Engineering**

47. National Academies:
    (a) Research Associateship Programs (graduate, postdoctoral, and senior level research opportunities): http://sites.nationalacademies.org/pga/rap/
    (b) Ford Foundation Fellowship Programs (predoctoral, dissertation or postdoctoral fellowships for individuals seeking academic careers in science and engineering): http://sites.nationalacademies.org/PGA/FordFellowships/index.htm
    (c) http://nationalacademies.org/grantprograms.html
    (d) List of Fellowship, Scholarship, and Grant Databases: http://sites.nationalacademies.org/PGA/Fellowships/PGA_046300
    (e) List of Outside Fellowships, Scholarships, and Grants Websites: http://sites.nationalacademies.org/PGA/Fellowships/PGA_046301
    (f) Awards for junior and mid-career researchers: http://www.nasonline.org/site/PageServer?pagename=AWARDS_main

48. National Science Foundation:
    (a) International Research Fellowship Program (IRFP) for junior scientists and engineers: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179
    (b) Integrative Graduate Education and Research Traineeship Program (IGERT) for undergraduates and graduate students in STEM: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759
    (c) National Science Foundation's Graduate Research Fellowship Program (GRFP) for students seeking research degrees in STEM: http://www.nsfgrfp.org/
    (d) NSF Alliances for Graduate Education and the Professoriate (AGEP) program (to help underrepresented minorities obtain graduate degrees in STEM and prepare them for faculty positions in academia): http://www.nsfagep.org/

49. National Society of Professional Engineers:
    (a) Scholarships for undergraduates and graduate students: http://www.nspe.org/Students/Scholarships/index.html
    (b) NSPE-PEC George B. Hightower, P.E. Fellowship (for an outstanding engineering graduate student): http://www.nspe.org/InterestGroups/PEC/Resources/Awards/hightower_fellowship.html
    (c) PEG Management Fellowship:
        i. http://www.nspe.org/InterestGroups/PEG/Resources/AwardsAndScholarships/peg_fellowship.html

ii. "This scholarship is designed for graduate students who are pursuing an MBA, a master's degree in engineering management, or a master's degree in public administration."

50. —

51. **Scholarships and Fellowships in Various Fields**

52. U.S. Department of Education:
    (a) Robert C. Byrd Honors Scholarship Program:
        i. High school graduates who have been accepted for enrollment at institutions of higher education (IHEs), have demonstrated outstanding academic achievement, and show promise of continued academic excellence may apply to states in which they are residents.
        ii. http://www2.ed.gov/programs/iduesbyrd/index.html
    (b) **Jacob K. Javits Fellowships Program**:
        i. This program provides fellowships to students of superior academic ability – selected on the basis of demonstrated achievement, financial need, and exceptional promise – to undertake study at the doctoral and Master of Fine Arts level in selected fields of arts, humanities, and social sciences.
        ii. http://www2.ed.gov/programs/jacobjavits/index.html
    (c) Close Up Fellowship Program:
        i. This program provides financial aid to enable low-income students, their teachers, and recent immigrants to come to Washington, D.C., to study the operations of the three branches of the federal government.
        ii. http://www2.ed.gov/programs/closeup/index.html
    (d) B.J. Stupak Olympic Scholarships :
        i. This program provides financial assistance to athletes who are training at the U.S. Olympic Education Center or one of the U.S. Olympic training centers and who are pursuing a postsecondary education at institutions of higher education (IHEs).
        ii. http://www2.ed.gov/programs/olympic/index.html
    (e) Teacher Education Assistance for College and Higher Education (TEACH) Grant Program:
        i. Through the College Cost Reduction and Access Act of 2007, Congress created the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program that provides grants of up to $4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families.
        ii. http://studentaid.ed.gov/PORTALSWebApp/students/english/TEACH.jsp
    (f) Scholarship search engine: https://studentaid2.ed.gov/getmoney/scholarship/
    (g) Financial Aid:
        i. http://www2.ed.gov/finaid/landing.jhtml?src=rt
        ii. http://studentaid.ed.gov/PORTALSWebApp/students/english/funding.jsp
        iii. Paying for college: http://www.college.gov
        iv. Student Aid (has information for students at all levels and parents): http://studentaid.ed.gov/

v. Student Aid Eligibility: http://studentaid.ed.gov/PORTALSWebApp/students/english/aideligibility.jsp?tab=funding
vi. Federal Student Aid: http://federalstudentaid.ed.gov/
vii. Academic Competitiveness Grant: The Academic Competitiveness Grant provides up to $750 for the first year of undergraduate study and up to $1,300 for the second year of undergraduate study. See http://studentaid.ed.gov/PORTALSWebApp/students/english/NewPrograms.jsp.

(h) Free Application for Federal Student Aid (FAFSA):
i. Financial Aid Estimator Tool (FAFSA4caster): http://www.fafsa4caster.ed.gov/F4CApp/index/index.jsf
ii. http://www.fafsa.ed.gov/

(i) Federal Pell Grant Program: http://www2.ed.gov/programs/fpg/index.html

53. European Commission:
(a) Erasmus Programme (for Europeans): http://ec.europa.eu/education/lifelong-learning-doc80_en.htm
(b) Erasmus Mundus (for non-Europeans): http://ec.europa.eu/education/external-relation-doc72_en.htm

54. Woodrow Wilson Foundation:
(a) The Woodrow Wilson-Rockefeller Brothers Fund Fellowships for Aspiring Teachers of Color (for underrepresented minorities seeking a career as a K-12 public school teacher in the US): http://www.woodrow.org/teaching-fellowships/wwrbf/index.php
(b) Woodrow Wilson Teaching Fellowship (for a MS program in teacher education, who would teach at high-need urban and rural schools or $\geq$ 3 years): http://www.wwteachingfellowshi org/
(c) Leonore Annenberg Teaching Fellowship (for a MS program in teacher education, who would teach at high-need urban and rural schools or $\geq$ 3 years): http://www.woodrow.org/teaching-fellowships/annenberg/index.php
(d) MMUF Travel & Research Grants (for graduate students who participated in the Mellon Mays Undergraduate Fellowship Program): http://www.woodrow.org/higher-education-fell opportunity/research/index.php
(e) MMUF Dissertation Grants (for graduate students who participated in the Mellon Mays Undergraduate Fellowship Program): http://www.woodrow.org/higher-education-fellowshi opportunity/dissertation/index.php
(f) Charlotte W. Newcombe Doctoral Dissertation Fellowship (for Ph.D. students writing their theses on ethical or religious values in all fields of the humanities and social sciences): http://www.woodrow.org/higher-education-fellowships/religion_ethics/index.php
(g) Woodrow Wilson Dissertation Fellowship in Womens Studies: http://www.woodrow.org/higher-education-fellowships/women_gender/index.php
(h) Doris Duke Conservation Fellowship program (Masters students seeking careers as practicing conservationists): http://www.woodrow.org/higher-education-fellowships/conservation/index.php
(i) Thomas R. Pickering Graduate Foreign Affairs Fellowship:

i. Prior to joining the United States Department of State Foreign Service, this fellowship supports students entering a Masters program in the following fields:
   A. public policy
   B. international affairs
   C. public administration
   D. academic fields such as:
      - business
      - economics
      - political science
      - sociology
      - foreign languages

ii. http://www.woodrow.org/higher-education-fellowships/foreign_affairs/pickering_grad/index.php

(j) Thomas R. Pickering Undergraduate Foreign Affairs Fellowship (for undergraduates seeking to join the United States Department of State Foreign Service): http://www.woodrow.org/higher-education-fellowships/foreign_affairs/pickering_undergrad/index.php

55. Burroughs Wellcome Fund:
    (a) Career Awards for Medical Scientists (post-Ph.D.): http://www.bwfund.org/pages/188/Career-Awards-for-Medical-Scientists/
    (b) Career Award for Science and Mathematics Teachers (science or mathematics K-12 teachers in North Carolina public schools): http://www.bwfund.org/pages/379/Career-Awards-for-Science-and-Mathematics-Teachers/
56. Gates Millennium Scholars (GMS) scholarship: http://www.gmsp.org/
57. Susan G. Komen for the Cure®: The Komen College Scholarship Program, http://ww5.komen.org/ResearchGrants/CollegeScholarshipAward.html
58. University of Kansas Madison & Lila Self Graduate Fellowship (Ph.D. fellowships for business, economics, and STEM): http://www2.ku.edu/~selfpro/
59. Nationally Coveted College Scholarships, Graduate School Fellowships & Postdoctoral Awards: http://scholarships.fatomei.com/
60. The Andrew W. Mellon Foundation:
    (a) Fellowships & Scholarships for undergraduates: http://www.mmuf.org/undergraduates/explore-your-opportunities/fellowships-scholorships
61. Siebel Scholarship:
    (a) For selected students in "business, computer science, and bioengineering"
    (b) Only available for students at selected universities.
    (c) http://www.siebelscholars.com/scholars
62. Aspen Institute (for leaders, e.g. in business, education, community service, and politics):
    (a) Catto Fellowship Program: http://www.aspeninstitute.org/leadership-programs/catto-fellowship-program
    (b) Rodel Fellowship Program: http://www.aspeninstitute.org/leadership-programs/aspen-institute-rodel-fellowships-public-le-/about-rodel-fellowship-program

(c) Henry Crown Fellowship Program: http://www.aspeninstitute.org/leadership-programs/henry-crown-fellowship-program

63. Smithsonian Institution:
    (a) Postdoctoral Fellowships, Predoctoral Fellowships, and Graduate Student Fellowships:
        i. http://www.si.edu/ofg/infotoapply.htm
        ii. http://www.si.edu/ofg/fell.htm
        iii. http://www.si.edu/ofg/ofgapp.htm
        iv. fields of research and study:
            A. American History, American Material and Folk Culture, and the History of Music and Musical Instruments
            B. History of Science and Technology
            C. History of Art, Design, Crafts, and the Decorative Arts
            D. Anthropology, Archaeology, Linguistics, and Ethnic Studies
            E. Evolutionary, Systematic, Behavioral, Environmental, and Conservation Biology
            F. Earth, Mineral, and Planetary Science
            G. Materials Characterization and Conservation
    (b) Internship opportunities: http://www.si.edu/ofg/internopp.htm
    (c) Research centers: http://www.si.edu/research/. [It also has lots of information for K-12 teachers. It has resources, funding, and internship opportunities for undergraduates and graduate students pursing research in various aspects of humanities, social science, and natural science.]
64. —
65. **Scholarships and Fellowships in Social Science and Humanities**
66. United States Institute of Peace (USIP):
    (a) Jennings Randolph Peace Scholarship Dissertation Program (for Ph.D. students working on topics related to peace, conflict, and international security): http://www.usip.org/grants-fellowships/jennings-randolph-peace-scholarship-dissertation-
67. Library of Congress:
    (a) Kluge Fellowships:
        i. Research in the humanities and social sciences, especially interdisciplinary, cross-cultural or multilingual
        ii. Open to scholars worldwide with a Ph.D. or other terminal advanced degree conferred within seven years of the July 15 deadline
        iii. http://www.loc.gov/loc/kluge/fellowships/kluge.html
    (b) J. Franklin Jameson Fellowship Research in American History (junior postdocs): http://www.loc.gov/loc/kluge/fellowships/jameson.html
    (c) Kislak Short Term Fellowship Opportunities in American Studies (students, postdocs, and faculty): http://www.loc.gov/loc/kluge/fellowships/kislakshort.html
    (d) Kislak Fellowship in American Studies (Ph.D. requirement): http://www.loc.gov/loc/kluge/fellowships/kislak.html
68. American Historical Association (AHA):

(a) AHA Research Grants: http://www.historians.org/prizes/Grants.htm
(b) Fellowships: http://www.historians.org/prizes/Fellowships.htm

69. American Sociological Association:
    (a) ASA Dissertation Award: http://www.asanet.org/about/awards/dissertation.cfm

70. American Psychological Association:
    (a) Scholarships, Grants, and Awards: http://www.apa.org/about/awards/index.aspx

71. American Anthropological Association (AAA):
    (a) AAA Minority Dissertation Fellowship Program (for minority Ph.D. candidates in anthropology): http://www.aaanet.org/cmtes/minority/Minfellow.cfm
    (b) Margaret Mead Award (for young scholars in anthropology): http://www.aaanet.org/about/Prizes-Awards/AAA-Margaret-Mead-Award.cfm
    (c) COSWA Award:
        i. The COSWA Award (formerly the Squeaky Wheel Award), sponsored by the Committee on the Status of Women in Anthropology (COSWA), recognizes individuals who have demonstrated the courage to bring to light and investigate practices in anthropology that are potentially discriminatory to women, or have acted to improve the status of women in anthropology through activities that raise awareness of women's contribution to anthropology or identify barriers to full participation by women in anthropology.
        ii. http://www.aaanet.org/about/Prizes-Awards/COSWA-Award.cfm
    (d) David M. Schneider Award (for Ph.D. students in anthropology): http://www.aaanet.org/about/Prizes-Awards/David-Schneider-Award.cfm
    (e) Links to "Section Prizes & Awards": http://www.aaanet.org/about/Prizes-Awards/section_awards.cfm
    (f) List of national (US) and international "Grants and Fellowships": http://www.aaanet.org/profdev/fellowships/
    (g) http://www.aaanet.org/

72. National Academy of Social Insurance:
    (a) John Heinz Dissertation Award (Ph.D. students writing their thesis on the planning and implementation of social insurance): http://www.nasi.org/studentopps/heinz

73. National Endowment for the Humanities's Division of Research Programs, grants and fellowship opportunities: http://www.neh.gov/grants/

74. *The Henry Luce Foundation*'s Luce Scholars Program to help US graduates learn more about Asia and Asian culture(s): http://www.hluce.org/lsprogram.aspx

75. Institute for Humane Studies at George Mason University:
    (a) Humane Studies Fellowships:
        i. http://www.theihs.org/programs/humane-studies-fellowships
        ii. Humane Studies Fellowships are awarded to graduate students and outstanding undergraduates planning academic careers with liberty-advancing research interests.
        iii. The fellowships are open to students in a range of fields, such as economics, philosophy, law, political science, anthropology, and literature.

(b) Film & Fiction Scholarships:
    i. Students pursuing MFAs in a variety of areas are eligible: film directing, production, screenwriting, playwriting, fiction, and literary-nonfiction writing
    ii. http://www.theihs.org/node/448

76. The Gilder Lehrman Institute of American History: Gilder Lehrman History Scholars & Gilder Lehrman One-Week Scholars (for sophomores or juniors majoring in American history or American Studies), http://www.gilderlehrman.org/education/hs_program_details.php
77. ————————————————————————————————————
78. **Fellowships in Art and Music**
79. Guggenheim Fellowships from the *John Simon Guggenheim Memorial Foundation*: http://www.gf.org/applicants
80. NEA National Heritage Fellowship (for master folk and traditional artists): http://www.nea.gov/honors/heritage/index.html
81. NEA Jazz Masters Fellowship (jazz artists): http://www.arts.gov/honors/jazz/index.html
82. Fellowships for Creative Writers [or NEA Literature Fellowships: Creative Writing]: http://www.nea.gov/grants/apply/Lit/index.html or http://www.arts.gov/grants/apply/Lit/index.html
83. ————————————————————————————————————
84. **Scholarships and Fellowships for Underrepresented Minorities**
85. Society of Women Engineers (SWE): SWE Scholarships and other scholarships, http://societyofwomenengineers.swe.org/index.php?option=com_content&task=view&id=222&Itemid=111
86. Coalition to Diversify Computing: http://www.cdc-computing.org/scholarships/
87. MassMutual Scholars Program:
    (a) Applicants must be undergraduates of African American/Black, Asian/Pacific Islander or Hispanic decent in the US.
    (b) Reside or plan to attend an institution in one of the following metropolitan areas:
        i. Atlanta, GA
        ii. Chicago, IL
        iii. Central New Jersey
        iv. Denver, CO
        v. Houston, TX
        vi. Miami, FL
        vii. Los Angeles, CA
        viii. San Antonio, TX
        ix. San Francisco, CA
    (c) Be majoring in business, economics, finance, financial planning, management, marketing or sales.
    (d) http://www.hsf.net/massmutual.aspx
    (e) http://www.apiasf.org/scholarship_apiasf_massmutual.html
88. *NASA*'s Minority University Research and Education Program (MUREP):

(a) http://www.nasa.gov/offices/education/programs/national/murep/home/index.html
(b) http://www.nasa.gov/offices/education/about/murep_overview.html
(c) Jenkins Pre-doctoral Fellowship Project, JPFP: http://www.nasa.gov/offices/education/programs/descriptions/Jenkins_Predoctoral_Fellowship_Project.html

89. Lists of scholarships and fellowships for underrepresented minorities:
    (a) Chris Enstrom, "Cashing in on Diversity Grants and Scholarships," in Graduating Engineer & Computer Careers. Available at: http://www.graduatingengineer.com/higher-education/20061129/Cashing-in-on-Diversity-Grants-and-Scholarships-; last accessed on August 25, 2010.

90. UNCF:
    (a) UNCF Special Programs Corporation:
        i. Harriett G. Jenkins Pre-doctoral Fellowship Program (JPFP) for underrepresented minorities pursuing graduate degrees in STEM: http://www.uncfsp.org/spknowledge/default.aspx?page=program.view&areaid=1&contentid=177&typeid=jpfp
        ii. NASA Science and Technology Institute (NSTI) Summer Scholars Program (10-week summer research scholarship): http://www.uncfsp.org/spknowledge/default.aspx?page=program.view&areaid=1&contentid=172&typeid=nstiinternshi
        iii. Motivating Undergraduates in Science and Technology (MUST) Program for undergraduates in STEM: http://www.uncfsp.org/spknowledge/default.aspx?page=program.view&areaid=1&contentid=346&typeid=must
        iv. Institute for International Public Policy Fellows Program: http://www.uncfsp.org/IIPP
        v. http://www.uncfsp.org/spknowledge/default.aspx?page=home.default
    (b) UNCF scholarship resources: http://www.uncf.org/forstudents/scholarship.asp
    (c) UNCF · Merck Science Initiative: scholarships and fellowships: http://umsi.uncf.org/ScholarshipsInternshipsFellowships/tabid/151/Default.aspx

91. Hispanic College Fund:
    (a) Scholarships: http://www.hispanicfund.org/scholarships/ and http://scholarships.hispanicfund.org/applications/
    (b) NASA MUST Scholarship Program: http://www.hispanicfund.org/nasa-must/
    (c) Hispanic Youth Symposium (scholarships are awarded to winners of the art competition, talent competition, and speech competition): http://www.hispanicyouth.org/about-the-program
    (d) http://www.hispanicfund.org/

92. Hispanic Heritage Foundation (HHF):
    (a) Scholarships and Resources: http://www.hispanicheritage.org/youth_int.php?sec=80
    (b) http://www.hispanicheritage.org/

93. Hispanic Scholarship Fund (HSF):
    (a) Scholarship programs for:

i. college students
ii. community college transfer students
iii. high school students
iv. Gates Millennium Scholars
v. See http://www.hsf.net/innercontent.aspx?id=34

(b) http://www.hsf.net/

94. American Indian Graduate Center (AIGC):
    (a) AIGC scholarships and fellowships:
        i. for advanced degree students in art, music, environmental studies, journalism, communications, medicine, dentistry, public health, nursing, or other health-related fields
        ii. for members of Wisconsin, New Mexico or Arizona tribes.
        iii. http://www.aigc.com/02scholarships/scholarships.htm
        iv. AIGC Fellowship (Graduate) for Native Americans and their descendants seeking advanced degrees: http://www.aigc.com/02scholarships/aigc/fellowship.htm
        v. Rainer Scholarship (for grad students): http://www.aigc.com/02scholarships/rainer.htm
    (b) List of resources about scholarships and fellowships:
        i. http://www.aigc.com/08otherscholarship/otherscholarships.html
        ii. Scholarships: http://www.aigc.com/08otherscholarship/scholarships.htm
        iii. Fellowships: http://www.aigc.com/08otherscholarship/fellowships.htm
    (c) Gates Millennium Scholar Program (for individuals seeking basic and advanced degrees): http://www.aigc.com/03gms/gms.htm
95. Asian & Pacific Islander American Scholarship Fund (APIASF) scholarship resources: http://www.apiasf.org/scholarships.html
96. American Association of University Women:
    (a) http://www.aauw.org/learn/fellowships_grants/index.cfm
97. Sigma Delta Epsilon-Graduate Women in Science (GWIS): http://www.gwis.org/programs.html
98. :
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99. :
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100. :
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106. §?? has more information concerning scholarships and fellowships in the following areas:
    (a) electronic design automation (EDA), and related areas of design automation:
        i. bio design automation (BDA)
        ii. Lab-on-chip design (LoC) automation
        iii. MEMS/NEMS design automation
    (b) digital VLSI design
    (c) analog and mixed-signal (AMS) VLSI design
    (d) computer architecture
    (e) parallel computing
    (f) concurrent programming
    (g) data mining
    (h) theoretical computer science
107. Ph.D. dissertation awards:
    (a) —
    (b) **Ph.D. Dissertation Awards for Computer Science**
    (c) ACM SIGKDD Doctoral Disseration Award (in data mining and knowledge discovery): http://www.sigkdd.org/awards_dissertation.php
    (d) ACM SIGMOD Jim Gray Doctoral Dissertation Award (in the database field): http://www.sigmod.org/sigmod-awards/doctoral-dissertation-award
    (e) Special Interest Group of the ACM on Management Information Systems (SIGMIS):
        i. ACM SIGMIS Doctoral Dissertation Award Competition (at the International Conference on Information Systems, ICIS): http://ai.arizona.edu/icis2009/program/dissertation.html and http://icis2010.aisnet.org/dissertation_award.htm
    (f) —
    (g) **Ph.D. Dissertation Awards for Mathematics**
    (h) International Center for Scientific Research (CIRS):
        i. E. W. Beth Dissertation Prize (for outstanding dissertations in the fields of Logic, Language and Information): http://www.cirs.net/prix/awards.php?id=481
    (i) The Association for Operations Management, APICS (Advancing Productivity, Innovation, and Competitive Success):
        i. Plossl Doctoral Dissertation Competition: The APICS Educational and Research Foundation, will annually grant one award of $2,500 for a doctoral dissertation dealing with any topic in operations management. Sample topics include operations strategy, operations planning and control systems, supply chain management, quality management, Six Sigma, facility location, forecasting, just-in-time/lean production systems, and project management. Entrants must be candidates for the

doctorate in operations management. The dissertation must be approved by the primary thesis advisor and not more than 50% completed at time of submission. See http://www.apics.org/Education/ERFoundation/Competitions/plossl.htm.

(j) —

(k) **Other Ph.D. Dissertation Awards**

(l) Institute for Operations Research and the Management Sciences (INFORMS):

i. Best Dissertation Award (Technology Management Section, for Ph.D. theses in technology management): http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards2/Technology-Management-Section/Best-Dissertation-Award

ii. TSL Dissertation Prize (Transportation Science and Logistics Section, for doctoral dissertations in the transportation science and logistics area): http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards2/Transportation-Science-and-Logistics-Section/TSL-Dissertation-Prize

iii. Best Dissertation Award (Telecommunications Section, for Ph.D. theses in telecommunications): http://www.informs.org/Recognize-Excellence/INFORMS-Community-P
Telecommunications-Section/Best-Dissertation-Award

iv. Frank M. Bass Dissertation Paper Award (Society for Marketing Science, for the best marketing paper derived from a Ph.D. thesis published in an INFORMS-sponsored journal): http://www.informs.org/Recognize-Excellence/INFORMS-Communi
Society-for-Marketing-Science/Frank-M.-Bass-Dissertation-Paper-Award

v. SOLA - Air Products Bi-Annual Dissertation Award (Section on Location Analysis, for Ph.D. theses on location related research): http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards2/Section-on-Loca
SOLA-Air-Products-Bi-Annual-Dissertation-Award

vi. :

108. Other awards:

- —
- **Awards for Computer Science**
- ACM SIGMOD Undergraduate Award: http://www.sigmod.org/sigmod-awards/sigmod-awards#undergraduate
- European Association of Theoretical Computer Science (EATCS): Presburger Award (for young researchers in theoretical computer science), http://www.eatcs.org/index.php/presburger.
- Computer Research Association:
  (a) Committee on the Status of Women in Computing Research (CRA-W):
    i. Borg Early Career Award (BECA): http://www.cra-w.org/borg
- —
- **Awards for Biomedical Engineering**
- Biomedical Engineering Society (BMES):

(a) Rita Schaffer Young Investigator Award (for junior researchers in biomedical engineering): http://www.bmes.org/aws/BMES/pt/sp/awards_investigator
(b) Graduate and Undergraduate Student Awards: http://www.bmes.org/aws/BMES/pt/sp/awards_student

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- **Awards for Mechanical Engineering**
- American Society of Mechanical Engineers (ASME):
  (a) Henry Hess Award (authors of research papers who are below 31 years old): http://www.asme.org/Governance/Honors/SocietyAwards/Henry_Hess_Award.cfm
  (b) Pi Tau Sigma Gold Medal (outstanding junior engineers): http://www.asme.org/Governance/Honors/SocietyAwards/Pi_Tau_Sigma_Gold_Medal.cfm
  (c) Marshall B. Peterson Award (researchers in tribology who are below 30 years old): http://www.asme.org/Governance/Honors/SocietyAwards/Marshall_B_Peterson_Award.cfm
  (d) Y.C. Fung Young Investigator Award (for young researchers in bioengineering): http://www.asme.org/Governance/Honors/SocietyAwards/YC_Fung_Young_Investigator.cfm
- ———————————————————————————————
- **Awards for Civil Engineering**
- American Society of Civil Engineers (ASCE):
  (a) Edmund Friedman Young Engineer Award for Professional Achievement (for junior engineers under the age of 36): http://www.asce.org/AwardsContent.aspx?id=16776
  (b) Committee on Younger Members (CYM) Awards (for junior engineers): http://www.asce.org/Content.aspx?id=11311
  (c) Collingwood Prize (for civil engineering researchers under the age of 35): http://www.asce.org/AwardsContent.aspx?id=15352
- ———————————————————————————————
- **Awards for Chemical Engineering**
- American Institute of Chemical Engineers (AIChE) awards: http://www.aiche.org/Students/Awards/index.aspx
- ———————————————————————————————
- **Awards for Systems Engineering**
- International Council on Systems Engineering (INCOSE) Stevens Doctoral Award (for Promising Research in Systems Engineering and Integration; A.B.D.s / Ph.D. candidates): http://www.incose.org/about/foundation/doctoralaward.aspx
- ———————————————————————————————
- **Awards for Mathematics, Operations Research, & Management Sciences**
- Institute for Operations Research and the Management Sciences (INFORMS):

(a) INFORMS Undergraduate Operations Research Prize: http://www.informs.org/Recognize-Excellence/INFORMS-Prizes-Awards/INFORMS-Undergraduate-Opera
(b) Optimization Prize for Young Researchers: http://www.informs.org/Recognize-Excellen INFORMS-Community-Prizes-and-Awards2/Optimization-Society/Optimization-Pri
(c) Underrepresented Minorities and Women Honoraria: http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards2/Simulation-Soci Underrepresented-Minorities-and-Women-Honoraria
(d) Best Dissertation Proposal Competition (College on Organization Science, for Ph.D. proposals in organizational science): http://www.informs.org/Recognize-Excellen INFORMS-Community-Prizes-and-Awards2/College-on-Organization-Science/Best-Dissertation-Proposal-Competition
(e) ISMS Doctoral Dissertation Proposal Competition (Society for Marketing Science, for Ph.D. proposals in marketing): http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards2/Society-for-Marketing-Science/ISMS-Doctoral-Dissertation-Proposal-Competition

- Alice T. Schafer Mathematics Prize For Excellence in Mathematics by an Undergraduate Woman: http://www.awm-math.org/schaferprize.html
- European Prize in Combinatorics:
  (a) The prize is established to recognize excellent contributions in Combinatorics by young European researchers (eligibility of EU) not older than 35.
  (b) http://www.math.tu-berlin.de/EuroComb05/prize.html
- The AMS-MAA-SIAM Frank and Brennie Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student: http://www.maa.org/awards/morgan.html; http://www.ams.org/profession/prizes-awards/ams-prizes/morgan-prize; and http://www.siam.org/prizes/sponsored/morgan.php
- —
- **Lists of awards**:
  (a) Association for Women in Science: http://www.awis.org/displaycommon.cfm?an=1&subarticlenbr=69
  (b) International Center for Scientific Research (CIRS): http://www.cirs.net/indexenglish.htm

8 Technology-Related Public Policy

Resources for engagement in creating technology-related public policy:

1. Yale Journal of Law & Technology (YJOLT):
   (a) http://www.yjolt.org/
   (b) http://wingenroth.org/
2. ACM Public Policy Office:
   (a) It represents ACM and its US Public Policy Council (USACM) on information technology policy issues that impact the computing field.
   (b) It seeks to educate policymakers and the public about policies that will that foster innovations in computing and related disciplines in ways that benefit society.

   (c) It also informs ACM's members and the public about policy developments through its weblog, Washington Update newsletter and articles in ACM publications.
   (d) ACM US Public Policy Council (USACM): http://usacm.acm.org/
   (e) ACM Committee on Computers and Public Policy (CCPP): http://www.acm.org/public-policy/acm-committee-on-computers-and-public-policy
   (f) http://www.acm.org/public-policy
3. IEEE:
   (a) IEEE-USA: http://www.ieeeusa.org/policy/default.asp
   (b) Smart Grids: http://smartgrid.ieee.org/public-policy
4. Computing Community Consortium (CCC): http://www.cra.org/ccc/
5. Computing Research Association (CRA):
   (a) http://www.cra.org/
   (b) CRA Government Affairs: http://www.cra.org/govaffairs/index.php
6. EngineeringPolicy.org: http://www.engineeringpolicy.org/
7. Congressional Bi-Partisan Robotics Caucus: http://www.roboticscaucus.org/
8. Advisory Committee for the Congressional Research and Development [R&D] Caucus: http://www.researchcaucus.org/
9. *National Academies Press* (NAP), from the (US) *National Academies*: http://www.nap.edu/
10. *Coalition to Diversify Computing*: http://www.cdc-computing.org/
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9 Other Outreach

Other outreach:

1. writing/poetry contests:
   (a) International 3-Day Novel Contest: http://www.3daynovel.com/about/?contest

10 Resources for Studying, Learning, and Research

Resources for research, and educational and learning material:

1. International Technology Roadmap for Semiconductors (ITRS): http://public.itrs.net/
2. Social networking sites:
   (a) for academics, see http://www.academia.edu/
   (b) *weSRCH.com*:
      i. "For professionals who engage in the fields of High Tech, Green Tech, and Medicine"
      ii. It has an online forum, and is a resource for news in the high tech, green tech, and bio tech industries.
      iii. http://www.wesrch.com/
3. Online encyclopedia; see http://openresearch.org/wiki/Main_Page
4. Educational resources and "open-source" textbooks:
   (a) OpenCourseWare Consortium:
      i. http://www.ocwconsortium.org/
      ii. OCW Finder: http://www.ocwfinder.org/
      iii. MIT OpenCourseWare: http://ocw.mit.edu/index.htm
   (b) Connexions: http://cnx.org/
   (c) Flat World Knowledge: http://www.flatworldknowledge.com/
   (d) Liquid Publications (LiquidPub): http://project.liquidpub.org/
   (e) OER Commons:
      i. A project of the Institute for the Study of Knowledge Management in Education, ISKME
      ii. http://www.oercommons.org/
   (f) NIXTY: http://nixty.com/
   (g) Learning Is For Everyone: http://www.learningis4everyone.org/
   (h) BCcampus OER Portal: http://freelearning.ca/about/
   (i) iBerry:
      i. http://iberry.com/
      ii. http://iberry.com/cms/ and http://iberry.com/cms/OCW.htm
   (j) :
   (k) :
   (l) :
   (m) :
   (n) :
   (o) :
   (p) Open Educational Resources (OER): http://wiki.creativecommons.org/OER
   (q) Open Learning Initiative: http://oli.web.cmu.edu/openlearning/
   (r) Peer 2 Peer University (P2PU): http://www.p2pu.org/
   (s) Curtis J. Bonk, Book Resources [for] "The World Is Open: How Web Technology Is Revolutionizing Education," Jossey-Bass (a Wiley imprint), San Francisco, CA. Available at: http://worldisopen.com/resources.php; last accessed on September 4, 2010.

(t) Wikiversity (from the Wikimedia Foundation): http://en.wikiversity.org/wiki/Wikiversity:Main_Page
(u) Einztein Knowledge Network: http://www.einztein.com/
(v) Saylor Foundation: http://www.saylor.org/
(w) Knewton: http://www.knewton.com/

5. Videos of lectures, research talks/presentations, and seminars:
   (a) *iTunes U*: http://www.apple.com/education/itunes-u/
   (b) *YouTube*:
      i. http://www.youtube.com/
      ii. YouTube EDU: http://www.youtube.com/education?b=400
   (c) http://videolectures.net/
   (d) Academic Earth: http://www.academicearth.org/
   (e) Mathematics:
      i. Institute for Mathematics and its Applications (IMA) at the University of Minnesota, Twin Cities: http://www.ima.umn.edu/videos/
6. Open Culture:
   (a) http://www.openculture.com/
   (b) "free cultural & educational media on the web"
7. Xuropa:
   (a) the electronic design online community; the Facebook for people working in EDA, IP design/verification/services, (rest of the) semiconductor industry (including design, CAD, verification, test, and device engineers), software industry, and systems people (including those in embedded systems, automobile industry, and medical systems)
   (b) see http://xuropa.com/

11 Resources for Market Research

Resources for market research:

1. Gary Smith EDA (GSEDA): http://www.garysmitheda.com/
2. VLSI Research Inc: https://www.vlsiresearch.com/
3. Future Horizons: http://www.futurehorizons.com/
4. Gartner [or Gartner Dataquest]: http://www.gartner.com/technology/home.jsp
5. iSuppli Corporation: http://www.isuppli.com/Pages/Home.aspx
6. Linley Group: http://www.linleygroup.com/
7. Semico Research Corp: http://www.semico.com/
8. Other organizations/companies that provide forecasts for the semiconductor market:
   (a) Semiconductor Intelligence: http://www.semiconductorintelligence.com/
   (b) Semiconductor Industry Capacity Statistics (SICAS): http://www.sicas.info/
   (c) Semiconductor Equipment and Materials International (SEMI®): http://www.semi.org/en/index.htm
   (d) WSTS (World Semiconductor Trade Statistics): http://www.wsts.org/
   (e) Semiconductor Industry Association (SIA): http://www.sia-online.org/

(f) International Data Corporation (IDC): http://www.idc.com/

(g) IC Insights:

i. *The McClean Report: A Complete Analysis and Forecast of the Integrated Circuit Industry*: http://www.icinsights.com/prodsrvs/mcclean/mcclean.html

ii. *IC Market Drivers: A Study of Emerging and Major End-Use Applications Fueling Demand for Integrated Circuits* helps identify opportunities for growth and evaluates the potential for new applications that are expected to fuel the market for integrated circuits through 2013. See http://www.icinsights.com/prodsrvs/marketdrivers/marketdrivers.html.

iii. *O·S·D Report: A Market Analysis and Forecast for Optoelectronics, Sensors, and Discretes* provides information about the end-use application, regional market analysis, leading supplier rankings, device history, and technology trends for:

- optoelectronics:
  - CCD and CMOS Image Sensors
  - Laser Transmitters and Pick-Ups (for fiber-optic networks)
  - Solid-State Lamps and LEDs
  - Infrared Devices
  - Couplers, Isolators
  - Optical Switches
  - Digital Character Displays
- sensors/actuators (including MEMS-based):
  - Pressure Sensors
  - Acceleration and Yaw Sensors
  - Magnetic-Field Sensors
  - Temperature Sensors
  - Fingerprint ID Chips
  - Actuators
- discretes:
  - Power Transistors and Modules (IGBTs, power IGBTs, and power FETs)
  - Small-Signal Transistors
  - Switching Transistors
  - Diodes, Rectifiers, and Thyristors
  - RF/Microwave Transistors and Modules

iv. http://www.icinsights.com/prodsrvs/osdreport/osdreport.html

v. *MEMS 2010: A Realistic Look Beyond the Hype* (Special Study). See http://www.icinsights.com/prodsrvs/specialstudies/mems/mems.html.

vi. *Global Wafer Capacity Analysis and Forecast* (Special Study). See http://www.icinsights.com/prodsrvs/specialstudies/globalcapacity/globalcapacity.html.

vii. *Strategic Reviews Online* offers quick access to thorough examinations of companies involved in the design and manufacture of integrated circuits. Whether a supplier owns a fab or is fabless, has sales of several million or several billion dollars, *Strategic Reviews Online* provides detailed reviews of the operations and activities of more than 200 of the world's established and emerging IC companies (totaling about 770 printed pages worth of valuable information). Access *Strategic Reviews Online: Extensive Profiles of the World's IC Manufacturers and Fabless Suppliers*

@ http://www.icinsights.com/prodsrvs/reviews/reviews.html.
viii. http://www.icinsights.com/

(h) ABI Research: http://www.abiresearch.com/home.jsp
(i) HTE Research, Inc.: http://www.hteresearch.com/; also see *InsideChips* @ http://www.insidechips.com/
(j) In-Stat, LLC: http://www.instat.com/
(k) Chipworks: http://www.ice-corp.com/

9. Yole Développement: http://www.yole.fr/
10. Lux Research (solar, nanomaterials, alternative power, water, biosciences): http://www.luxresearchinc.com/
11. Pike Research (global clean technology markets: smart energy, clean transportation, clean industry, and building efficiency): http://www.pikeresearch.com/
12. Deloitte Consulting:
    (a) see market survey of industries @ http://www.deloitte.com/view/en_US/us/industries/index.htm
    (b) http://www.deloitte.com/view/en_US/us/Insights/centers/index.htm
    (c) see Deloitte Review @ http://www.deloitte.com/view/en_US/us/Insights/Browse-by-Content-Type/deloitte-review/index.htm
    (d) see Deloitte Research @ http://www.deloitte.com/view/en_US/us/Insights/Browse-by-Content-Type/research/index.htm
    (e) see Case Studies @ http://www.deloitte.com/view/en_US/us/Insights/Browse-by-Conte
    Case-Studies/index.htm
    (f) see Deloitte Technology Services Consulting @ http://www.deloitte.com/view/en_US/us/Services/consulting/technology-consulting/index.htm
    (g) see Deloitte Debates @ http://www.deloitte.com/view/en_US/us/Insights/Browse-by-Content-Type/deloitte-debates/index.htm
13. Morgan Stanley:
    (a) Technology Research: http://www.morganstanley.com/institutional/techresearch/.
    (b) Journal of Applied Corporate Finance: http://www.morganstanley.com/views/jacf/index.html.
    (c) Perspectives: http://www.morganstanley.com/views/perspectives/index.html.
    (d) Global Strategy Roundup: http://www.morganstanley.com/views/gsr/index.html.
    (e) Global Economic Forum: http://www.morganstanley.com/views/gef/index.html.
14. McKinsey & Company: See McKinsey Quarterly @ http://www.mckinseyquarterly.com/home.aspx?srid=6 and McKinsey Global Institute (MGI) @ http://www.mckinsey.com/mgi/
15. Accenture Research & Insights: http://accenture.ie/global/research_and_insights/research_and_insights_int; also, see http://accenture.ie/Global/Services/By_Industry/Electronics_and_High_Tech/Services/ServicesSemiconductorInd.htm for Accenture's Semiconductor Business
16. Ernst & Young: http://www.ey.com/SG/en/Industries

17. Boston Consulting Group (BCG):
    (a) http://www.bcg.com/expertise_impact/publications/default.aspx
    (b) Industries that BCG provides services for and analysis of: http://www.bcg.com/expertise_impact/industries/default.aspx
    (c) BCG Strategy Institute: http://www.bcg.com/about_bcg/strategyinstitute/default.aspx and http://www.bcg.com/about_bcg/strategyinstitute/research/default.aspx.
18. PricewaterhouseCoopers:
    (a) Industry sectors: http://www.pwc.com/gx/en/industry-sectors/index.jhtml
    (b) Research & insights: http://www.pwc.com/gx/en/research-insights/index.jhtml
19. Pew Research Center, http://pewresearch.org/:
    (a) Pew Global Attitudes Project: http://pewglobal.org/
    (b) Pew Internet and American Life Project: http://www.pewinternet.org/
    (c) Pew Social and Demographic Trends Project: http://pewsocialtrends.org/
    (d) Pew Forum on Religion and Public Life: http://pewforum.org/
    (e) Pew Research Center for the People and the Press: http://people-press.org/
    (f) Project for Excellence in Journalism: http://pewsocialtrends.org/
    (g) Pew Hispanic Center: http://pewhispanic.org/
20. Brookings Institution: http://www.brookings.edu/
21. Knowledge@Wharton from University of Pennsylvania's Wharton School [of business]: http://knowledge.wharton.upenn.edu/
22. Goldman Sachs: See Global Markets Institute @ http://www2.goldmansachs.com/ideas/global-markets-institute/index.html
23. Capgemini:
    (a) Publishes a "World Retail Banking Report 20XY"; see http://www.capgemini.com/insights-and-resources/by-publication/world_retail_banking_report_2009/
    (b) Insights & Resources: Publications; see http://www.capgemini.com/insights-and-resources/by-publication/

12 Resources for Research Publications

Resources for research publications:

1. *Google Scholar*: http://scholar.google.com/
2. *CiteSeer*^{x}:
    (a) http://citeseerx.ist.psu.edu/
    (b) Scientific Literature Digital Library and Search Engine
3. *arXiv*:
    (a) Open access to 624,659 e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics

   (b) http://arxiv.org/

4. Microsoft Academic Search: http://academic.research.microsoft.com/
5. Scirus: http://www.scirus.com/
6. *eScholarship*, California Digital Library and The Berkeley Electronic Press:
   (a) http://www.escholarship.org/
   (b) eScholarship provides a suite of open access, scholarly publishing services and research tools that enable departments, research units, publishing programs, and individual scholars associated with the University of California to have direct control over the creation and dissemination of the full range of their scholarship.
   (c) With eScholarship, you can publish the following original scholarly works on a dynamic research platform available to scholars worldwide:
      i. Journals
      ii. Books
      iii. Working Papers
      iv. Conference Proceedings
      v. Seminar/Paper Series
7. Social Science Research Network (SSRN): http://ssrn.com/
8. Universitat Politècnica de Catalunya:
   (a) Department of Computer Languages and Systems (Departament de Llenguatges i Sistemes Informàtics, LSI):
      i. LSI Tech Reports archive: http://www.lsi.upc.edu/dept/techreps/techreps.html

12.1 Resources on Technical Writing

Resources for academic/technical writing:

- Individuals:
  1. Kenneth M. Hanson (Los Alamos National Laboratory): http://kmh-lanl.hansonhub.com/techwriting.html or http://public.lanl.gov/kmh/techwriting.html
  2. William Stallings, "Writing Guide". Available at: http://www.williamstallings.com/Extras/Writing_Guide.html; last accessed on August 25, 2010.
- Stanford University:
  1. Stanford University InfoLab:
     (a) Prof. Jennifer Widom: http://infolab.stanford.edu/~widom/paper-writing.html
- Carnegie Mellon University:
  1. Philip Koopman, "How to Write an Abstract," Department of Electrical and Computer Engineering, Carnegie Mellon University, October 1997. Available at: http://www.ece.cmu.edu/~koopman/essays/abstract.html; last accessed on August 26, 2010. Also available at: http://www.computersciencestudent.com/Extras/Abstract.html.
- University of Pennsylvania:

1. Steve Zdancewic, "Writing Tips," Department of Computer and Information Science, School of Engineering and Applied Science, University of Pennsylvania, July 29, 2003. Available at: http://www.cis.upenn.edu/~stevez/writing-tips.html; last accessed on September 5, 2010.
2. University of California, Los Angeles:

1. Terence Tao, *On writing*, Department of Mathematics, University of California, Los Angeles. Available at: http://terrytao.wordpress.com/advice-on-writing-papers/; last accessed on September 1, 2010.

- Pennsylvania State University:
  1. Penn State College of Engineering: http://www.writing.engr.psu.edu/
- University of Toronto:
  1. University College (UC) Writing Centre: http://www.utoronto.ca/ucwriting/handouts.html
- Linköping University:
  1. Department for Computer and Information Science:
     (a) Christoph Kessler, "Stylistic advice to my exjobb and PhD students for writing a thesis," Department for Computer and Information Science, Linköping University. Available at: http://www.ida.liu.se/~chrke/exjobb/writing.html; last accessed on September 1, 2010.
     (b) Christoph Kessler, "Exjobb project plan guidelines," Department for Computer and Information Science, Linköping University. Available at: http://www.ida.liu.se/~chrke/exjobb/exj_plan.shtml; last accessed on September 1, 2010. [This provides information on writing research/thesis proposals.]
- State University of New York at Buffalo:
  1. William J. Rapaport, "How to Write (How to Prepare Technical Reports)," Department of Computer Science and Engineering, State University of New York at Buffalo, Buffalo, NY. Available at: http://www.cse.buffalo.edu/~rapaport/howtowrite.html; last accessed on August 25, 2010.
- Tufts University:
  1. Norman Ramsey, *Norman Ramsey's Resources for Writers*, Department of Computer Science, Tufts University. Available at: http://www.cs.tufts.edu/~nr/students/writing.html; last accessed on September 2, 2010.
- University of Maryland, Baltimore County:
  1. Department of Computer Science and Electrical Engineering:
     (a) Alan T. Sherman (Alan Theodore Sherman), "Some Advice on Writing a Technical Report," Department of Computer Science and Electrical Engineering, University of Maryland, Baltimore County, April 27, 1996. Available at: http://www.csee.umbc.edu/~sherman/Courses/documents/TR_how_to.html; last accessed on August 28, 2010.
- Capital Community College:
  1. Guide to Grammar and Writing: http://grammar.ccc.commnet.edu/grammar/

2. Online Resources for Writers: http://webster.commnet.edu/writing/writing.htm

- *Guide to Online Schools*, or *GuideToOnlineSchools.com*:
  1. *The Ultimate Style Guide Resources for MLA, APA, Chicago, and CSE*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/mla-apa-chicago-cse; last accessed on August 25, 2010.
  2. *The Complete Plagiarism Resource*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/plagiarism; last accessed on August 25, 2010.
  3. *The Top 50 Academic Writing Resources Online*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/best-writing-resources; last accessed on August 25, 2010.
- Lorraine Lica:
  1. Lorraine Lica, "The Distinction Between WHICH and THAT With Diagrams: Especially for Scientists". Available at: http://home.earthlink.net/~llica/wichthat.htm; last accessed on September 3, 2010.
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Resources on English grammar:

1. RubyWorks: http://rubyworks.github.com/english/grammar/gramdex.html

12.2 Style Guides

Style guides:

1. Guardian newspaper: http://www.guardian.co.uk/styleguide

13 Grad School Information

Grad school info:

- general information and advice about grad school:
  1. IEEE:
     (a) Susan Karlin, "How to Choose A Grad School: Figure out what you want and who can give it to you," *IEEE Spectrum*, September 2005. Available at: http://spectrum.ieee.org/at-work/education/how-to-choose-a-grad-school; last accessed on August 28, 2010.
     (b) IEEE Potentials, Volume 21, Issue 3, Aug/Sep 2002.
     (c) IEEE Potentials, Volume 24, Issue 3, Aug/Sep 2005.
  2. ACM:
     (a) ACM, *ACM Crossroads Student Resources*, ACM, New York, NY, Aug 17, 2005. Available at: http://oldwww.acm.org/crossroads/resources/; last accessed on August 29, 2010.

(b) ACM, *Graduate Educational Resources from ACM Crossroads*, ACM, New York, NY, Aug 7, 2005. Available at: http://oldwww.acm.org/crossroads/resources/graduate.html; last accessed on August 29, 2010.
(c) *ACM Crossroads* articles on grad school application and life in grad school: [1–5, 7, 8].

3. European Commission:
   (a) Marie Curie Actions: http://ec.europa.eu/research/mariecurieactions/index.htm... **SCHOLARSHIPS!!!**
   (b) *EURAXESS* Research Job Vacancies: http://ec.europa.eu/euraxess/index.cfm/jobs/jvSearch or http://ec.europa.eu/euraxess/index_en.cfm?l1=13&l2=3&initSearch=1#... **SCHOLARSHIPS!!!**
   (c) European Commission, "Third European Report on Science & Technology Indicators 2003," Directorate-General for Research, European Commission. Available at: http://cordis.europa.eu/indicators/contacts.htm; last accessed on September 1, 2010. Report on European universities and research initiatives.
   (d) Publications by the Directorate-General for Research, European Commission, about research initiatives and output in Europe: http://cordis.europa.eu/indicators/publications.htm
4. American Psychological Association:
   (a) American Psychological Association, *gradPSYCH* [magazine], American Psychological Association, Washington, DC. Available at: http://www.apa.org/gradpsych/; last accessed on September 1, 2010. [Read issues from May 2003 till January 2005; **This is an excellence source of information about doing well in graduate school and internships, and seeking research careers in academia and the industry.**]
5. Computing Research Association (CRA):
   (a) Information for Undergraduate and Graduate Students: http://www.cra.org/for-students/
   (b) Computer Research Association's Committee on the Status of Women in Computing Research (CRA-W), "Graduate Student Information Guide". Available at: http://www.cra-w.org/sites/default/files/grad-guide.pdf; CRA-W ⇒ Resources ⇒ Publications ⇒ link and description to the guide, "Graduate Student Information Guide"; last accessed on September 3, 2010.
6. American Mathematical Society:
   (a) *Applying to Graduate School*. Available at: http://www.ams.org/profession/career-info/grad-school/grad-school; last accessed on September 2, 2010.
7. The Mathematical Association of America:
   (a) *MAA Students*. Available at: http://www.maa.org/students/; last accessed on September 2, 2010.
8. University of California, Berkeley:
   (a) Matthew Moskewicz, Parallel Computing Laboratory (Par Lab), Department of Electrical Engineering and Computer Sciences:
      i. Developed the *Chaff* SAT solver with Conor Madigan as undergrads that is 10-100X faster than then existing SAT solvers.

ii. He is named a co-winner of the 2009 CAV Award, along with his co-developers of *Chaff* and the developers of the *GRASP* SAT solver, for his fundamental contribution to the field of Computer Aided Verification.
iii. http://www.princeton.edu/engineering/eqnews/spring01/feature5.html
iv. http://parlab.eecs.berkeley.edu/people/matthew-moskewicz

(b) *Secret Blogging Seminar* is a blog written by recent Ph.D. graduates from Berkeley's Department of Mathematics. Noah Snyder, "Thoughts on graduate school," May 13, 2009. Available at: http://sbseminar.wordpress.com/2009/05/13/thoughts-on-graduate-school/; last accessed on September 1, 2010.

(c) *UC Berkeley Career Center*, "Graduate School - Letters of Recommendation," UC Berkeley. Available at: https://career.berkeley.edu/grad/gradletter.stm; last accessed on September 5, 2010.

9. Carnegie Mellon University, Computer Science Department:
   (a) Carnegie Mellon University, *Ph.D. in Computer Science*, Computer Science Department, Carnegie Mellon University. Available at: http://www.csd.cs.cmu.edu/education/phd/index.html; last accessed on August 28, 2010.
   (b) Mark Leone, *Advice on Research and Writing*, Computer Science Department, Carnegie Mellon University. Available at: http://www-2.cs.cmu.edu/afs/cs.cmu.edu/user/mleone/web/how-to.html; last accessed on August 28, 2010. Also, see http://www.cs.cmu.edu/~mleone/how-to.html for another copy. [Mark Leone has graduated with a MS CS from CMU.]
10. University of California, San Diego:
   (a) UCSD VLSI CAD Laboratory, *Useful tips on how to succeed in graduate school and your subsequent research career*, Department of Computer Science and Engineering & Department of Electrical and Computer Engineering, University of California, San Diego. Available at: http://vlsicad.ucsd.edu/Research/Advice/index.html; last accessed on August 28, 2010. **EXCELLENT!!!**
11. University of Michigan, Ann Arbor:
   (a) Igor Markov, Department of Electrical Engineering and Computer Science: http://www.eecs.umich.edu/~imarkov/i_students.html. In particular, see his "Advice for graduate students".
12. University of California, Los Angeles:
   (a) Philip E. Agre, "Advice for Undergraduates Considering Graduate School," UCLA Department of Information Studies, University of California, Los Angeles, October 1996 (Modified: May 2001). Available at: http://polaris.gseis.ucla.edu/pagre/grad-school.html; last accessed on August 28, 2010. See http://polaris.gseis.ucla.edu/pagre/grad-school.pdf for a PDF copy of this article. **CLASSIC!!!**. See http://polaris.gseis.ucla.edu/pagre/index.html for more articles.
   (b) Terence Tao, *Career advice*, Department of Mathematics, University of California, Los Angeles. Available at: http://terrytao.wordpress.com/career-advice/; last accessed on September 1, 2010. Additional information can be found at: http://www.math.ucla.edu/~tao/.
13. Stanford University:

(a) John Ousterhout, "My Favorite Sayings," Department of Computer Science, Stanford University, September 09, 2009. Available at: http://www.stanford.edu/~ouster/cgi-bin/sayings.php; last accessed on September 4, 2010. [Also, see *Odds & Ends*: http://www.stanford.edu/~ouster/cgi-bin/misc.php]

(b) Jeffrey Michael Heer, Department of Computer Science:
   i. The only Ph.D. student to have ever won the Microsoft Graduate Fellowship and the IBM Ph.D. Fellowship concurrently. After he won these fellowships as a Ph.D. student at Berkeley, IBM changed the rules for its Ph.D. fellowship so that nobody else can do this anymore. This prevents other companies from competing with IBM for hiring these fellows as research interns.
   ii. http://hci.stanford.edu/jheer/cv/

(c) Ravi Vakil, "For potential students," Department of Mathematics, Stanford University. Available at: http://math.stanford.edu/~vakil/potentialstudents.html; last accessed on September 1, 2010. ["Great articles and books" in mathematics: http://math.stanford.edu/~vakil/greatwriting.html. Information about getting/writing letters of recommendation: http://math.stanford.edu/~vakil/recommendations.html.]

(d) Philip Guo, *Academic Home Page*, Department of Computer Science, Stanford University. Available at: http://www.stanford.edu/~pgbovine/academic.htm; last accessed on September 1, 2010. [See resources at the bottom of the page. Also, see http://www.stanford.edu/~pgbovine/writings.htm for his non-academic/research articles.]

(e) Stanford University, *Tomorrow's Professor*[SM] *Mailing List Links*, Center for Teaching and Learning, Stanford University. Available at: http://www.stanford.edu/dept/CTL/Tomprof/links.html; last accessed on September 1, 2010.

(f) Eran Magen, *How I Got Into the Stanford Psychology Ph.D. Program*, Department of Psychology, Stanford University. Available at: http://www.howigotintostanford.com/; last accessed on September 1, 2010.

(g) Stanford University, *Tutoring and Academic Support*, [Office of the] Vice Provost for Undergraduate Education, Stanford University. Available at: http://ual.stanford.edu./ARS/index.html; last accessed on September 1, 2010.

14. University of Washington:

(a) University of Washington, *10-Year Review Self-Study*, Department of Computer Science & Engineering, University of Washington, January 2000. Available at: http://www.cs.washington.edu/homes/lazowska/selfstudy/; last accessed on September 2, 2010. See other information on Prof. Ed Lazowska's web page: http://www.cs.washington.edu/homes/lazowska/.

(b) Yuriy Brun, *Yuriy Brun's Advice*, Department of Computer Science & Engineering, University of Washington. Available at: http://www.cs.washington.edu/homes/brun/advice/; last accessed on August 28, 2010. See http://www.cs.washington.edu/homes/brun/advice/PhDAdvice.pdf for: Yuriy Brun, "Getting a Ph.D. at the University of Southern California," May 20, 2010.

(c) Michael Ernst, *Advice for researchers and students*, Department of Computer Science & Engineering, University of Washington. Available at: http://www.cs.washington.edu/homes/mernst/advice/; last accessed on August 28, 2010.

(d) Karin Strauss, *For graduate students* [see the links on the left side of her home page]. Available at: http://www.cs.washington.edu/homes/kstrauss/; last accessed on September 3, 2010.

(e) Wanda Pratt, *Advice*, Information School & Division of Biomedical & Health Informatics / Department of Medical Education and Biomedical Informatics / School of Medicine, University of Washington. Available at: http://faculty.washington.edu/wpratt/advice.htm; last accessed on September 3, 2010.

(f) William A. Stein, *Home Page*, Department of Mathematics, University of Washington. Available at: http://wstein.org/; last accessed on September 5, 2010. **[Has GREAT resources for junior faculty application and research grant proposals. He has provided tar balls (or zip files) and PDF files of these material.]**

(g) University of Washington Graduate School, *Re-envisioning the Ph.D. project*, University of Washington Graduate School, University of Washington. Available at: http://www.grad.washington.edu/envision/index.html; last accessed on August 28, 2010. [This research is about issues concerning Ph.D. programs, such as: how to improve the quality of Ph.D. programs and student outcomes, and the lifestyle (including social life) of Ph.D. students; and funding issues.]

15. Duke University:
    (a) Xiaowei Yang, *Advice Collection*, Department of Computer Science, Duke University. Available at: http://www.cs.duke.edu/~xwy/advices.html; last accessed on August 28, 2010.
16. Princeton University:
    (a) Boaz Barak, Department of Computer Science:
        i. He won the ACM Doctoral Dissertation Award.
        ii. http://awards.acm.org/doctoral_dissertation/
        iii. http://www.cs.princeton.edu/~boaz/
17. University of Pennsylvania:
    (a) Stephanie Weirich, *Advice for Graduate Studies*, Department of Computer and Information Science, School of Engineering and Applied Science, University of Pennsylvania. Available at: http://www.seas.upenn.edu/~sweirich/phdadvice.htm; last accessed on September 5, 2010.
18. Purdue University:
    (a) Douglas E. Comer, *A few essays about Computer Science*, Department of Computer Science, Purdue University: http://www.cs.purdue.edu/homes/dec/. Look for the section, "A few essays about Computer Science". The essay, "How to generate a CS research topic," is funny: http://www.cs.purdue.edu/homes/dec/essay.topic.generator.html.
19. Cornell University:
    (a) CU-ADVANCE Center (research and resource center concerning diversity and gender equity): http://advance.cornell.edu/
20. Yale University:
    (a) Stephen C. Stearns, "Some Modest Advice for Graduate Students," Department of Ecology and Evolutionary Biology, Yale University. Available at: http://www.yale.edu/eeb/stearns/advice.htm; last accessed on August 28, 2010.

(b) Stephen C. Stearns, "Designs for Learning," Department of Ecology and Evolutionary Biology, Yale University. Available at: http://www.yale.edu/eeb/stearns/designs.htm; last accessed on August 28, 2010.

21. Harvard University:
    (a) H. T. Kung, "Useful Things to Know About Ph. D. Thesis Research," Harvard School of Engineering and Applied Sciences, Harvard University. (Prepared for "What is Research" Immigration Course, Computer Science Department, Carnegie Mellon University, 14 October 1987)
    (b) The Collaborative on Academic Careers in Higher Education, Harvard University Graduate School of Education: http://isites.harvard.edu/icb/icb.do?keyword=coache&tabgroupid=icb.tabgroup104863
22. University of Wisconsin-Madison:
    (a) Dorothea Salo, *A Tale of Graduate School Burnout*. Available at: http://members.terracom.net/~dorothea/gradsch/index.html; last accessed on August 28, 2010.
    (b) Dorothea Salo, *Straight Talk about Graduate School*. Available at: http://members.terracom.net/~dorothea/gradsch/straighttalk.html; last accessed on August 28, 2010.
    (c) Dorothea Salo, *What to do before applying to graduate school*. Available at: http://members.terracom.net/~dorothea/gradsch/success.html; last accessed on August 28, 2010.
23. Pennsylvania State University, Department of Computer Science and Engineering:
    (a) Tao Xie and Yuan Xie, *Advice Collection*, Department of Computer Science at North Carolina State University, and Department of Computer Science and Engineering at Pennsylvania State University. Available at: http://www.cse.psu.edu/~yuanxie/advice.htm; last accessed on August 25, 2010. Also, see http://people.engr.ncsu.edu/txie/advice/index.html and http://people.engr.ncsu.edu/txie/advice.htm.
24. The University of North Carolina at Chapel Hill:
    (a) Ronald T. Azuma, "So long, and thanks for the Ph.D.!" a.k.a. "Everything I wanted to know about C.S. graduate school at the beginning but didn't learn until later." The 4th guide in the Hitchhiker's guide trilogy (and if that doesn't make sense, you obviously have not read Douglas Adams, v. 1.08, Department of Computer Science, The University of North Carolina at Chapel Hill, January 2003. Available at: http://www.cs.unc.edu/~azuma/hitch4.html; last accessed on September 3, 2010. [Also, see *Guides to surviving Computer Science graduate school* at: http://www.cs.unc.edu/~azuma/azuma_guides.html.]
25. University of British Columbia:
    (a) UBC Faculty of Graduate Studies, *The Graduate Game Plan*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-success/graduate-game-p last accessed on August 28, 2010.
    (b) UBC Faculty of Graduate Studies, *Resources for Achieving Success*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-success/resources-achie last accessed on August 28, 2010.

(c) UBC Faculty of Graduate Studies, *Research on the Lived Experience of Graduate Students*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-su research-lived-experience-graduate-students; last accessed on August 28, 2010.

(d) UBC Faculty of Graduate Studies, *Resources for Graduate Student Career Development*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-succes resources-graduate-student-career-development; last accessed on August 28, 2010.

(e) UBC Faculty of Graduate Studies, *Graduate Guides*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-success/graduate-guides; last accessed on August 28, 2010.

(f) UBC Faculty of Graduate Studies, *Present and Publish Your Research*, UBC Faculty of Graduate Studies, University of British Columbia. Available at: http://www.grad.ubc.ca/current-students/gps-graduate-pathways-success/present-publish-your-research; last accessed on August 28, 2010.

26. University of California, Irvine; Donald Bren School of Information and Computer Sciences:

(a) *UCI on iTunes U*, "Improving your Grad School Application," University of California, Irvine: Donald Bren School of Information and Computer Sciences: Bren School Honors Seminar on November 12, 2008. Available at: http://deimos3.apple.com/WebObjects/Core.woa/Browse/uci.edu.1983660442.01983660444.1975757832?i=2046363870; last accessed on August 28, 2010. Also, see http://www.oit.uci.edu/itunesu/ for *UCI on iTunes U*, and http://www.ics.uci.edu/about/videos/index.php for *Bren School iTunes U* content. [I can access this from the main iTunes site as follows: Look at the "Find Educational Provider" tab on the left panel (it's in the middle), and select "Universities and-Colleges" $\Longrightarrow$ Select "UC Irvine" $\Longrightarrow$ Under the Courses panel, select "Donald Bren School of Information and Computer Sciences" $\Longrightarrow$ Under the "Community Outreach" panel, select "Improving your grad school application" $\Longrightarrow$ watch this video. The video clip is about a panel discussion of professors about how to get into a top-tier graduate program in CS. It talks about things that admission officers look for, how to get strong letters of recommendation.]

27. University of California, Davis:

(a) Galois Group, Department of Mathematics:

i. University of California, Davis, *Useful things to know when starting graduate school... ...as contributed by experienced grad students!*, Department of Mathematics, University of California, Davis. Available at: http://galois.math.ucdavis.edu/UsefulGradInfo/HelpfulAdvice/WishIdKnown; last accessed on September 1, 2010.

ii. University of California, Davis, *LaTeX Tutorial*, Department of Mathematics, University of California, Davis. Available at: http://galois.math.ucdavis.edu/UsefulGradInfo/GettingStarted/LaTeXTutorial; last

accessed on September 1, 2010. [Has LaTeX template for research proposal that is required for the Ph.D. qualifying exam.]

iii. University of California, Davis, *Writing Your Doctoral Thesis*, Department of Mathematics, University of California, Davis. Available at: http://galois.math.ucdavis.edu/UsefulGradInfo/HelpfulAdvice/WritingYourThesis; last accessed on September 1, 2010. [Has LaTeX template for Ph.D. dissertations.]

iv. "If you are a UC Davis Math Grad Student, then you are a member of the Galois Group."

28. University of Chicago:
    (a) Pedro F. Felzenszwalb, Department of Computer Science:
        i. http://people.cs.uchicago.edu/~pff/
        ii. His paper, "Digipaper: A Versatile Color Document Image Representation," has been cited 24 times in about 11 years since publication (as of September 1, 2010). He was an undergraduate then, and probably did this work as a junior or early in his senior year.
        iii. His paper, "Efficient Matching of Pictorial Structures," is probably based on his work done as a senior. As of September 1, 2010, this paper as been cited 222 times in about 10 years. From http://cs.uchicago.edu/, it states the following in its news section on September 1, 2010. "Pedro Felzenszwalb receives Longuet-Higgins prize. The 2010 Longuet-Higgins award has been given to Pedro Felzenszwalb and Daniel Huttenlocher, for their paper "Efficient Matching of Pictorial Structures", Conference on Computer Vision and Pattern Recognition 2000. This award goes to a paper from 10 years ago that has made a fundamental impact on computer vision. Congratulations, Pedro!"

29. University of Virginia:
    (a) David Evans, *Advice*, Department of Computer Science, University of Virginia. Available at: http://www.cs.virginia.edu/~evans/advice/; last accessed on September 2, 2010. Also, see "advice for prospective research students": http://www.cs.virginia.edu/~evans/advice/prospective.html.

30. University of Maryland, Baltimore County:
    (a) Marie desJardins, Department of Computer Science and Electrical Engineering:
        i. http://www.cs.umbc.edu/~mariedj/
        ii. Has information on "How to Succeed in Graduate School," "how to organize a workshop," and "Presenting your research: Papers, talks and chats".
        iii. E.g., Marie desJardins, "How to Succeed in Graduate School," Department of Computer Science and Electrical Engineering, University of Maryland, Baltimore County: http://www.cs.umbc.edu/~mariedj/papers/advice-summary.html

31. University of Maryland, College Park:
    (a) Dianne Prost O'Leary, *Graduate Study in the Computer and Mathematical Sciences: A Survival Guide*, Department of Computer Science, University of Maryland, College Park. Available at: http://www.cs.umd.edu/~oleary/gradstudy/gradstudy.html; last accessed on August 28, 2010. It is also available at: http://www.cs.umd.edu/~oleary/gradstudy/. See http://www.cs.umd.

edu/~oleary/ for more articles about "the accessibility of computer science," "8 rules for career success," and the disparity in gender ratios in STEM fields.

32. Indiana University:
    (a) Indiana University, *What Every New Grad Student Should Know*, School of Informatics and Computing, Indiana University. Available at: http://www.cs.indiana.edu/docproject/grad.stuff.html; last accessed on September 1, 2010.
    (b) David Chapman (Editor), *How to do Research At the MIT AI Lab*, AI Working Paper 316, MIT AI Lab, Massachusetts Institute of Technology, October, 1988. Available at: http://www.cs.indiana.edu/docproject/grad.stuff.html; last accessed on September 1, 2010.
    (c) Marie desJardins, *How to Be a Good Graduate Student*, SRI International (formerly Stanford Research Institute), March 1994. Available at: http://www.cs.indiana.edu/docproject/grad.stuff.html; last accessed on September 1, 2010.
33. The University of Arizona:
    (a) Jonathan Sprinkle, *Students: So, you want to be my student*, Department of Electrical and Computer Engineering, The University of Arizona. Available at: http://www2.engr.arizona.edu/~sprinkjm/Main/Students; last accessed on September 5, 2010. "Choose 2-3 IEEE or AIAA journal or conference publications from my website that interest you. Do not choose technical reports, or student papers. Write a critical review of the papers, including why the work is interesting, but most importantly where you think the work should go next. In this review, you are proving to me that you understand the purpose of research, and most importantly that you understand the technical details of the paper and how they relate to research."
34. Vienna University of Technology (TU Vienna):
    (a) Silvia Miksch, *Tips: How to Do Research*, Faculty of Informatics, Vienna University of Technology. Available at: http://www.ifs.tuwien.ac.at/~silvia/research-tips/; last accessed on September 1, 2010. It has plenty of resources about:
        i. "How to Do Research"
        ii. "How to Write a Scientific Paper"
        iii. "How to Design a Poster"
        iv. "Tips on Organizing Conferences, Workshops, and Symposia"
        v. "How to Review"
        vi. "Digitial Libaries"
        vii. "Tips for Writing Correct English"
35. Tufts University:
    (a) Norman Ramsey, *Resources for Students*, Department of Computer Science, Tufts University. Available at: http://www.cs.tufts.edu/~nr/students/; last accessed on September 2, 2010.
    (b) Norman Ramsey, *How to get admitted to a PhD program*, Department of Computer Science, Tufts University. Available at: http://www.cs.tufts.edu/~nr/students/admit.html; last accessed on September 2, 2010.

36. State University of New York at Buffalo:
    (a) William J. Rapaport, *Information for Grad Students in Computer Science & Engineering at UB*, Department of Computer Science and Engineering, Department of Philosophy, and Center for Cognitive Science, State University of New York at Buffalo, Buffalo, NY. Available at: http://www.cse.buffalo.edu/~rapaport/GRAD/; last accessed on September 2, 2010.
37. North Carolina State University, Department of Chemical and Biomolecular Engineering:
    (a) Richard M. Felder, "An Engineering Student Survival Guide," Department of Chemical and Biomolecular Engineering, North Carolina State University, 1993. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/survivalguide.htm; last accessed on August 27, 2010.
38. San Francisco State University:
    (a) Eric Hsu, Department of Mathematics:
        i. Eric Hsu, *Math Education Job Search Resources*, Department of Mathematics, San Francisco State University. Available at: http://bfc.sfsu.edu/cgi-bin/hsu.pl?Math_Education_Job_Search_Resources; last accessed on September 1, 2010. Also, accessible at: http://math.sfsu.edu/hsu/jobs.html.
        ii. Has lots of information on applying for positions in academia.
        iii. Has lists of postdoc positions and (junior) faculty openings.
39. New Mexico Institute of Mining and Technology (New Mexico Tech):
    (a) Brian Borchers, "Recommendation Letters," Department of Mathematics, New Mexico Institute of Mining and Technology. Available at: http://infohost.nmt.edu/~borchers/recletters.html; last accessed on September 2, 2010.
40. University of Minnesota Duluth:
    (a) University of Minnesota Duluth, *Is Graduate School Right For You?*, Career Services, University of Minnesota Duluth. Available at: http://www.d.umn.edu/careers/grad_school/right_for_you.html; last accessed on September 2, 2010.
41. The University of Waikato:
    (a) Sean Oughton, *Graduate School Survival Guide*, Department of Mathematics, The University of Waikato. Available at: http://www.math.waikato.ac.nz/~seano/grad-school-advice.html; last accessed on September 3, 2010. [Also, see http://www.math.waikato.ac.nz/~seano/ for Sean's web page.]
42. Sumit Gupta, *Articles and Information about Graduate School*. Available at: http://www.4bearsonline.com/collections/grad/index.shtml; last accessed on August 25, 2010.
43. About.com:
    (a) About.com, *Graduate School*. Available at: http://gradschool.about.com/; last accessed on August 25, 2010.
    (b) Timothy Dzurilla, *Writing Graduate Application Essay: Tips to Writing a Successful Personal Statement*, About.com, Nov 1, 2007. Available at: http://www.suite101.com/content/writing-graduate-application-essay-a34598; last accessed on September 1, 2010. [Help with writing a statement of purpose]

(c) Naomi Rockler-Gladen, *How to Choose a Graduate School: Faculty, Fit, Student Culture, and Other Grad Program Considerations*, About.com, Nov 12, 2007. Available at: http://www.suite101.com/content/how-to-choose-a-graduate-school- last accessed on September 1, 2010. [How to select a graduate program ... EXCELLENT]

(d) Naomi Rockler-Gladen, *How to Choose a Graduate Advisor: Finding a Faculty Member to Direct an MA Thesis or PhD Dissertation*, About.com, Oct 30, 2007. Available at: http://www.suite101.com/content/how-to-choose-a-graduate-adviso last accessed on September 1, 2010. [How to pick an advisor ... EXCELLENT]

44. Institute for Operations Research and the Management Sciences (INFORMS):
    (a) *Career Center* (has some information on funding/fellowships, and academic careers): http://www.informs.org/Build-Your-Career/INFORMS-Student-Union/Career-Center
45. Dario Toncich, *Key Factors in Postgraduate Research - A Guide for Students*. Available at: http://www.doctortee.net/KeyFactors.html; last accessed on September 1, 2010.

- Grad school admission advice:
  1. University of California, Berkeley:
     (a) Department of Economics, "Criteria," Department of Economics, University of California, Berkeley. Available at: http://www.econ.berkeley.edu/econ/grad/admit-criteria.shtml; last accessed on August 28, 2010.
  2. Harvard University:
     (a) Susan Athey, "Advice for Applying to Grad School in Economics," Department of Economics, Harvard University. Available at: http://kuznets.fas.harvard.edu/~athey/gradadv.html; last accessed on August 28, 2010.
- Advice concerning research:
  1. University of California, Riverside:
     (a) John Baez, "Advice for the Young Scientist," Department of Mathematics, University of California, Riverside, March 25, 2007. Available at: http://math.ucr.edu/home/baez/advice.html; last accessed on August 28, 2010.
- advice about giving presentations:
  1. Cornell University, Department of Computer Science:
     (a) Charles Van Loan, "The Short Talk," Department of Computer Science, Cornell University. Available at: http://www.cs.cornell.edu/cv/ShortTalk.htm; last accessed on August 25, 2010.
  2. University of Wisconsin-Madison, Computer Sciences Department:
     (a) Mark D. Hill, "Oral Presentation Advice," Computer Sciences Department, University of Wisconsin-Madison, April 1992, Revised January 1997. Available at: http://pages.cs.wisc.edu/~markhill/conference-talk.html; last accessed on August 25, 2010. It includes a short summary of a presentation on this topic by Prof. David A. Patterson. David A. Patterson, "How to Give a Bad Talk," Computer Science Division, Department of Electrical Engineering and Computer Sciences, University of California-Berkeley, 1983.

3. University of California, Los Angeles:
   (a) Terence Tao, "Talks are not the same as papers," Department of Mathematics, University of California, Los Angeles. Available at: http://terrytao.wordpress.com/career-advice/talks-are-not-the-same-as-papers/; last accessed on September 1, 2010.
4. North Carolina State University, Department of Chemical and Biomolecular Engineering:
   (a) Richard M. Felder, "Tips on Talks," Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/speakingtips.htm; last accessed on August 28, 2010.

- Advice on studying:
  1. State University of New York at Buffalo, Department of Computer Science and Engineering:
     (a) William J. Rapaport, "How to Study: A Brief Guide," Department of Computer Science and Engineering, Department of Philosophy, and Center for Cognitive Science, State University of New York at Buffalo, Buffalo, NY. Available at: http://www.cse.buffalo.edu/~rapaport/howtostudy.html; last accessed on August 25, 2010.
  2. University of Oregon, Teaching and Learning Center:
     (a) Ronald C. Blue, "How to Study," Teaching and Learning Center, University of Oregon. Available at: http://tep.uoregon.edu/resources/faqs/outsidehelp/study.html; last accessed on August 25, 2010.
  3. North Carolina State University, Department of Chemical and Biomolecular Engineering:
     (a) Richard M. Felder, "Handouts for Students," Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Student_handouts.html; last accessed on August 28, 2010.
  4. Middle Tennessee State University:
     (a) Carolyn Hopper, "The Study Skills Help Page: Learning Strategies for Success," Middle Tennessee State University. Available at: http://frank.mtsu.edu/~studskl/; last accessed on August 25, 2010.
  5. Joseph Frank Landsberger:
     (a) Joseph Frank Landsberger, *Study Guides and Strategies*. Available at: http://www.studygs.net/; last accessed on August 25, 2010.

- Advice on test preparation and test taking:
  1. North Carolina State University, Department of Chemical and Biomolecular Engineering:
     (a) Richard M. Felder, "Random Thoughts: Memo," *Chemical Engineering Education*, Vol. 33, No. 2, pp. 136–137, 1999. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Columns/memo.html; last accessed on August 28, 2010.

(b) Richard M. Felder and James E. Stice, "Tips on Test Taking," Department of Chemical and Biomolecular Engineering, North Carolina State University, and Deptartment of Chemical Engineering, The University of Texas at Austin. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/testtaking.htm; last accessed on August 28, 2010.

- Advice for engineering students:
  1. University of Maryland, Baltimore County; Department of Computer Science and Electrical Engineering:
     (a) Alan T. Sherman (Alan Theodore Sherman), *How To's and Other Generic Course Documents*, Department of Computer Science and Electrical Engineering, University of Maryland, Baltimore County, September 12, 1995. Available at: http://www.csee.umbc.edu/~sherman/Courses/documents/; last accessed on August 28, 2010. Also, see http://www.csee.umbc.edu/~sherman/Courses/.
     (b) Alan T. Sherman (Alan Theodore Sherman), *Teaching Activites*, Department of Computer Science and Electrical Engineering, University of Maryland, Baltimore County. Available at: http://www.csee.umbc.edu/~sherman/mycourses.html; last accessed on August 28, 2010.
  2. North Carolina State University, Department of Chemical and Biomolecular Engineering:
     (a) Richard M. Felder's column, "Random Thoughts," in the journal, *Chemical Engineering Education*. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Columns.html; last accessed on August 28, 2010.
     (b) Richard M. Felder, "An Engineering Student Survival Guide," Department of Chemical and Biomolecular Engineering, North Carolina State University, 1993. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/survivalguide.htm; last accessed on August 27, 2010.
        - Do not expect people to tell me how to solve certain problems, especially implementation details as a researcher.
        - Learn to find out for myself what I need to know. That is, determine the scope of things that I need to know, the time frame and deadline(s) in which I should acquire knowledge of those skills and knowledge, and create a plan to acquire those skills and knowledge.
        - I should learn to be more resourceful, and determine where can I get help. Particularly, resources (e.g., publications and online material), individuals, and networks of people that can provide a significant amount of help to people.
        - Make a serious effort to solve a problem before I approach others for help. Else, they may get annoyed when I did not bother to learn how to solve problems that are actually very simple. Also, bring my (attempted/considered) solutions to the people who I seek help from. Show them my flow charts, schematics, calculations, algorithms, and heuristics. This would convince them that I have done my homework, and am not asking bane questions.
        - To help me understand how to apply the skills and knowledge that I am acquiring in "practical, real-world applications," I should look at textbooks (including alternative textbooks/books, such as handbooks and encyclopedias) for such examples. I can also look ahead further in the chapter, book, or books of

subsequent classes to see how these skills and knowledge will be applied. Note that information that I skip while reading my textbook, manuals, and guides may actually contain the solution that I am looking for. Think of the questions that I asked Anders Franzen about the SMT-LIB manual during my internship at FBK while working on the *MathSAT* project. I did not understand the material in the manual, since I lacked a background in compiler design and formal grammar/languages. So, I had to get he to help me interpret what I was reading. This was like when I was learning about UNIX as a freshman/sophomore. I did not understand what I was reading when I looked at the UNIX manual ("man pages"). Thus, I shall learn how to read technical literature better.

- By reading technical and semi-technical magazines and newspapers/newsletters, I can learn about "practical, real-world applications" of the things that I am learning about. In addition, by talking to others (students further ahead of me in engineering education and professional engineers), I learn to see how can I apply the things that I am learning about in "practical, real-world applications". Furthermore, I can tap into the newsletters and technical magazines of professional organizations, such as ACM and IEEE, to find out about research opportunities/projects where I can apply what I am learning about.
- If my lecture slides/notes and textbooks(s) do not have adequate worked-out examples (e.g., only trivial examples) to help me understand mathematical theories and formulas, and engineering concepts, I shall seek other resources. E.g., I can look at lecture slides/notes from equivalent/similar classes that are taught at other universities. In addition, I can look at other textbooks/books on this subject. Note that for advanced topics, such as those covered by advanced graduate classes, I may only be able to find 1 or 2 books on this topic. So, I may not always have the luxury of looking at worked examples from other textbooks; e.g., I could find many textbooks for differential equations and vector analysis, but not for antenna analysis or satisfiability modulo theories.
- I shall improve my ability to work out problems on my own if I cannot find adequate examples for that problem or similar problems. In addition, I shall document worked solutions digitally, so that I can refer to them during revision for an exam, my prelims/quals, or when I encounter a similar problem during research and development.
- I shall also improve the way I revise/relearn concepts, technologies, skills, and knowledge. Documenting resources and prior solutions to problems would help me relearn things. Such documentation requires proper information management, so that I can reuse the previously acquired knowledge and skills. Remember that using LaTeX on a UNIX-like operating system helps me with information management.
- If I do not understand how and why things work, determine if knowledge of that is required for solving problems in my research/class project, or assignment. If not, I can move on and address this when I have more free time (e.g., "slack" periods during the calendar year). To find out more about how certain things work, I can look into the references in my lecture slides/notes and textbooks(s), or search/google for references online. Note that learning how and

why certain things work may require (advanced) knowledge that is outside the scope of my discipline or research area. Hence, it is important to know when to stop delving into (/investigating/probing) a concept/technique. Remember my problems with understanding Prof. Sanjit A. Seshias publications on adaptive eager encodings, in which he used "polyhedral theory" (I believe in the context of integer programming and combinatorial optimization) to prove a theorem regarding the satisfiability of UTVPI formulas? Ditto for lambda expressions (and lambda calculus) so that I can understand how syntax is represented for a given signature in first-order logic.]

- I shall improve my ability to convert descriptions of architectures and techniques into hardware/software implementations. It is easier to grasp the concepts in pseudocode, flowcharts, schematics, figures, and demonstrations than to learn the concepts from text and create abstractions of those concepts on my own. I shall improve my ability to create pseudocode, flowcharts, schematics, figures, and demonstrations from what I have read, especially in journal and conference papers.
- I shall improve my ability to perform statistical analysis on my experimental data, and analyze the figures/graphs that I have plotted.
- Use a book from the *Schaum's Outline* series from *McGraw-Hill* to help me learn material from introductory and intermediate classes. "Even if you can't find a reference with exactly the type of coverage that works best for you, just reading about the same topic in two different places usually clarifies the ideas." [Remember how I read about the same topic in different advance engineering math textbooks to learn concepts for my classes in differential equations and vector analysis?]
- Working with others allows me to overcome obstacles that I may not be able to overcome on my own. While I may give up on learning certain things or overcome specific problems in individual projects, my teammates may be able to come up with solutions to problems in group projects. In addition, working in a diverse group exposes me to solutions that can be more effective and/or efficient... $student sroutinelyteachoneanotheringroupwork --andasanyprofessorwilltellyou, teachingsomethingisprobablythemosteffectivewaytolearn$
- Try to find groups of three to four people to work on a problem. When I work in pairs, I may not expose myself to a sufficient variety of approaches. Similarly, when I work in larger groups (i.e., > 4), some individuals may be left out of the "active problem-solving process".
- I shall endeavor to outline solution on my own first, without being boggled or encumbered by the implementation details. Subsequently, I can work out the complete solutions with my group. If each individual does this, each group member can learn how to get started in solving problems in the project. That is, let's outline solutions to the problem, before we meet to discuss our considered solutions and develop the complete solution together.
- "For group work to be fully effective, every group member should be able to explain in detail every solution obtained in a work session. Having the group members (particularly the weaker ones) go through these explanations before

ending the session is a good way to make sure that the session has achieved its objectives." This will mitigate the tendency for the more technically challenged and reserved individuals to accept proposed solutions without understanding those solutions.

(c) Richard M. Felder, "How to Survive Engineering School," Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Columns/Surviving-School.html; last accessed on August 28, 2010.

- Advice on teaching:
  1. Stanford University:
     (a) Stanford University, *Teaching at Stanford*, Center for Teaching and Learning, Stanford University. Available at: http://ctl.stanford.edu/teaching-at-stanford.html; last accessed on September 1, 2010.
     (b) Stanford University, *Handouts and Teaching Tips*, Center for Teaching and Learning, Stanford University. Available at: http://ctl.stanford.edu/teachingta/handouts-and-teaching-tips.html; last accessed on September 1, 2010.
     (c) Stanford University, *Speaking of Teaching Newsletters*, Center for Teaching and Learning, Stanford University. Available at: http://ctl.stanford.edu/speaking-of-teac
     html; last accessed on September 1, 2010.
  2. University of California, Riverside; Department of Mathematics:
     (a) John Baez, "How to Teach Stuff," Department of Mathematics, University of California, Riverside, January 23, 2006. Available at: http://math.ucr.edu/home/baez/teaching.html; last accessed on August 28, 2010.
  3. University of Oregon, Teaching and Learning Center:
     (a) Teaching Effectiveness Program, *Teaching Resources*, Teaching and Learning Center, University of Oregon. Available at: http://tep.uoregon.edu/resources/index.html; last accessed on August 25, 2010. Also, look the "Teaching FAQ's": http://tep.uoregon.edu/resources/faqs/
     (b) Teaching Effectiveness Program, Resources for *Teaching with Technology*, Teaching and Learning Center, University of Oregon. Available at: http://tep.uoregon.edu/technology/index.html; last accessed on August 25, 2010.
  4. North Carolina State University, Department of Chemical and Biomolecular Engineering:
     (a) Richard M. Felder, *Student-centered Teaching and Learning*, Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Student-Centered.
     html; last accessed on August 28, 2010.
     (b) Richard M. Felder, *Index of Learning Styles*, Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSpage.html; last accessed on August 28, 2010.
     (c) Richard M. Felder, *Learning Styles*, Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Learning_Styles.html; last accessed on August 28, 2010.

(d) Richard M. Felder, *Richard Felder's Education-related Publications*, Department of Chemical and Biomolecular Engineering, North Carolina State University. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/Education_Papers.html; last accessed on August 28, 2010.

5. Joseph Frank Landsberger:
   (a) Joseph Frank Landsberger, *Teaching Guides and Strategies*. Available at: http://www.studygs.net/teaching/; last accessed on August 25, 2010.

- Resources to improve my English skills:
  1. *Guide to Online Schools*:
     (a) *Guide to Online Schools* [or *GuideToOnlineSchools.com*], *Resources to Help Improve Your English Pronunciation*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/english-pronunciation; last accessed on August 25, 2010.

- time management:
  1. *Guide to Online Schools*:
     (a) *Guide to Online Schools* [or *GuideToOnlineSchools.com*], *The Best Compilation of Time Management Resources on the Web*. Available at: http://www.guidetoonlineschools.com/tips-and-tools/time-management; last accessed on August 25, 2010.

- Math and Science revision:
  1. Basic high school math:
     (a) North Carolina State University, Department of Chemical and Biomolecular Engineering:
        – Kenny Felder and Gary Felder, "Kenny's Math and Physics Help," 2009. Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/kenny/home.html; last accessed on August 28, 2010.
        – Kenny Felder, "Selected Other Educational Sites on the Web". Available at: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/kenny/edulinks.html; last accessed on August 28, 2010.

- good blogs about graduate school:
  1. Marc Eaddy, *Marc Eaddy: Confessions of an Ex-PhD Student*. Available at: http://marceaddy.blogspot.com/; last accessed on August 28, 2010.

- fun stuff about grad school:
  1. Jorge Cham, *Piled Higher and Deeper*. Available at: http://www.phdcomics.com/; last accessed on August 28, 2010. See the latest "PHD Comics" at: http://www.phdcomics.com/comics.php. This comic strip pokes fun at the [fun, harsh, interesting, and absurd] realities of life in grad school.

- other information about or related to grad school (and higher education):
  1. *Eurodoc*: union of grad student associations of each European country; see http://en.wikipedia.org/wiki/EURODOC and http://www.eurodoc.net/
  2. *European Association for Quality Assurance in Higher Education* (ENQA): union of accreditation board(s) of each European country; see http://en.wikipedia.org/wiki/ENQA and http://www.enqa.eu/

3. *Innolyst*:
   (a) Innolyst, *ResearchCrossroads*, Innolyst:
      i. Ernest Kuh, UC Berkeley: http://www.researchcrossroads.org/Researchers/830167 or http://www.researchcrossroads.org/index.php?option=com_content&view=article&id=49&Itemid=55&user_id=830167
      ii. US-based researchers who receive US government funding for their research have profiles in *ResearchCrossroads*. E.g., I can find the amount of public funding that my professors at USC received, and the organization that funds them. I can also read an abstract of the project that they got funded for.
      iii. http://www.researchcrossroads.org/
   (b) http://www.innolyst.com/
4. A. Lee, C. Dennis, and P. Campbell. Nature's guide for mentors. Nature, 447(7146):791–797, June 14, 2007 [6].
5. American Council of Trustees and Alumni (ACTA):
   (a) The American Council of Trustees and Alumni (ACTA) is an independent, non-profit organization committed to academic freedom, excellence, and accountability at Americas colleges and universities.
   (b) Launched in 1995, we are the only organization that works with alumni, donors, trustees, and education leaders across the United States to support liberal arts education, uphold high academic standards, safeguard the free exchange of ideas on campus, and ensure that the next generation receives a philosophically rich, high-quality college education at an affordable price.
   (c) ACTA Publications: https://www.goacta.org/publications/. [ACTA publications cover many aspects of issues concerning higher education institutions, and serve to provide standards of academic excellence and strategies for achieving these standards.]
6. GOOD, *GOOD Education*: http://www.good.is/series/good-education/
7. Lumina Foundation for Education, *Publications*. Available at: http://www.luminafoundation.org/publications/; last accessed on September 4, 2010.
8. National Center for Academic Transformation: http://thencat.org/
9. Graduate Software Engineering 2009 (GSwE2009): http://www.gswe2009.org/

14 Resources on Financial Management

Resources on financial management:
1. New York Times: http://www.nytimes.com/interactive/2010/03/24/your-money/financial-tuneup-checklist.html and http://topics.nytimes.com/your-money/financial-tuneup/index.html
2. http://invest-faq.com/; this is maintained by a computer scientist, Dr. Christopher Lott.

15 Resources on Small Businesses and Entrepreneurship

Resources on small businesses and entrepreneurship:
1. http://boss.blogs.nytimes.com/

15.1 Start-ups

Information about start-ups:

1. start-up stages:
   (a) attic room stage:
   Objective Finder; follower(s)
   People Me
   Funding $0
   Paperwork One pager
   (b) garage-stage start-up, or pre-launch stage start-up:
   Objective build prototype
   People founding team
   Funding <$100K
   Paperwork Simple business plan
   (c) seed-stage start-up, or post-alpha-launch stage start-up:
   Objective Alpha launch
   People First employees
   Funding <$1M
   Paperwork Business plan
   (d) growth-stage start-up (funded stage):
   Objective Scale business
   People Management team
   Funding >$1M
   Paperwork Operational plan, reporting
   (e) Tim Has, "Startup Stages," published on February 27, 2010 in his blog "Startup Republic: Startup Lessons and Howtos"; see http://www.eways.nl/blog/en/attic-room-stage/startup-stages/; last viewed on August 20, 2010
   (f) See http://www.skmurphy.com/startup-stages/.
2. stages of start-up investment:
   (a) Seed Round / Concept - Angel or VC investor:
      i. Proof of concept focus
      ii. 1 or 2 customers engaged
      iii. Less than $1M investment
   (b) Round A "Validation" - VC:
      i. Early bookings or revenues with 1 to 3 customers
      ii. Ability to demonstrate the business can scale
   (c) Round B "Productization / Proliferation":
      i. Has product that can be sold
      ii. Beta customers using product
      iii. Breakeven financials
   (d) Round C "Scalability":
      i. Using finance to expand and scale the business.
3. types of start-up:
   (a) bootstrapped startup
   (b) early-stage start-up
   (c) angel-funded start-up

(d) venture-funded start-up, or VC-funded start-up
(e) NSF-funded start-up, or DARPA-funded start-up
(f) For example:
    i. From http://www.public.lyricsemiconductor.com/news.htm: "Lyric Semiconductor, Inc. a DARPA- and venture-funded MIT spin-out, today emerged from stealth mode to launch a new technology called probability processing, which is poised to deliver a fundamental change in processing performance and power consumption."; last viewed on August 20, 2010.

4. **Insert entries for the profiles of the start-up and its co-founders into *CrunchBase* @ http://www.cru**
5. To advertise job opportunities, use:
    (a) *The Resumator*: http://www.theresumator.com/home/s:posterous
    (b) *Startuply*: http://www.startuply.com/
    (c) :
6. emerge from stealth mode; operating in stealth mode
7. "We are a fast-moving 8 person company."

Advice concerning start-ups:

1. Stephan Schmidt, "7 Bad Signs not to Work for a Software Company or Startup," Code Monkeyism, August 18, 2009. Available at: http://codemonkeyism.com/7-signs-work-software-compa last accessed on September 5, 2010. The "7 bad signs not to work for a software company or startup are":
    (a) No Source Control
    (b) No top tools or only home brewed ones (IDE, Build System,)
    (c) No business model or not enough money
    (d) They dont let you talk to or see developers
    (e) High turnover
    (f) Hiring is mainly done by HR, not by developers/technical staff
    (g) No decent hardware
2. Guy Kawasaki, "Guy Kawasaki's 10 Questions to Ask Before You Join a Startup," on July 21, 2009. Available at: http://www.mint.com/blog/how-to/guy-kawasaki-startup-tips/; last accessed on September 5, 2010. Questions:
    (a) How much money do you have in the bank?
    (b) What is your net outflow per month?
    (c) What is the post-money valuation of your last round?
    (d) What can you do that your competitors cannot?
    (e) What can your competitors do that you cannot?
    (f) Who are your investors?
    (g) Who is on your board of directors?
    (h) Has anyone in the engineering team actually shipped a product?
    (i) Assume that you have $0 for marketing, how would you market the product?
    (j) What keeps you awake at night?

3. A good place for garage-stage start-ups, or even seed-stage start-ups, to work is a coworking environment. These environments have to be functional and conducive for work, so that we can be productive. That said, coworking environments provide an atmosphere that is "social, energetic, and creative," just like research and computer labs at good research universities (and at coffee shops in the Silicon Valley). In addition, these environments allow us to have our own working space that is affordable.
   (a) *Citizen Space*. Available at: http://citizenspace.us/; last accessed on September 5, 2010.
   (b) Wikipedia article on "Coworking". Available at: http://en.wikipedia.org/wiki/Coworking; last accessed on September 5, 2010.

15.1.1 Resources on Creating, Managing, and Joining Start-ups

Resources on creating, managing, and joining start-ups:

1. general resources:
   (a) Steve Blank; includes a bibliography of books about start-ups and entrepreneurship: http://steveblank.com/
   (b) Technology Ventures Corporation: http://techventures.org/resources/docs/
   (c) *Y Combinator* **Startup Library**: http://ycombinator.com/lib.html
2. "EE Times 60 Emerging Startups list"; google this list
3. Berkeley:
   (a) http://entrepreneurship.berkeley.edu/
   (b) http://entrepreneurship.berkeley.edu/business_competitions/vcic/index.html
   (c) http://entrepreneurship.berkeley.edu/business_competitions/external.html,
   (d) http://bplan.berkeley.edu/ (Annual UC Berkeley Business Plan Competition past winners include CommandCAD)
4. Stanford University:
   (a) Department of Computer Science:
      i. John Ousterhout, "Startup Company Culture," Department of Computer Science, Stanford University, September 06, 2009. Available at: http://www.stanford.edu/~ouster/cgi-bin/startupCulture.php; last accessed on September 4, 2010.
5. business competitions:
   (a) Global Social Venture Competition (GSVC): http://www.gsvc.org/
   (b) Intel®+UC Berkeley Technology Entrepreneurship Challenge: http://www.entrepreneurshipch org/ and http://www.entrepreneurshipchallenge.org/resource_lib.htm
   (c) UCSD: http://challenge.ucsd.edu//index.php
6. business plans:
   (a) Bplans.com (Palo Alto Software, Inc.): http://www.bplans.com/index.cfm
   (b) Harvard Business School: http://www.hbs.edu/entrepreneurship/resources/businessplan.html

7. webinars:
   (a) Career Webinars from the IEEE-USA Employment and Career Services Committee:
      i. It has videos on start-ups, entrepreneurship, and innovation.
      ii. http://www.ieeeusa.org/careers/webinars/default.asp
   (b) A. Richard Newton Distinguished Innovator Lecture Series and the Life as an Entrepreneur Series:
      i. This is a cooperative effort between the College of Engineering's Center for Entrepreneurship (CET) and the Haas School of Business's Lester Center for Entrepreneurship & Innovation at UC Berkeley.
      ii. See http://www.youtube.com/user/UCBerkeleyEvents#g/c/EB00B77318BDAA72 for the lecture series.
      iii. This lecture series has multiple entrepreneurs and VCs giving guest lectures.
   (c) Entrepreneurship Corner at Stanford University: http://ecorner.stanford.edu
   (d) Computer Science and Engineering Colloquia @ *iTunes U*:
      i. It is organized by the Computer Science and Engineering department at the University of Washington.
      ii. It has lectures throughout the academic year.
      iii. Sometimes, they invite start-up entrepreneurs and venture capitalists to talk about entrepreneurship and getting funding for small companies.
8. networking organizations:
   (a) *The Indus Entrepreneurs (TiE)* for networking among high-tech entrepreneurs, start-up co-founders, venture capitalists, and angel investors: http://www.tie.org/
   (b)
9. IEEE-USA TechMatch (from IEEE-USA Entrepreneurs Village and the Business Catapult): http://businesscatapult.com/refcode/ieeeusa:
   (a) Benchmark survey: Analyze the business concept and strategy. Ask the following questions. How unique is your business? When did you consistently start generating a profit? How much do you anticipate you will need to invest? What is your experience with customers? Compare my answers for these questions to those of successful businesses (already reviewed by Business Catapult).
   (b) Investment survey: What is the purpose of the investment? What is the amount of money being sought? What is the stage of company development? What is the companys projected value? Score the "health" of the start-up's investment plan from 1 to 100, and determine areas for improvement.
   (c) Determine approaches to establishing a target market, the kind of investors to seek, and whether to seek a financial, product design, or equity partner.
10. Intel:
   (a) http://www.intel.com/education/highered/entrepreneur/
   (b) http://www.intel.com/education/highered/entrepreneur/curriculum.htm
11. start-up schools:
   (a) Start-up school, which is organized by Berkeley CSUA, St@b, BASES, and Y Combinator: http://startupschool.org/
   (b) Start-up school (UK): http://www.schoolforstartups.co.uk/

(c) Start-up school (Melbourne or Sydney, Australia): http://www.startupschool.com.au/

12. technology magazines:
    (a) Entrepreneur:
        i. http://www.entrepreneur.com/
        ii. http://www.entrepreneur.com/bizstartups/index.html
    (b) Inc.com: http://www.inc.com/start-up
    (c) Red Herring, Inc.: http://www.redherring.com/
    (d) Technology Review Inc. (Massachusetts Institute of Technology): http://www.techreview.com/
13. Other online resources:
    (a) Oracle Corporation (then Sun Microsystems): http://www.sun.com/startup and http://www.sun.com/startupessentials/indexb.jsp
    (b) Sean K. Murphy: http://www.skmurphy.com/blog/
    (c) Silicon Valley Association of Startup Entrepreneurs (SVASE): http://www.svase.org
    (d) University of Central Florida (UCF) Business Incubation Program: http://www.incubator.ucf.edu/resources/research.html
    (e) U.S. Small Business Administration (SBA): http://www.sbaonline.sba.gov/ and http://www.sbaonline.sba.gov/smallbusinessplanner/plan/writeabusinessplan/index.html
    (f) New York Times resources:
        i. See http://www.nytimes.com/2010/07/25/business/25corner.html?hp=&pagewanted=all about what a start-up entrepreneur looks for in job candidates, and the culture and working environment of the start-up.
        ii. See http://www.nytimes.com/2007/10/28/business/28invent.html?sq=paypal&st=cse&scp=18&pagewanted=all and http://topics.nytimes.com/top/news/business/series/age_of_riches/index.html for some articles on creating start-ups.
    (g) Semiconductor industry:
        i. *InsideChips*: http://www.insidechips.com/
    (h) Silicon Valley Leadership Group: http://svlg.org/
14. "Technology Entrepreneur Resources" (Suggested Reading List) from http://www.intel.com/education/highered/entrepreneur/resources.htm:
    (a) Entrepreneurial Management:
        i. The Ernst and Young Business Plan Guide by Eric Siegel, Brian R. Ford, and Jay M. Burnstein
        ii. The Portable MBA in Entrepreneurship , 3rd ed. by William D. Bygrave, Editor
        iii. The Start-up Entrepreneur by James R. Cook
        iv. The Entrepreneur's Guide to Business Law by Constance Bagley and Craig E. Dauchy
        v. New Venture Mechanics by Karl H. Vesper
        vi. Engineering Your Start-up: A Guide for the Hi-Tech Entrepreneur by Michael L. Baird

vii. The New Venture Handbook: Everything You Need to Know to start and Run Your Own Business by Ronald E. Merrill and Henry D. Sedgwick
viii. High-Tech Ventures: The Guide for Entrepreneurial Success by C. Gordon Bell with John E. McNamara
ix. New Venture Creation: Entrepreneurship for the 21st century , 5th ed. by Jeffry Timmons
x. New Business Ventures and the Entrepreneurby Howard Stevenson et al.
xi. The Successful Business Plan: Secrets and Strategiesby Rhonda Abrams
xii. Pratt's Guide to Venture Capital Sources by Testa, Hurwitz & Thibeault
xiii. Raising Money: Venture Funding and How to Get It by Ronald E. Merrill
xiv. Innovation and Entrepreneurship by Peter Drucker

(b) High Technology Marketing:
i. How to Drive the Competition Crazy by Guy Kawasaki
ii. Crossing the Chasm by Geoff Moore
iii. Inside the Tornado by Geoff Moore
iv. Relationship Marketing: Successful Strategies for the Age of the Customer by Regis McKenna
v. Real Time Marketing by Regis McKenna
vi. Marketing High Technology: An Insider's View by Bill Davidow
vii. The One-to-One Future by Don Peppers et al.

(c) Other:
i. Financial & Cost Analysis for Engineering. and Technology Management by Hank Riggs
ii. High Tech StartUp by John L. Nesheim
iii. Only the Paranoid Survive by Andy Grove
iv. Startup by Jerry Kaplan
v. Regional Advantage by A. Saxenian
vi. Built to Last by Jim Collins and Jerry Porras
vii. Burn Rate: How I Survived the Gold Rush Years on the Internet by Michael Wolff
viii. Competing on Internet Time: Lessons from Netscape and Its Battle with Microsoft by Michael A. Cusumano and David B. Yoffie
ix. The New New Thing by Michael Lewis
x. eBoys by Randall Stross
xi. Harvard Business Review on Entrepreneurship by Amar Bhldt

15. information on creating a software development environment for software-based start-ups:
(a) http://www.possibility.com/wiki/index.php?title=StartupDevelopmentEnvironment

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